Department of Environmental Conservation

Division of Lands and Forests

Pharaoh Lake Wilderness Complex

Unit Management Plan

April 1992

New York State Department of Environmental Conservation
MARIO M. CUOMO, *Governor* THOMAS C. JORLING, *Commissioner*

A

UNIT MANAGEMENT PLAN

FOR THE

PHARAOH LAKE WILDERNESS COMPLEX:

BALD LEDGE PRIMITIVE AREA, FIRST BROTHER PRIMITIVE AREA

GOOSENECK PRIMITIVE AREA, HAGUE BROOK PRIMITIVE AREA

AND

PHAROAH LAKE WILDERNESS AREA

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Mario Cuomo
Governor

Thomas C. Jorling
Commissioner

MEMORANDUM FROM
THOMAS C. JORLING, *Commissioner*

New York State
Department of Environmental Conservation

TO: The Record

FROM: Thomas C. Jorling

SUBJECT: Unit Management Plan
Pharaoh Lake Wilderness Complex

DATE: April 15, 1992

The Unit Management Plan for the Pharaoh Lake Wilderness Complex has been completed. The Plan is consistent with the guidelines and criteria of the Adirondack Park State Land Master Plan, the State Constitution, Environmental Conservation Law, and Department rules, regulations and policies. The Plan includes management objectives for a five-year period and is hereby approved and adopted.

cc: L. Marsh

PURPOSE AND NEED

The Department of Environmental Conservation has prepared a unit management plan for the Pharaoh Lake Wilderness Complex (PLWC) as required by the Adirondack State Land Master Plan, Section 816 of the Adirondack Park Agency Act (Article 27 of the Executive Law).

The purpose of the unit management plan is to guide the preservation, management, and use of the PLWC by establishing long-term goals and objectives. The plan also describes the management practices and activities needed over the next five years to achieve the desired goals and objectives. The plan covers a five-year period from 1992 to 1997. Ordinarily, the plan will be revised on a five-year cycle, but may be amended or revised if resource and/or sociological conditions change significantly.

The plan is divided into five basic sections: Sections I and II discuss the physical and biological characteristics of the natural resources existing in the unit and the demand for those resources. Section III provides a summary of the management situation at the time the plan was prepared and states the plan's long-term goals and objectives. Section IV identifies proposed management practices, standards, and guidelines for the unit as a whole. This section also provides measures to mitigate adverse environmental impacts. A schedule for implementation is found in Section V which further addresses budget needs to carry out the work described in the plan.

A final environmental impact statement accompanies the plan as a separate report containing descriptions of the proposed management actions, their environmental settings, potential environmental impacts, ways to minimize impacts, and reasonable alternatives. The final environmental impact statement also provides a public disclosure of the record used by the

Department in its environmental decision making. It reflects revisions of the draft environmental impact statement and responses to public comments.

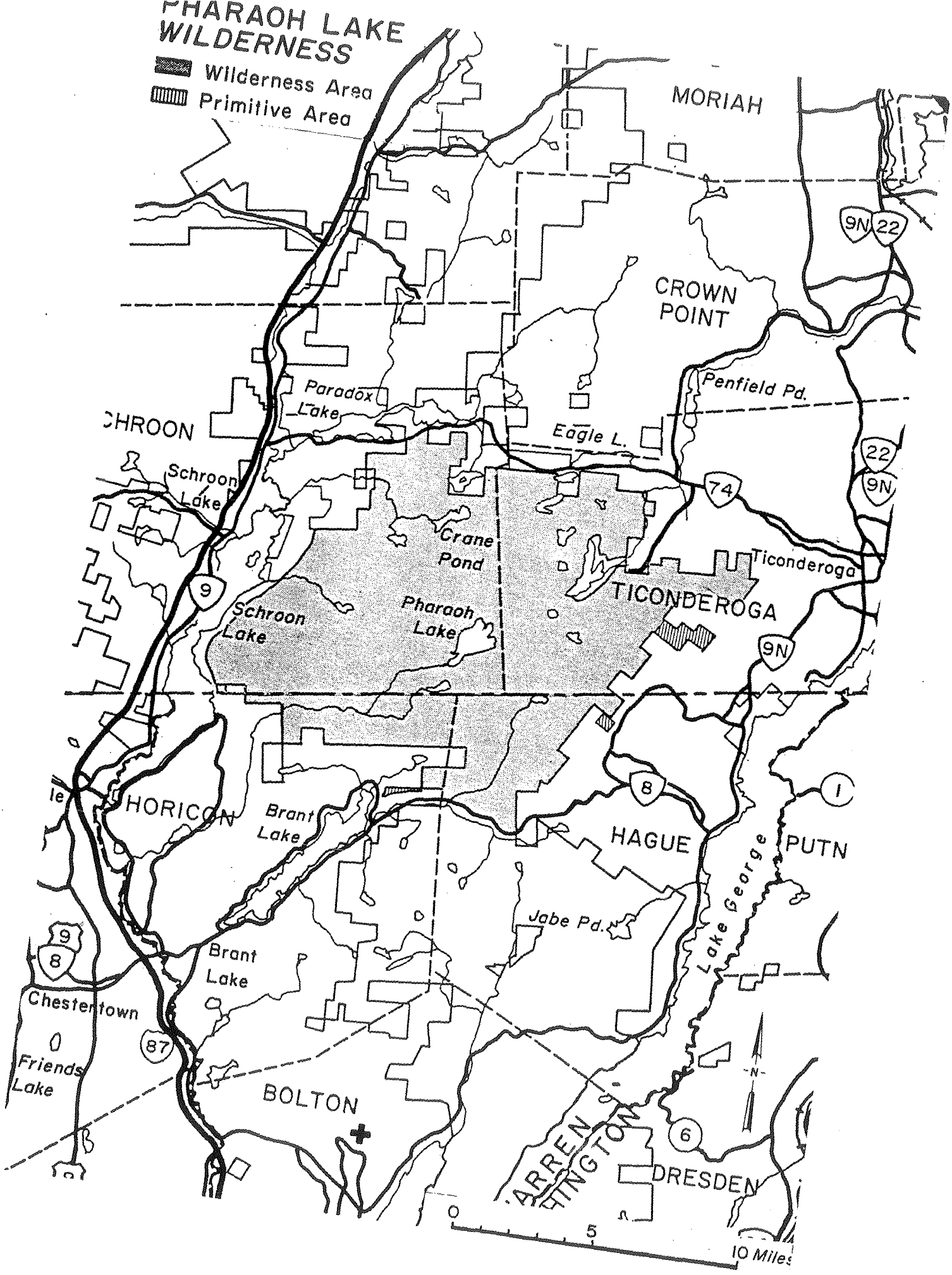
All of the documents, files, and other planning records that chronicle the planning process for the PLWC are available for public inspection during regular business hours at the Regional Forestry Manager's Office, NYS DEC, Route 86, Ray Brook, NY 12977. These planning records detail the information used and the decisions made in preparing the final plan.

PLAN CHRONOLOGY
PHARAOH LAKE WILDERNESS COMPLEX

1.	Initiate planning team	April 1984
2.	Press Release: Solicit public comment	May 1984
3.	Commence Field Inventory	May 1984
4.	Mailed invitations for specific comments to concerned citizens	July 1984
5.	Requested comments from local governments Towns of Hague, Horicon, North Hudson, Schroon and Ticonderoga	July 1984
6.	Meet with Essex County Sportsmen's Federation	August 1984
7.	Meet with Schroon Town Supervisor	August 1984
8.	Meet with Horicon Town Supervisor	September 1984
9.	Meet with Ticonderoga Town Supervisor	October 1984
10.	Crane Pond Road inspection with Schroon officials	November 1984
11.	Environmental News Bulletin (ENB), intent to prepare draft environmental impact statement (DEIS)	November 1984
12.	Meet with North Hudson Town Supervisor	November 1984
13.	Public discussion group (Schroon Lake)	November 1984
14.	Public discussion group (Ticonderoga)	December 1984
15.	In-house review of inventory	December 1984
16.	Press Release: Announce first public meeting to receive comments on inventory and identify issues	January 1985
17.	Meet with Adirondack Mountain Club	January 1985
18.	Public discussion group (Schroon Lake)	January 1985
19.	Distribute 100 copies of inventory	February 1985
20.	First formal public meetings: Schroon Lake and Ticonderoga	April 1985
21.	Receive and review public comments (90-day period)	July 1985
22.	Prepare proposed management sections of plan	October 1985
23.	Adirondack Park Agency revises Adirondack State Land Master Plan	February 1986
24.	Revise draft plan to comply with Adirondack State Land Master Plan	March 1986

25. ENB: Notice of Completion of draft plan and DEIS	May 1987
26. Press Release: Announce second public meeting for draft plan and DEIS	May 1987
27. Distribute 200 copies of draft plan	May 1987
28. Publish legal notices for public meeting (30 days advance notice)	June 1987
29. Formal public meeting (Schroon Lake) for public comment	July 1987
30. Receive and review public comments (90-day period)	October 1987
31. Governor Cuomo approves revised Adirondack State Land Master Plan	November 1987
32. Revise final plan and DEIS	March 1988
33. ENB: Notice of Completion of final plan and EIS	April 1988
34. Plan submitted to Adirondack Park Agency	April 1989
35. Update draft to reflect removal of non-conforming uses	May 1990
36. APA requests development of Wilderness Fisheries Guidelines	June 1990
37. Develop Wilderness Fisheries Guidelines	November 1991
38. Final draft plan re-submitted to Adirondack Park Agency	February 1992

TABLE OF CONTENTS


PHARAOH LAKE WILDERNESS
Wilderness Area
Primitive Area
MORIAH
CROWN POINT
Paradox Lake
Penfield Pd.
Eagle L.
SCHROON
Schroon Lake
Crane Pond
Pharaoh Lake
Schroon Lake
TICONDEROGA
Ticonderoga
HORICON
Brant Lake
HAGUE
Lake George
PUTN
Jabe Pd.
Brant Lake
Chestertown
Friends Lake
BOLTON
WARRENSBURG
DRESDEN
9N
22
74
9
8
87
6
1
N
0
5
10 Miles

I. INTRODUCTION

A. Area Description

1. General Description

a. Bald Ledge Primitive Area

The Bald Ledge Primitive Area is located in the Town of Ticonderoga, Essex County. It consists of an appendage of the Pharaoh Lake Wilderness to the west and is further bounded by private land, north, east and south. It is severed from the wilderness area by a road (0.5 mile in length) used periodically to transport forest products from adjacent private land.

b. Gooseneck Primitive Area

The Gooseneck Primitive Area is located in Lot Nos. 25 and 38 of the Paradox Tract, Town of Ticonderoga, Essex County. Once part of the Pharaoh Lake Wilderness, this area was reclassified to primitive area status in 1982 to provide for the continued operation of Gooseneck Pond as a water supply facility for the Village of Ticonderoga. The primitive area includes the dam and control valves at the pond and a 100' wide corridor from the State land boundary to the dam site containing a restricted access service road. Gooseneck Pond, under Section 15, Article 1509 of the Environmental Conservation Law, is a legally defined public water supply.

c. Hague Brook Primitive Area

This area is located in the Town of Hague, Warren County. It is bounded on three sides by private land and on the northeast by the Pharaoh Lake Wilderness Area. It contains a private access road to a parcel of private land lying between this area and the Pharaoh Lake Wilderness Area to the northwest. The owner of this inholding is

reputed to have deeded rights to use unspecified roads within the area.

d. First Brother Primitive Area

The First Brother Primitive Area lies east of Brant Lake in the Town of Horicon, Warren County. It is bounded by private lands north, east, and south, and on the west by Palisades Road, a town highway. A common corner is shared with the Pharaoh Lake Wilderness, i.e., the southwest corner of Lot 41, Brant Lake Tract.

e. Pharaoh Lake Wilderness Area

The Pharaoh Lake Wilderness Area is located in the Towns of Schroon and Ticonderoga in Essex County and in the Towns of Horicon and Hague in Warren County. The wilderness is located east of Route 9 and Interstate 87, south of Route 74, north of Route 8 and west of Route 9N. The area is bounded on the west by the East Shore Road and private land; north by Route 74, the great lot line between Eagle and Pyramid Lakes and private land; east by Bald Ledge and Hague Brook Primitive Areas, Putnam Pond Public Campground and private land; and, south by Route 8 and private land.

The wilderness was expanded in 1979 by the reclassification of the Crane Pond Primitive Area, with the exception of the Crane Pond Road, to wilderness. A snowmobile trail, 3.5 miles in length leading from Route 74 to the Crane Pond Road, was closed in 1975, making this reclassification possible. The Crane Pond Road was then classified to a primitive corridor.

Following an assessment of public use trends and their resource impacts in the northwest portion of the wilderness, including Crane

Pond, the Adirondack Park Agency reclassified the Crane Pond road from primitive to wilderness and added it to the Pharaoh Lake Wilderness in 1986. This action was approved by Governor Cuomo in November of 1987 as part of the five year revision of the Adirondack State Land Master Plan. According to the Master Plan, the Crane Pond Road was listed as a "non-conforming use" and, scheduled for closure no later than the end of the third year following wilderness classification. The road was officially closed to motor vehicle use in December 1989.

2. Acreage

a. Bald Ledge Primitive Area

Comprises 5 lots and totals 500 acres

b. Gooseneck Primitive Area

Occupies approximately 1 acre

c. Hague Brook Primitive Area

Contains 210 acres

d. First Brother Primitive Area

Contains 90.5 acres

e. Pharaoh Lakes Wilderness Area

The acreage of the wilderness is 46,283 acres.

3. Access

Due to its proximity to Interstate 87, Routes 8, 9 and 74, and numerous state, county, and town roads, public access is easily gained.

a. Bald Ledge Primitive Area

The area is bisected by a private road from the east, but there is no developed public access.

b. Hague Brook Primitive Area

The area is accessible from New Hague road via numerous old woods roads.

c. First Brother Primitive Area

The area is accessible via Palisades Road east of Brant Lake.

d. Pharaoh Lake Wilderness

1. Adirondack Trailhead
2. Berrymill Pond Trailhead, New Hague Road
3. Blue Hill Trailhead, Route 74
4. Crane Pond Road
5. Gull Pond Trailhead, Alder Meadow Road
6. Lost Pond Trailhead, Putnam Pond Public Campground Road
7. Mill Brook Trailhead
8. Otter Pond Trailhead, Route 74
9. Putnam Pond Public Campground
10. Spectacle Pond Trailhead, East Shore Road
11. Springhill Ponds Trailhead
12. Tubmill Marsh Trailhead, Route 74

B. History of the Land Unit

The histories of the units in the Pharaoh Lake Wilderness Complex are all entwined.

The Schroon Lake region was settled in the 1790's and by the late 1800's, this area had become a flourishing resort community. Settlement of the wilderness area was limited to the fringe areas and was a mix of lumber camps, subsistence farms and boarding houses for hunters and fishermen.

Prior to State ownership, logging was the principal commercial activity. By the mid 19th century, most of the region's virgin white pine had been harvested. As early as 1830, sawmills were active at Alder Meadow, Crane Pond and Paradox. Several smaller mills sprang up but soon moved on as the timber resource was consumed. Remnants of these former mill sites still can be found at the outlets of Crane Pond and Pharaoh Lake.

Following the demise of the white pine forest, the logging industry turned to eastern hemlock to supply tanin bark for the Schroon River Valley tanneries. By 1875, major tanneries were situated at Millbrook (now Adirondack) and near the Brant Lake outlet. Hemlocks were felled in the spring when the bark began to "slip" and the bark was piled on nearby skid roads until frozen ground permitted easy transport. Remains of these old bark roads still can be found in the Desolate Brook Valley and the road leading from Brant Lake to Pharaoh Lake.

Discovery of iron ore north of Route 74 stimulated charcoal operations at Chilson, Cranberry Marsh and at Lost Pond. Charcoal soon became a cash commodity and whole forest areas were denuded as the iron ore industry expanded.

Graphite was found in the general area and mined commercially at Bear and Rock Ponds.

Large accumulations of logging slash, combined with unseasonable droughts, contributed to significant wildfires in the period from 1903-1913. These fires largely altered the forest cover to pioneer species and laid bare mountain summits.

The area was not generally conducive to agriculture. Shallow soils, rock and excessive slopes precluded most attempts at farming. However, Culver Fields, once an active farm near Mill Brook, was planted to red

pine. Gregoryville, an old settlement on the Sucker Brook-Desolate Brook Trail, was a small farming settlement that is now completely overgrown.

Forest Preserve acquisitions commenced with tax sale foreclosures beginning in 1890 and were heightened with the depression years of the 1920's and 1930's. Much of the area surrounding Crane Pond was purchased in 1908 from the Raquette Falls Land and Timber Company. The Bald Ledge Primitive Area, which comprises five 100-acre lots, was purchased and consolidated through acquisitions in 1928, 1931, and 1936.

Despite human influences over the years, the PLWC does possess a natural-looking character today, the scars of human activity being largely healed. It now provides a reasonable example of the wilderness that covered the land before it was occupied by the first Europeans.

II. RESOURCE INVENTORY OVERVIEW

A. Natural Resources

1. Physical

a. Geology

The Pharaoh Lake Wilderness Complex (PLWC) is situated in the central highlands region of the Adirondack Mountain massif. The bedrock is precambrian, formed over a billion years ago.

Granite gneiss, a metamorphic rock whose origin is very complex, comprises the bulk of the PLWC. Its color is generally pink, due to a predominance of quartz and feldspar. It is relatively resistant to erosion and forms mountain masses.

In some areas, a complex arrangement of metamorphic rocks of sedimentary origin occur. Their susceptibility to erosion varies according to rock type so that the resultant topography is convoluted and rugged. This occurrence of metasediments represents a downfill into the massif; they were originally deposited as limestone, sandstone and shale beds and were enfolded and changed into marble, quartzite, gneiss and schist.

In other areas there is an exposure of leucogranitic gneiss, layered with other rock types. These may include magnetite and/or lodestone.

Amphibolite, a blackish rock, and one of the most widespread types found in the Adirondacks, is found in the area. Its origin is hypothetical, possibly volcanic.

In certain areas the bedrock type is unknown because it is buried beneath unconsolidated deposits of glacial origin, deposited tens of thousands of years ago.

b. Soils

Soil data is available at a map scale of 1:62,500. This general soils data was prepared for the Adirondack Park Agency by the USDA Soil Conservation Service in cooperation with Cornell University in 1975. Although this data is generalized, it is useful when applied to soil limitations developed for backcountry recreation activities. Most of the land has a thin cover (a yard or less in thickness) of stony soil derived from the weathered bedrock.

Glacial till, which forms a 5 to 15 feet or thicker blanket over part of the area, has weathered to form soils that are stony and gravelly, very permeable and possessing an iron rich humus layer. A layer of hardpan occurs a foot or so beneath the surface of some of these soils, restricting internal drainage.

Along the western boundaries of the area, thick deposits of glacial outwash have given rise to sandy, gravelly soils.

To date, there have been no studies to investigate the forest productivity of the PLWC soils nor have soil pH or soil buffering capacities been determined.

c. Terrain

The landscape character of the region features a variety of terrain, ranging from the irregular rocky shorelines of the many lakes and ponds to a series of steep ridges and valleys with abrupt changes in elevation.

Pharaoh Mountain, with an elevation of 2,551 feet, the most significant topographic feature, is centrally located within the wilderness area. A number of lesser, steep sided hills and mountains characterize the area and give the appearance of a rugged, broken topography.

d. Water

The PLWC includes headwater portions of the Upper Hudson and Lake Champlain drainages. The area includes approximately 70 miles of small coldwater streams which are primarily first and second order sections. Stream gradients are variable, but include extended sections of extremely high gradient (200+ feet/mile).

The PLWC contains 41 ponded waters with a total surface area of 1,277 acres. Pharaoh Lake is the largest individual water (441-acre surface area). It is one of the largest lakes in the Adirondack Park totally surrounded by Forest Preserve lands. Other large waters include: 167-acre Crane Pond, 77-acre Gooseneck Pond, 66-acre Whortleberry Pond, 54-acre Berrymill Pond, 32-acre Crab Pond, 13-acre Bear Pond, and 15-acre Oxshoe Pond.

Section IV, Projected Use and Proposed Management-Fisheries, lists the major ponded waters in the PLWC with a brief narrative statement pertaining to their important features, including past and current management, accessibility, size, fish species composition and shoreline characteristics. Table 1 gives additional statistical information about the ponded waters of the area, including watershed, fisheries management classification, acreage, depth, and volume. Chemical and biological data are summarized in Table 2.

e. Wetlands

The wetlands in the PLWC are of unparalleled value serving as natural buffers for erosion, flood, and pollution control to protect area water resources. They are natural recreation areas affording unlimited opportunities for bird watching, wildlife observation, photography, hunting, trapping, and canoeing. Open space character is maintained by ponded waters and associated wet meadows.

Wetlands also support a wide array of fish and wildlife and can be important habitats for a number of protected wildlife species. Threatened species that are known or believed to occur within the unit include the osprey and red-shouldered hawk. Species of special concern include the Cooper's hawk, Jefferson salamander and spotted salamander, wood turtle, and common loon.

A detailed inventory of PLWC wetlands was completed by the Adirondack Park Agency (See Map 3). A total of approximately 400 wetlands one acre and larger were identified. The wetlands are variable in size with the larger wetland complexes found in association with Pharaoh Lake Brook, Mill Brook, Sucker Brook, Coffee Pond, Beaver Meadow Marsh, Putnam Creek, and Rock Pond Brook. Portions of three large adjacent wetlands (Haymeadow Brook, Alder Creek, and Cranberry Marsh) extend into the PLWC.

f. Climate

Climatological factors, such as temperature and amounts of snow cover and rain, affect seasonal use trends, trail locations, accessibility and public use management. The annual total precipitation averages 40 inches. Of this precipitation, snowfall normally averages 60 to 80 inches and covers the ground for about 4 months, December through March. However, summer and fall months tend to be quite dry. The growing season lasts approximately 120 days.

2. Biological

a. Vegetation

The forest types of the PLWC have developed in response to a variety of human and natural influences. Prior to Forest Preserve acquisition, most of the State's lands had been harvested for forest products. Abandoned agricultural lands soon reverted to forests as at Culver Fields and Gregoryville. Forest fires, both natural and man-caused, burned extensive areas.

Historically, these factors have contributed to a great diversity of forest types and a mix of early and late stage forests, conducive to a richness in plant and animal species. Seven broad forest types are present:

1. Pine-Oak-Northern Hardwood forests occupy the more fertile, better drained south facing slopes of the Bald Ledge Primitive Area and Pharaoh Lake Wilderness. Major tree species include eastern white pine, red and white oak, beech, sugar maple, and yellow birch. The oaks and beech provide mast (acorns and nuts), an important food for deer, bear, and smaller mammals.

2. Pioneer Hardwoods cover extensive portions of the PLWC. They represent an early successional plant community associated with old burns, abandoned agricultural lands, blowdowns, and other forest disturbances. Its primary components are aspen, pin cherry, red maple, and white birch. Some areas are relatively open with a mixture of grasses, shrubs, and trees; other areas are dense thickets of saplings which afford a varied habitat for wildlife. This type is best illustrated by an extensive old burn south of Pharaoh Mountain.

3. Northern Hardwood Forests in the PLWC prefer the well-drained, rich sites of the uplands. These forests are represented by several early and late stages of sugar maple, beech, and yellow birch. Most forest stands have an abundance of beech. Beech is a vigorous tree and has dominated many sites after logging because of its ability to sprout and send up root suckers. The abundance of beech in the PLWC has favored the spread of beech bark disease, an insect-fungus complex which has caused extensive mortality in older trees. Excellent mature northern hardwood forests can be found between Grizzle Ocean and Putnam Pond and southwest of Berrymill Pond.

4. Mixed Pine Forests surround many lakeshore locations and occupy the less fertile, drier ridges. Red and white pine are the most common species encountered. Both pines have served as pioneer species following blowdown and forest fire in the PLWC. The well-drained, sandy, rocky knoll southeast of Pharaoh Lake contains many outstanding red and white pine. Charred stumps attest to past fires.

5. Eastern Hemlock is a minor forest type in the region preferring cool, moist sites where it reaches its best development under dense forest conditions protected from heavy winds. The largest hemlock

stands in the wilderness are found where the soil is damp and shaded along streams, narrow valleys, ponds and lakes, and on north-facing slopes. Deep, dark hemlock forests can be found along the Crane Pond Road and Suckerhole Hill.

6. Spruce-Fir forests prevail in the lowlands and on the extreme upper slopes of several mountains. These forests are dominated by red spruce and balsam fir. Infrequent associates include white and yellow birch, red maple, and northern white cedar. Although minor in occurrence, this forest type provides important winter cover for deer as in the Desolate Brook basin.

7. Plantations of red, white, and Scotch pine and Norway spruce, planted prior to 1940, are found along the Pharaoh Road south of Mill Brook at Culver Fields. Although not wilderness in character, these plantations are reverting to natural stands as forest succession takes place.

To date, the presence of rare and endangered plant species has not been documented in the PLWC region (DEC, The Natural Heritage Program, 1990).

Major common understory plants typical of the PLWC include:

Speckled Alder	Adder's Tongue	Hepatica
Elderberry	Sarsaparilla	Saxifrage
Witch Hobble	Partridgeberry	Baneberry
Laurel	Indian Pipe	
Labrador Tea	Wild Leek	
Leatherleaf	Indian Cucumber Root	
Choke Cherry	False Solomon's Seal	
Cranberry	Dutchman's Breeches	
Blueberry	Wild Ginger	
Huckleberry	Violets	
Trillium	Clubmosses	
Moccasin Flower	Hophornbeam	
Gold Thread	Ground Hemlock	
Marsh Marigold	Spiraea	

Bluebead Lily	Wild Raisin
Solomon's Seal	Beaked Hazelnut
Alternate Leaf Dogwood	Bearberry
Wintergreen	Canada Mayflower
Bunch Berry	Snakeroot
Wood Sorrel	Various Grasses
Star Flower	Various Ferns
Skunk Currant	Pipsissewa

b. Wildlife

Field inventories of wildlife species have not been made in the PLWC. Lists of species present were compiled using a number of publications and the reports of DEC staff and other observers (Tables 16, 18 and 20).

1. Birds

At least 140 species of birds are present in the unit one or more seasons of the year (Appendix 12). In addition to direct observation, sources of information used to develop a list of birds present include Birdlife of the Adirondack Park by Bruce Beehler (1978), Birds of New York State by John Bull (1974), Webb et al (1977), birds listed during the five-year Breeding Bird Atlas Project, and knowledgeable people.

Habitat preferences of selected bird species are listed in Appendix 13. Birds associated with marshes, ponds, lakes, and streams are numerous and include the common loon, pied billed grebe, great blue heron, American bittern, ducks, Canada goose and the spotted sandpiper. The most common ducks include the mallard, black duck, wood duck, hooded merganser, and common merganser.

Waterfowl, woodcock, snipe, rails, crow, ruffed grouse, and wild turkey are the only game birds that can be taken legally during prescribed hunting seasons.

Birds of prey common to the area include the barred owl, great horned owl, goshawk, red-tailed hawk, sharp-shinned hawk and broad-winged hawk.

Appendix 12 indicates the variety of song birds found among the various habitats present in the area and includes woodpeckers, flycatchers, wrens, thrushes, vireos, warblers, blackbirds, finches, grosbeaks, and sparrows.

2. Mammals

As a supplement to observations by DEC Wildlife staff, A Field Guide to the Mammals by William Henry Burt (1964), was used to develop a list of mammals present in the PLWC (Appendix 14). Selected species and their preferred habitats are discussed in Appendix 15.

Larger mammals known to inhabit the PLWC include white-tailed deer, black bear, beaver, otter, fisher, coyote, bobcat, raccoon, red fox, gray fox, marten, muskrat, skunk, porcupine, and snowshoe hare. A variety of smaller mammals reside in the unit, including a number of species of shrews, bats, moles, and mice, along with the weasel, mink, eastern chipmunk, and red squirrel. Except for protected species, all may be taken in accordance with applicable DEC regulations. Information on harvest is collected on the first seven of the listed species by town and/or wildlife management unit. Appendix 18 gives harvest records for the seven species.

Beaver are frequently a nuisance by flooding trails and roads. Problem sites are on Mill Brook on the Pharaoh Lake trail, the outlet of Crane Pond, and the outlets of Grizzle Ocean Pond and Rock Pond.

Six deer wintering areas have been identified in the PLWC. They include the vicinities of Wilcox Pond, Beaver Meadow Marsh, Spectacle Pond, east end of Crane Pond through Honey Pond, Berrymill Pond and an extensive area the south of Park Mountain east to Spuytenduivel Brook and north around Pharaoh Lake and Pharaoh Mountain (Map #4).

Deer wintering areas are usually areas of spruce-fir forest that serve as shelter when snow depths accumulate to 20 inches or more. They are typically used every winter. The carrying capacity of deer wintering areas essentially controls the carrying capacity of the entire annual range of a deer population.

3. Amphibians and Reptiles

According to the observations of DEC Wildlife staff, and information obtained from A Field Guide to Reptiles and Amphibians by Robert Conant (1958), 3 species of turtles, 10 species of snakes, 9 species of salamanders, 1 species of toad, and 8 species of frogs are believed to be residents of the PLWC (Appendix 16). Selected species and their habitat preferences are listed in Appendix 17. Those species found mostly in marshes or ponds and along wooded streams include the following:

a. Turtles - snapping, painted
b. Snakes - northern water, northern redbellied, eastern garter, eastern ribbon, northern brown, northern ringneck
c. Toad - American

d. Salamanders - red spotted newt, spotted, blue spotted, Allegheny mountain, northern spring, northern two-lined, northern dusky

e. Frogs - northern spring peeper, bull, pickerel, northern leopard, green, wood, mink, eastern gray tree

A few species can be found under logs and leaf litter on the forest floor or in fields. The snakes and the wood turtle listed below do not require moist surroundings to survive:

a. Snakes - northern ring neck, eastern smooth green, eastern milk, eastern garter

b. Salamanders - red-backed

c. Turtle - wood.

4. Endangered, Threatened, Species of Special Concern and Other Unique Species

Species recognized as endangered by the federal government and New York State, which may occur in the PLWC, are the bald eagle, golden eagle, peregrine falcon and Indiana bat. Single golden eagles were sighted in 1971 and 1972 near Treadway Mountain. There are no historical reports of bald eagles, golden eagles, peregrine falcons, or Indiana bats residing in the unit.

New York has released peregrine falcons and/or bald eagles each year in the Adirondacks from 1981 to 1988. The Department of Environmental Conservation has documented bald eagles and peregrine falcons nesting in the Adirondacks. Potential nesting sites exist within the unit.

Indiana bats have been found in an inactive mine located near the PLWC.

Threatened species of wildlife that may be residents of the PLWC are the osprey and the red-shouldered hawk. One pair of ospreys were nesting on Beaver Meadow Marsh in 1981 and summer and fall migrants have been observed on Schroon Lake and the Hudson River.

Species of special concern (6NYCRR182) that may be present in the PLWC include the Jefferson salamander, spotted salamander, wood turtle, common loon, Cooper's hawk, common raven, eastern bluebird, and the small-footed bat.

A survey to determine the presence of the common loon was conducted in 1978 on Crane Pond, Pharaoh Lake, and Whortleberry Pond; none were found. Two loons were observed on Pharaoh Lake on August 12, 1981. However, a DEC survey of Crane, Pharaoh, and Whortleberry in 1984 and 1985 produced no sightings.

The presence of the common raven has been confirmed in the Breeding Bird Atlas, while the presence of the eastern bluebird is described as "probable".

Small-footed bats have been counted, among a number of other species, in an inactive mine serving as a hibernaculum located west of Graphite, just outside the PLWC. They very probably can be found in the PLWC during the summer.

There are a number of wildlife species which are considered obligative to extensive areas of forest that are relatively undisturbed by human development. A list of species which are found in the PLWC whose range in New York is generally confined to the Adirondacks would include:

Birds	Mammals
Golden Eagle	Fisher
Northern Raven	Marten
Olive-sided Flycatcher	Bobcat
Yellow-bellied Flycatcher	Black Bear
Swainson's Thrush	
Lincoln's Sparrow	
Red Crossbill	
White-winged Crossbill	
Evening Grosbeak	
Ruby-crowned Kinglet	
Black-throated Blue Warbler	

Wildlife once present in the PLWC but now extirpated include the moose, timber wolf, cougar, and lynx. Moose have migrated from adjoining northeast states into New York and may one day take up residence.

c. Fisheries

The acquatic communities of the Adirondacks are a result of geological and human influences. Prior to human influences, relatively simple fish communities were common, particularly in headwater areas such as the PLWC. Human-caused changes in habitat and introduction of fishes have altered those natural communities. Nonnative fishes are widespread and many native species now are more widely distributed than historically. Other natives, notably brook trout and round whitefish, have declined.

Geological History

George (1980) provides a summary of geological events which influenced the colonization of the Adirondack ecological zone by fishes. A limited number of cold tolerant, vagile, lacustrine species closely followed the retreat of the glacier. Such species presumably had access to most Adirondack waters. At about 13,000 BP (before present), glacial Lake Albany with a surface elevation of

350' a.s.l. (average sea level), provided a colonizing route for Atlantean and eastern boreal species to Lake George and Lake Champlain. Barriers above that elevation would have excluded those species from interior portions of the Adirondacks.

By about 12,300 BP, the Ontario lobe of the glacier had retreated sufficiently to allow species associated with the Mississippi drainage access to fringes of the Adirondacks via the Mohawk Valley and the St. Lawrence drainage including Lake Champlain. Lake Albany had apparently drained prior to that, as barriers had formed on the Lake George outlet (George 1980).

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

Human Influences

Approximately 300 years ago the influence of human cultures from the Old World initiated a period of rapid manipulation of the natural environment. Commercial trapping, hunting, fishing and lumbering precipitated substantial impacts to natural ecosystems. Slightly more than 150 years ago, canal construction opened new migration routes for fishes into peripheral Adirondack areas. Railroads and

roads were developed to support the tanning and lumbering industris, and in the late 1800's tourism rapidly expanded (George, 1980).

This exploitation of pristine fisheries combined with anthropogenic environmental degradation resulted in the decline of fish populations and stimulated early management efforts consisting primarily of stocking.

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

An example of the artifically induced range extension of an Adirondack native species is found in the spread of bullheads throughout the St. Regis Canoe Area waters. The biological surveys of the Champlain and St. Lawrence-Canada watersheds, conducted in the early 1930's, documented the presence of bullheads in only four of a subset of eight ponds. This is extremely unusual, given the fact

that none were collected from other nearby interconnecting waters. It strongly suggests that they were artifically introduced even there. Most such introductions cannot be documented.

Detailed documentation of the historic fish communities is not available. Extensive fishery survey data was first collected in the 1930's, decades after the massive stockings and introductions of the late 1800's. Reviewing work by Mathers from the 1880's and others, George (1980) has summarized what is known. Table 3 presents information on species known to be native, native-but-widely introduced, and nonnative. It should be noted that the native classification does not mean those species were found in every water nor even in a majority waters. For example, of 1,123 waters surveyed by the Adirondack Lakes Survey Corporation in the 1980's which contained fish, white suckers and northern redbelly dace were found respectively in 51 and 19 percent of the lakes. The other species listed in Table 3 as native are less widely distributed. Such distributions, after a century of introductions, demonstrate that "native" does not necessarily imply a historically ubiquitous distribtuion. Indeed, barriers, high stream gradients, low stream fertilities, and rigorous climatic conditions following retreat of the glacier resulted in low species diversity for fishes in most Adirondack waters.

The available data demonstrates that introductions occurred in the Pharaoh Lakes waters. Nonnative fishes including yellow perch, golden shiners, smallmouth bass and others were present during early surveys (Table 10). Later surveys show introductions are continuing,

even though reclamations reduced the occurrence of a few species (Table 10). Early and recent surveys also show the ranges of native fishes have been increased (Table 9). There is no way to determine which of the native species were historically present in Pharaoh and which were introduced concurrently with the nonnatives.

Brook trout were particularly successful at colonizing and thrived in the relative absence of competing and predacious fishes. George (1980) states: "Under primeval conditions, the brook trout was nearly ubiquitous in the Adirondacks. Its agility, great range in size and facility in rapidly flowing water allowed it to spread widely, perhaps even concurrently with the demise of the glaciers, thus explaining its presence in unstocked waters above currently impassible waterfalls."

Topography

Watershed morphometry probably severely limited the diversity of fishes in the PLWC. The PLWC includes first and second order streams, and fish diversity is normally low in such headwater portions of watersheds (Hynes 1972). Topography would have made that lack of diversity particularly prominent in the PLWC. About 75 percent of PLWC drains via Schroon and Brant Lakes to the Hudson. On the main stem of the Hudson, the Hadley-Luzerne Falls and possibly Spier Falls were barriers at elevations above historic Lake Albany. As Lake Albany drained, two additional barriers, Glens Falls and Bakers Falls, formed. An additional 242 feet of elevation from above the Hadley-Luzerne Falls to Schroon Lake, and the resulting lotic habitat, would have acted as a strong filter, if not a barrier, to many species. Similar gradients and barriers, notably the falls at

Crown Point Center, are present on Putnam Creek which drains about 25 percent of the PLWC.

Furthermore, the individual streams draining the PLWC have extended stretches of extremely high gradient which include additional barriers to upstream movement of fishes. Gradients of 200 feet/mile or greater are found on extended stretches of the various streams (Table 4). While those streams have not been ground checked, barriers are virtually inevitable at such gradients. For comparison, the West Branch Ausable from the top of Monument Falls to the downstream end of the flume has a gradient of about 115 feet/mile and includes barriers at the flume, at a falls upstream of the Whiteface bridge and at High Falls.

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

Impacts of Fish Introductions

The decline in brook trout associated with the introduction of other fishes is a result of both predation and competition for food. Brook trout feed primarily on invertebrates. Many other fishes,

including white sucker, longnose sucker, redbreast sunfish, pumpkinseed, brown bullhead, yellow perch, and the cyprinids (minnows, shiners, and dace) also feed primarily on invertebrates (Scott and Crossman 1973). In low fertility waters such as Adirondack ponds, competition for such forage can be intense.

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

Competition and predation by introduced species have greatly reduced the abundance of brook trout sustained by natural reproduction. Only about 40 (10%) of the traditional brook trout ponds in public ownership in the Adirondack Park now support viable, self-sustaining brook trout populations and they are gradually being lost as other fishes are introduced. None of the PLWC ponds surveyed presently sustain viable brook trout populations sustained by natural reproduction. The potential for successful natural reproduction is greatly enhanced when interspecific competion and predation are greatly reduced or eliminated.

Human introductions of nonnatives and natives which had limited distributions have nearly eliminated natural brook trout monocultures in the Adirondacks. Historic brook trout monocultures have been

documented in the Adirondack Park (Table 5) and the survival of even a few such unique communities through the massive environmental disturbances and species introductions of the 19th and 20th centuries is quite remarkable.

Brook trout populations in combination with other native species also occurred. Naturally reproducing brook trout presently maintain such combinations (Tables 7 and 8), and routine stocking of brook trout does so on about 360 public waters.

Habitat Changes

Natural reproduction by brook trout is also very sensitive to impacts from sedimentation caused, for example, by extensive logging, fires and other human activities. During the 1800's, the Pharaoh Lakes area supported a logging industry including several sawmills. Industry products included lumber, tannin bark for tanning, and charcoal for iron processing. In addition to logging, graphite mining occurred in the Pharaoh Lakes area at Bear and Rock Ponds. For additional information on logging and mining, see Section I.B. Due to their reproductive behavior, brook trout are among the most susceptible of all Adirondack fish fauna to the impacts of sedimentation. Brook trout spawn in the fall, burying their eggs in gravel. Flow must be maintained through the gravel, around the eggs, until hatching the following spring. Sand or fine sediments restrict flow around the eggs resulting in an inadequate supply of oxygen.

The long incubation period, the lack of care subsequent to egg deposition and burying the eggs contribute to the brook trout's susceptibility to sedimentation. Only the Atlantic salmon, kokanee

and brown trout are similar in all three aspects and these four species are maintained primarily by stocking. Lake trout, cisco, lake whitefish and round whitefish are fall spawners and have the long incubation period. However, they do not bury their eggs and, therefore, are less susceptible to suffocation. Stocking is necessary to maintain lake trout in many waters, and the round whitefish is in serious decline. The ranges of cisco and lake whitefish have been extended by early stockings, but they are not an abundant component of the Adirondack fish fauna. All other Adirondack fishes are spring spawners, yielding short incubation periods, and, with the exception of rainbow trout, do not bury their eggs. Various strategies further minimize vulnerability to sediments, such as eggs suspended from vegetation (eg. yellow perch, northern pike and certain minnow species) and fanning the nest during incubation (eg. bullhead, pumpkinseed, smallmouth bass and largemouth bass). In general, the species less susceptible to sedimentation have thrived during the recent history of the Adirondacks.

Recently, acidic deposition has impacted the aquatic resources of the Adirondacks. The ALSC surveyed 1,469 Adirondack waters, 24 percent of which had pH levels less than 5.0 (Kretser et al 1989). Historic data and water chemistry analysis demonstrates that many of those waters were historically circumneutral and able to support fishes. Although less well studied, streams have also been impacted by acidification (Colquhoun 1984). The available water chemistry data does not indicate an acidification problem for ponds in the Pharaoh Lakes Wilderness. That data would not have detected episodic events such as acidification of streams during snow melt.

Conclusion

Habitat degradation, widespread introductions of nonnative fishes, and broad dispersal of natives which historically had limited distributions have drastically altered the fish fauna of Adirondack waters. George (1980) states: "All of the above events have impacted the fish fauna of the Adirondack Park, often in complex and synergistic ways subverting any effort at simple explanation for changes in a particular population". Due to a paucity in early stocking records, especially for nongame species, it is impossible to determine if a particular species was native in a specific pond, even though they may have been present by the time of the first fisheries survey.

Native species sensitive to competition and habitat changes have declined. Distribution of other natives, and of nonnatives, have increased due to human influences.

3. Visual

Forest fires burned many of the higher mountaintops down to bedrock, leaving a number of vantage points from which excellent views can be obtained of the surrounding country. Also, the rock outcrops protruding as points beyond the forested shorelines of many ponds and lakes afford fine views. The following locations are popular vistas:

(a) Pharaoh Mountain

(b) Treadway Mountain

(c) Stevens Mountain

(d) Rocky points on Pharaoh Lake, Rock Pond and Crane Pond

4. Unique Areas and/or Historical

(a) Red Pine, Scotch Pine, Norway Spruce, White Pine plantings at the Culver Fields, Adirondack trailhead and Wilcox Pond are unique in that they represent a man-made forest in the wilderness, slowly reverting to natural forests.

(b) Graphite workings at Rock Pond and Bear Pond; historical site.

(c) Mill sites at the outlets of Crane Pond and Pharaoh Lake denote former manufacturing sites within the wilderness.

(d) Foundations in the vicinity of Crane Pond and Gregoryville denote former settlements in the wilderness.

(e) Desolate Valley Brook; historical, remains of old "bark roads" used to transport hemlock bark to Horicon tanneries.

In addition, waters with Adirondack brook trout management classifications in the PLWC and the adjoining Hammond Pond Wild Forest are important in that they contain approximately 10% of New York State's ponded water brook trout resource. The PLWC contains 21 brook trout ponds and the adjacent Hammond Pond Wild Forest Area contains 12. Together, these areas are also important on a national basis, since the majority of the brook trout ponded waters are located in northern New York, Maine, and Canada.

B. Man-Made Facilities

1. Pharaoh Wilderness Section

a. Non-Conforming Facilities

1. Fire Tower - Pharaoh Mountain (1)

2. Observer's Cabin - Pharaoh Mountain (1)

b. Conforming Structures

1. Leantos	Grizzle Ocean (1)
	Clear Pond (1)
	Rock Pond (1)
	Little Rock Pond (1)
	Tubmill Marsh (1)
	Lilypad Pond (1)
	Pharaoh Lake (7)
	Oxshoe Pond (1)
	Berrymill Pond (1)
	TOTAL LEANTOS (15)
2. Pit Privies	Grizzle Ocean (1)
	Crane Pond (3)
	Oxshoe Pond (1)
	Pharaoh Lake (7)
	Rock Pond (1)
	Lost Pond (1)
	Clear Pond (1)
	Berrymill Pond (2)
	Little Rock Pond (1)
	Tubmill Marsh (1)
	TOTAL PRIVIES (19)
3. Remote Tent Sites (non-designated)	Pharaoh Lake (52)
	Putnam Pond-North Pond (9)
	Spectacle Pond (2)
	Gull Pond (1)
	Goose Pond (5)
	Crane Pond (26)

Burge Pond (1)

Oxshoe Pond (3)

Crab Pond (6)

Horseshoe Pond (1)

Whortleberry Pond (7)

Little Rock Pond (1)

Rock Pond (6)

Clear Pond (2)

Grizzle Ocean (5)

Springhill Ponds (5)

Adirondack Trailhead (3)

Millbrook Trailhead (6)

Pharaoh Lake Brook (1)

Lost Pond (5)

Berrymill Pond (3)

Heart Pond (1)

Lilypad Pond (1)

Bear Pond (1)

Desolate Brook (3)

Coffee Pond (2)

Crab Pond (1)

Spuytenduivel Brook (1)

Pharaoh Mountain Trail (1)

Pharaoh Mountain Summit (1)

Crane Pond Road (6)

TOTAL SITES (168)

(Remote sites were field investigated and identified by assistant forest ranger staff during 1983, 1984 and 1987.)

4. Trailheads

Springhill Ponds

Gull Pond

Adirondack

Mill Brook (Pharaoh Road)

Putnam Pond Campground

Lost Pond

Crane Pond

Tubmill Marsh

Otter Pond

Spectacle Pond

Blue Hill Trail

Putnam Pond Campground

Berrymill Pond (from New Hague Road)

5. Sign-in Registers

Crane Pond (1)

Pharaoh Lake (1)

6. Foot Trails

Adirondack Trailhead to Pharaoh Lake Outlet	7.2 mi.
Mill Brook Trailhead to Pharaoh Lake Outlet	3.3 mi.
Pharaoh Lake Outlet to Springhill Ponds	4.6 mi.
Springhill Ponds trail to Long Swing Trail (East Shore)	1.3 mi.
Pharaoh Lake Outlet to Pharaoh Mountain Trail	1.6 mi.
Spur Trail to Lean-tos (Watchrock Point)	0.2 mi.
Pharaoh Lake to Pharaoh Mountain Summit	1.5 mi.
Crane Pond Trailhead to Grizzle Ocean	9.0 mi.

Long Swing Trail to Pharaoh Mountain Summit	2.1 mi.
Route 74 to Crane Pond Road (Blue Hill Trail)	2.7 mi.
East Shore Road to Spectacle Pond	1.6 mi.
East Shore Road to Gull Pond	0.6 mi.
Crane Pond Road to Goose Pond	2.7 mi.
Trail around Grizzle Ocean	1.0 mi.
Pharaoh Lake Trail to Lilypad Pond (Oxshoe Pond, Crab Pond, Horseshoe Pond)	2.7 mi.
Lilypad Pond to Rock Pond	1.3 mi.
Shortcut from Crab Pond to Pharaoh Lake Trail	0.4 mi.
Tubmill Marsh trailhead to Lilypad Pond junction (0.2 miles on private land)	2.7 mi.
Route 74 to Otter Pond (0.1 mile on private land)	0.5 mi.
Putnam Pond Campground to Grizzle Ocean	1.9 mi.
Putnam Pond Campground to New Hague Road (Berrymill Pond)(0.2mile on private land)	4.4 mi.
Putnam Pond Campground to Bear Pond (Heart Pond)	1.5 mi.
Bear Pond to Rock Pond	1.7 mi.
Heart Pond Trail to Rock Pond Trail	0.8 mi.
Putnam Pond to Rock Pond	0.6 mi.
Spur to Clear Pond Trail	0.3 mi.
Trail around Rock Pond	1.9 mi.
Rock Pond to Clear Pond	0.6 mi.
Trail around Clear Pond	0.8 mi.
Clear Pond to Grizzle Ocean Trail	0.8 mi.
Putnam Pond to Clear Pond	0.6 mi.
Putnam Pond to Treadway Mountain Summit	2.4 mi.

Putnam Pond Road to Lost Pond	1.5 mi.
Trail around Lost Pond	1.2 mi.
TOTAL	68.0 mi.

7. Horse Trails (also listed as Foot Trails)

Adirondack trailhead to Springhill Ponds 11.8 mi.

Mill Brook to Pharaoh Lake Outlet 3.3 mi.

8. Dams

Pharaoh Lake Outlet

Crane Pond Outlet

Berrymill Pond Outlet

9. Signs

41 (approximate)

10. Major Bridges

Mill Brook

Pharaoh Lake Outlet

East shore of Pharaoh (2)

Rock Pond to Bear Pond

Lilypad Pond to Rock Pond

Putnam Pond to Clear Pond

Mud Pond Outlet

Putnam Pond to Treadway Junction (2)

Lost Pond Trail

Putnam Pond Campground to Heart Pond (2)

Crane Pond

Inlet to Putnam Pond

Trail along southeast shore (3)

Alder Pond Outlet

Inlet to Glidden Marsh

Blue Hill Trail (3)	
Pharaoh Brook	
Pharaoh Lake (south shore) (4)	
Spectacle Pond Trail (4)	
Crane Pond to Pharaoh Lake (2)	
Split Rock Bay vicinity of spring (2)	
Wolf Pond Outlet	
Trail from Pharaoh to Grizzle Ocean (4)	
Pharaoh Mountain Trail (4)	
Outlet to Grizzle Ocean	
Grizzle Ocean to first trail intersection (2)	
Outlet of Little Rock Pond	
TOTAL BRIDGES (49)	

2. Hague Brook Primitive Area

   a. Non-conforming uses:

      Restricted Access Roads — Mileage Undetermined

3. Gooseneck Pond Primitive Area

   a. Non-conforming Uses

      1. Restricted Access Road — 0.1 mi.

4. Bald Ledge Primitive Area

   a. Non-conforming uses:

      1. Restricted Access Road — 0.5 mi.

5. First Brother Primitive Area

   No facilities.

C. Cultural

The forest preserve lands of this area are rich in history but possess limited cultural resources. This region was not extensively settled and significant improvements on the landscape were few. The cultural resources of this area are limited to early travel routes, farms of early settlers, logging and mining ventures, tanneries and vacation retreats. Many of these cultural sites are identified under the History Section, I B.

The cultural significance of all Adirondack fire towers, including Pharaoh Mountain, is being assessed by the NYS Department of Parks, Recreation, and Historic Preservation.

D. Economic

1. Impact of State Ownership on Adjacent Private Lands

The impact of State ownership on adjacent private lands has not been fully assessed.

In the summer of 1983, Ms. Karen Bomba, of the University of Waterloo, Waterloo, Ontario, conducted an extensive study of trail users in the Dix, Giant, and Pharaoh Lake Wilderness Areas. Her study, entitled "Economic Expenditures of Hikers in the Adirondacks", interviewed 268 groups and encountered 5,229 persons. In the Pharaoh region alone, 2,286 individuals were counted. The study identified trail user characteristics, outlined recreational needs and preferences, and documented economical expenditures to adjoining communities.

Each group interviewed stayed an average of 3 days per year in the wilderness and spent an average of $44.23 per day. Expenditures were made for equipment, meals and lodging, gasoline, groceries, and enter-

tainment. For the Pharaoh region, the 2,286 individuals encountered spent $303,329.34 during the summer months.

We know that thousands of people come to the PLWC from Canada, downstate New York, New England, New Jersey and beyond, and contribute to the local economy. Gas station owners, sporting goods dealers, restauranteurs, grocers, hoteliers, etc., all benefit from the many recreationists attracted to the wilderness area.

2. Impact of Adjacent Private lands on State Holdings

The irregular configuration of the PLWC is bordered by many parcels of private lands, north, south, east and west. This configuration lends itself to problems of access, public use, and trespass. Especially along the East Shore Road, Schroon Lake, hundreds of private parcels abut the wilderness boundary and necessitate extensive boundary line maintenance.

Three important trailheads originate on and/or cross private lands. The eastern trailhead to Berrymill Pond off the New Hague Road is located on private land and its marked trail further crosses 0.9 mile of private land. Access to the Springhill Ponds is via an unmarked trail originating on private land. The marked trail from Tubmill Marsh crosses 0.2 mile of private land. Cooperation with private landowners at these points has been good, but future access cannot be guaranteed. Summer youth camps located in the region utilize the PLWC to a great extent for their summer camping and hiking activities. Large groups of day users, up to 100 individuals, can be encountered in the unit. Popular group spots include Crane Pond, Pharaoh Lake, Pharoah Mountain, and Whortleberry Pond.

Two important landowners who may eventually impact the unit are the American Graphite Company and the International Paper Company. Traditionally, their lands have been open to public use and have served as a buffer to the wilderness area. Should these lands be posted and the public denied access, use of the PLWC could intensify.

E. Public Use

1. Land Resources

There is much concern about the growing public use of the Pharaoh Lake Wilderness Complex and the impacts of this use both on natural resources and the wilderness experiences of visitors. Because of the proximity to the Adirondack Northway, ease of access, the population pressures of the Albany-Capital District area, and the relative attractiveness of the unit, visitor use is heavy.

Visitor use is unevenly distributed between entry points and throughout the backcountry. Although there are 13 major trailheads, three of these (Adirondack, Crane Pond and Mill Brook) account for over two-thirds of all visitor use.

There is heavy use and general congestion along the shorelines of many ponds. Greatest use is concentrated in both location and time. Clear Pond, Crane Pond, Goose Pond, Lost Pond, Oxshoe Pond, and Pharaoh Lake sustain heavy visitor use. The most noticeable impacts include worn-out campsites, litter, and general congestion, with few opportunities for solitude.

Pharaoh Lake is the most heavily used area for camping with up to 300 campers per weekend. Crane Pond is the most popular area for day use.

Pharaoh Mountain summit is a favored hiking destination, receiving up to 2,500 visitors annually. In 1975, the Pharaoh Mountain fire observer registered of 4,000 visitors. However, with the closure of the fire tower in 1984, this number has declined.

The busiest periods of use are the opening of fishing season, Memorial Day, the last week of July, first three weekends of August, Labor Day, and Columbus Day. June use is relatively light.

A public use survey was conducted by assistant forest rangers in 1979. There have been no subsequent studies since. The 1979 survey was limited to the summer season and did not fully cover the spring fishing season nor the fall big game hunting season. The highlights of this survey include:

Number of Groups	497
Number of Persons Encountered	2,778
Group Size: 1-5 persons	79%
6-10 persons	19%
11 persons and over	2%
Average Group Size	4

Most Favored Wilderness Activity	# Respondents	Percentage
1. Fishing	210	42.2
2. Camping	114	22.9
3. Hiking	84	16.9
4. Bird Watching	44	8.9
5. Swimming	29	5.8
6. Hunting	7	1.4
7. Canoeing	7	1.4
8. Trapping	2	0.5

About 75% of all groups entering the PLWC have been between one and four individuals composed largely of family groups and/or friends. Larger groups account for about 25% of total use. Sponsored youth camps, church groups, and scouts make extensive use of the PLWC.

During the main summer season, trail encounters between groups can be extensive, surpassing 12 or more group encounters per day. It is

not uncommon to meet groups of 50 or more on the Pharaoh Mountain trail or along the shores of Crane Pond and Pharaoh Lake. Generally, the quality of the wilderness experience decreases with increased numbers of encounters.

Large groups can also cause excessive campsite wear and tear. Large parties threaten campsites where tent space is limited. Often, campsite areas are extended, soil is compacted, and vegetation is damaged. Water pollution is a potential threat. Other wilderness visitors are often bothered by increased noise and general crowding at favored locations.

The four adjoining primitive areas -- Bald Ledge, First Brother, Gooseneck Pond, and Hague Brook -- have limited access, few or no facilities and receive little visitor use.

2. Fisheries

Information about the numbers of anglers who visit the waters of the PLWC is not available. However, it is known that fishing ranks as one of the most popular activities pursued by visitors (NYSDEC 1979).

It can be assumed that fishing pressure is highest on waters located close to public highways. Angler use of the unit's streams is probably light.

After the trout season opens on April 1, fishing pressure on trout waters typically peaks in intensity in May when trout can still be found in the cool water near the surface of a pond. Fishing activity declines from late spring through the summer when the formation of a thermocline draws fish to deeper water. The decline of fishing activity which occurs as the summer progresses coincides with an increase in pond use

by hikers and campers. Angling on brook trout ponds ceases altogether after the trout season closes on September 30.

It is acknowledged that the use of the waters of the PLWC by anglers impacts the physical surroundings of those waters. The closure of Crane Pond Road and the Pharaoh Lake Road, previously used for motorized access to the interior of the PLWC, will substantially reduce angler use of many ponds, especially Oxshoe, Crane, Goose and Pharaoh, which have been heavily used. The Bureau of Fisheries will continue to coordinate with the Division of Lands and Forests to assess physical impacts related to public use of waters and to prescribe appropriate management actions.

3. Wildlife

Data regarding public use of wildlife resources for the PLWC is lacking for both consumptive (hunting, trapping) and non-consumptive (wildlife observation, photography) uses.

Hunter-trapper use can only be generalized in that hunting parties and individuals use the PLWC principally for big game hunting and trapping furbearers. There is no estimate available as to the number of people nor man days of use.

Information regarding non-consumptive use of wildlife is also lacking. It is generally recognized that observation of wildlife enhances the recreational experience of hikers, campers, and sportsmen.

F. Capacity of the Resource to Withstand Use

1. Land Resources

Capacity of the resource to withstand use is a measure of the arbitrary limit of public use that any specific land area can support.

This capacity is very much site related. Its measurements are based on a combination of the ecological, natural, and physical factors of any one specific site. The total capacity of a 50,000-acre land unit may be 1,000 individuals per day; but, if they are concentrated in just a few acres, both the physical and sociological capacities have been exceeded and overuse has occurred. This concentration of people within a given area can be due to several factors, including hiking trail locations, the existence of bodies of water or waterways, scenic qualities such as can be found on mountain tops or overlooks, and terrain restrictions.

Generally, areas can be easily identified where people have concentrated and have caused site degredation beyond tolerable limits. The determination of a specific capacity for a given area must take into account the areas of popularity and concentration. Then some method must be employed to disperse individuals out and/or restrict numbers in each specific area to keep them within the physical capacities of that area. If this is done in all areas where users tend to concentrate, a general guideline can be developed to establish total use capacity.

Areas with problems of overuse are apparent and easily recognized. Indications of overuse may include extensive litter, erosion on trails, compacted soils, obliterated ground cover and the absence of certain animal and fish species. While overuse is readily perceived, the actual number of users is not easily or accurately determined. At best, we can only offer estimates for use on the PLWC. Much of the day use of the PLWC is water oriented. Overnight use is almost entirely related to the close proximity of water.

The following assumptions and calculations based on guidelines found in the Adirondack State Land Master Plan were made to obtain an approxi-

mate level of capacity to withstand use on the PLWC. Overnight capacity and day use capacity were used as the major indices. The intensive use areas (i.e. the public campgrounds) have developed facilities to protect the environment and were excluded.

a. Overnight Capacity

The user who impacts an area the greatest is the one who stays overnight. The overnight capacity of the PLWC has been calculated as follows:

1. Small bodies of water, here defined as less than 100 surface acres in size, had hypothetical camping sites assigned, taking into account total surface acreage, shoreline irregularity and campsite location practicality, usually relating to site wetness;
2. Large bodies of water, 100 surface acres or more in size, were assigned hypothetical camping sites utilizing the Adirondack State Land Master Plan guidelines dealing with 1/4-mile campsite spacing. Using these procedures, bodies of water were identified for potential camping sites.

Site conditions and existing leanto locations were field evaluated and a total of 179 primitive campsites were assigned. Specific locations and the desirable number of designated sites are listed in Section II B, Man-Made Facilities.

The Adirondack State Land Master Plan defines a Primitive Tent Site as "an undeveloped primitive tent site providing space for not more than 3 tents, which may have an associated pit privy and a fire ring, designed to accommodate a maximum of 8 people on a temporary or transient basis, and located so as to accommodate the need for shel-

ter in a manner least intrusive on the surrounding environment". Utilizing the preceding definition and calculating the total number of hypothetically located sites, a total of 1,432 individuals could be accommodated in the PLWC on a given night. However, when one considers the undesirability of having the full complement of 8 people at each site and the statistical fact that the average group only consists of 4 individuals, the overnight capacity for this area is arbitrarily reduced to 716 individuals per night. These figures are an estimate based on only one criterion. They are not absolute; there are many variables to consider, several of which are subjective. The ideal carrying capacity might be considerably lower or higher than what is recommended.

b. Day Use Capacity

Ordinarily, day use activities do not impact an area at the same level as overnight use. However, specific areas close to access points and favored physical attractions can be significantly impacted. Major areas impacted by day users and their maximum number of visitors observed on peak weekends and holidays are:

Crane Pond - 350 visitors per day

Lost Pond - 30 visitors per day

Goose Pond - 60 visitors per day

Clear Pond - 25 visitors per day

Oxshoe Pond - 20 visitors per day

Rock Pond - 20 visitors per day

Pharaoh Lake - 300 visitors per day

Similar pressures are being felt at Gull and Spectacle Ponds which have easy access and short trail segments.

Signs of overuse in these areas are readily recognized: overcrowded parking, widespread litter, illegal fires, and trampled vegetation. Along the shores of these ponds, dead wood for firewood is generally absent as all the available material has been consumed.

The unit also receives substantial day and overnight use from the many youth camps in the Brant Lake-Schroon Lake region that bring large groups into the wilderness. The Whortleberry Pond drainage is intensely used by the Boy Scouts of America from Camp Read. Other youth camps frequent the area and popular spots include Crane Pond, Pharaoh Mountain, Pharaoh Lake, and the Pyramid Lake drainage.

Unlike overnight capacity, the Adirondack State Land Master Plan has no definitive guidelines to establish day use capacities.

2. Fisheries Resource

DEC angling regulations for PLWC will be designed to incorporate the wilderness values expressed in the wilderness fish management guidelines. In addition to angling regulations, factors at work in the PLWC which serve to limit use include the relative remoteness of ponds from roads and the seasonal nature of angling in coldwater ponds.

Degradation of spawning habitat, and an abundance of competing and predacous fish species, severely limit natural brook trout reproduction (see Section II.A.2.c). Therefore, the populations of many of the unit's brook trout ponds are maintained by DEC's annual stocking program. Most waters (approximately 80 percent of potential trout ponds in wilderness areas), cannot be reclaimed due to technical or logistical reasons. For instance, reclamation is precluded in ponds having extensive bog and swamp areas which provide refugia for fishes during treat-

ment. The need for suitable barrier dam sites or natural waterfalls to prevent reinfestation is another constraint. Thus, maintenance stocking is needed in many wilderness waters to recreate an approximation of natural conditions and to afford a quality fishing experience (one akin to that which primeval explorers may have encountered).

Under existing regulations, the trout populations of stocked ponds are capable of withstanding current and anticipated levels of angler use. Nevertheless, management activities including angling regulations will emphasize establishing brook trout populations which can sustain themselves without the aid of annual stocking. Decades of experience on Adirondack trout ponds have shown the invasion of competing species is much more detrimental to trout abundance, sizes, and natural reproduction than is angling. Certain very heavily fished ponds provide insights regarding this premise.

Black Pond (P256 SLC) on publicly accessible Paul Smith's College property in Franklin County and Lower Sargent Pond (P294 RAQ) on state land in Hamilton County are cases in point. Both have been known to produce high quality brook trout fisheries in terms of numbers and sizes of fish. Both have received extremely heavy fishing pressure and have yielded undoubtedly high trout harvest rates. Both fisheries were sustained totally by natural reproduction after reclamation in the 1970's.

Black Pond was, and still is, governed by special regulations (five fish per day, artificial lures only). Even with these departures from the standard regulations (ten fish per day, use of fish for bait prohibited), substantial harvest of trout occurred. Shortly before 1985 competing fishes became reestablished in Black Pond. Trout numbers and

sizes rapidly declined, and the popularity of the fishery followed suit. Natural reproduction of trout has apparently been eliminated. Now the predominate species are yellow perch and members of the minnow family. Rarely is a trout or trout angler observed on this roadside pond.

Lower Sargent Pond has standard regulations. This water is situated approximately two miles from the nearest road; however, it is accessible via foot trail and float plane. It has been popular with anglers for many years and Lower Sargent Pond has consistently produced high catch rates and some of the largest brook trout reported caught in the region. ALSC collected one bullhead from Lower Sargent Pond in 1984. In addition to this documentation of the presence of bullheads, reliable reports have been received over the past two years that other small, nontrout fish species have been observed in the shallows, and that the brook trout population is beginning to decline.

In certain instances, overfishing, or more accurately, overharvest, may indeed contribute to a reduction in the numbers of large trout. However, brook trout reach sexual maturity at very small sizes (smaller than what most anglers consider "keeping" size). Consequently, we are not aware of the existence of any examples of waters in which regulated harvest has led to reproductive failure. If necessary, DEC fisheries staff have the regulatory authority to enact more restrictive harvest regulations.

The reclamation of several ponds within the unit will lead to the distribution of angler use among those ponds, thereby preventing the concentration of use which would occur if only one or two ponds were reclaimed. Furthermore, the closure of Crane Pond and Pharaoh Lake

Roads, which previously provided motorized access to the interior of the PLWC, will reduce angler use of many waters.

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

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

3. Wildlife

The level of human density established to meet an acceptable level of solitude will be below the capacity of most wildlife to withstand use. However, there are a few species that are vulnerable to disturbance by even a few people. Among the species found in the PLWC that are particularly vulnerable are the common loon, fisher, and beaver. Common loons can be readily driven off nests by people whether walking along shore or in boats (Titus, 1978). Nest desertion or mortality of newly hatched young can occur when birds are repeatedly chased by people.

Fisher and beaver can be susceptible to overharvest where access is available to trappers. The interior of the PLWC is not very accessible to trappers and, therefore, overharvest of the population of a large area is unlikely. For example, lacking heavy trapping activities, beaver removed from one drainage can be replaced by beaver moving in

from other unharvested drainages in the area. Hunter and trapper densities are usually too low in the PLWC to cause any detrimental impact on game populations.

III. MANAGEMENT AND POLICY

A. Past Management

1. Early Developments

Initial management of the State lands in the Pharaoh Lake region commenced with the creation of the Adirondack Forest Preserve in 1885. Early management activities were administered by the Forest Commission. Its early duties included fish and game law enforcement, protection against trespass, and forest fire suppression. This commission was superceded by the Conservation Department in 1909. Insect and disease control activities and recreation management were soon added.

Beginning in the 1920's, the Department adopted a management scheme that increased recreational use of the Forest Preserve. Over a 50-year period, numerous administrative and recreational facilities were built in the PLWC. Pharaoh Mountain, with its steel fire tower, became a hub of activity with several trails leading to its summit. Hiking trails led to almost every lake and pond. Lean-tos were built to satisfy user demand and horse and snowmobile trails criss-crossed the unit. Motor vehicle use was permitted to many interior locations. An interior cabin, boat livery, and a corral-barn complex were added to Pharaoh Lake's southern shoreline in the early 1960's. User demand was heavy and extensive resource damage occurred on portions of the trails system and popular camping areas.

2. Wilderness Designation

Both the Pomeroy Commission (1961) and the Adirondack Study Commission (1970) proposed wilderness designation for the Pharaoh Lake region. The two commissions concluded that there was significant deterioration and that many activities, then present in the unit, were

adversely affecting natural resources and diminishing the public's enjoyment of these wild lands.

The Adirondack Park Agency Act of 1971 and its subsequent Adirondack State Land Master Plan established the Pharaoh Lake Wilderness as an area "that should retain a primeval character and influence, without permanent improvements or human habitation, and that should be protected and managed so as to preserve its natural condition".

3. Removal of Non-Conforming Uses and Structures

The DEC was required by the Adirondack State Land Master Plan to assess the extent of damage and take action where necessary to keep it to a minimum. Present DEC policy stipulates that all administrative structures and improvements should be the minimum needed to protect the resource and the safety of users and should set the example by which the public uses the wilderness. DEC management programs in the PLWC have emphasized the removal of non-conforming uses and structures as funds permitted. In particular, the following have been removed:

- 8.5 miles of jeep trails; closed to motorized use.
- 3.1 miles of public highway (Crane Pond and Pharaoh Roads); closed to motorized use.
-5.5 miles of snowmobile trails; discontinued.
-4.0 miles of overhead telephone line.
-Pharaoh Lake interior outpost, boat livery, corral-horse barn complex.
-Pharaoh Lake lean-to cluster; dismantled.
-Pharaoh Lake Horse Barn.

The following discussion highlights the scope of non-conforming uses and structures.

a. Motorized Use and Mechanical Transport

With certain exceptions (fire, search and rescue), the Adirondack State Land Master Plan prohibits motor vehicle use in wilderness to minimize adverse affects on natural resources and the experiences of wilderness users. All interior roads are closed to motor vehicle use. Motor-powered watercraft and airplanes are banned on area waters. The recreational use of snowmobiles and all-terrain vehicles is not permitted under any circumstance. Finally, in keeping with its wilderness ethic, the recreational use of mechanical forms of transportation (including mountain bicycles) will be ultimately prohibited pending adoption of appropriate rules and regulations. Department policy stresses and encourages primitive forms of transportation.

b. Crane Pond Road

The Crane Pond Road has been a management concern since designation as wilderness. The original Adirondack State Master Plan created a primitive area of 2,800 acres north and east of the Pharaoh Lake Wilderness in 1972. Known as the Crane Pond Primitive Area, it contained the 2.1 miles Crane Pond town road right of way, 2.1 miles of overhead telephone lines, and 3.5 miles of snowmobile trails. The unit was bounded on the north by NYS Route 74 and private lands lying immediately south of that route; on the east by the common boundary between State land and the Pyramid Lake property; on the south by Crane Pond and the Crane Pond road; and on the west by the State land boundary.

The Master Plan explicitly stated: "All or part of the area could logically become part of the Pharaoh Lake Wilderness if all or a

section of the Crane Pond town road, which now dead ends at Crane Pond some two miles into the area, was closed to motor vehicles".

By 1975, the Department removed the snowmobile trails and telephone lines, thus making it possible for the Agency to reclassify the unit (except for the town road right of way) to wilderness. The town road right of way was left as a "primitive corridor".

The 1979 edition of the Master Plan once again addressed the Crane Pond Road situation and went on to say, "Should the level of use of this wilderness area [the Pharaoh Lake Wilderness] result in a continuation of existing management problems and resulting resource degradation, the road corridor should be terminated either at the State land boundary at the end of the Alder Meadow Road, or at an intermediate point, such as the Goose Pond trailhead, and the corridor wholly or partially reclassified to wilderness".

After extensive public debate, the Adirondack Park Agency reclassified the Crane Pond Road from a "primitive corridor" to "wilderness" and included it as part of the Pharaoh Lake Wilderness. This action called for the closure of the Crane Pond Road to motorized vehicles and was approved by Governor Cuomo in November 1987.

Although the road was under the jurisdiction of the Town of Schroon at the time, the Department was given the legal authority to close the road as per section 212 of the Highway Law, as amended by the Laws of 1988, Chapter 161. This law, approved by the State legislature, reads in part:

> "If a highway passes over or through lands wholly owned and occupied by the state, the location of such portion of such highway as passes through such lands may be altered and changed, or the same may be abandoned or the use

> thereof as a highway discontinued with the consent and approval of the state authority having jurisdiction or control over such lands by an order directing such change in location, abandonment or discontinuance. Such order shall contain a description of that portion of the highway the location of which has been changed, abandoned or discontinued, and a description of the new location thereof, if any, and shall be filed in the office of the state authority having control of such lands. This act shall take effect immediately"

In November 1989, Commissioner Thomas C. Jorling, issued such an order, duly notified the Town of Schroon and had the Crane Pond Road closed to motor vehicle use on of December 4, 1989. Thereupon, the Town of Schroon petitioned the Essex County Supreme Court, challenging DEC's closure of that portion of the Crane Pond Road within the Forest Preserve to motor vehicles. The court rejected the Town's argument and upheld the Commissioner's order under the terms and conditions of the amended 1988 Highway Law. The Court maintained that the Town's reading of the statute would render it ineffective and would defeat the intent of the legislature. This action was supported by the NYS Court of Appeals and the Town's motion was denied.

c. Pharaoh Road (Mill Brook)

The Pharaoh Road was once a public highway crossing the Towns of Horicon and Schroon, penetrating the wilderness beyond Pharaoh Lake. This unimproved road was officially abandoned by the Commissioner of the Department of Transportation in 1976 under the terms and conditions of the old Highway Law, Section 212. This closure affected only that portion wholly within the Forest Preserve from the State land boundary to its terminus. In 1976, the road was barricaded at Mill Brook, a major bridge crossing, 1.0 mile inside

the wilderness boundary and closed to motor vehicle use. Commissioner Jorling reaffirmed the original closure order and the road was closed in December of 1989.

d. Overhead Telephone Lines

DEC removed approximately 4.0 miles of overhead telephone line (poles and wires) from the PLWC in 1976. The former telephone rights-of-way have been allowed to revegetate naturally.

e. Pharaoh Lake Interior Outpost and Boat Livery

Prior to wilderness designation, the Conservation Department maintained an interior cabin and boat livery on the southeast shore of Pharaoh Lake, both of which attracted heavy visitor use. To minimize its intrusion upon the wilderness setting, the DEC removed the two structures in 1976. This was in keeping with the Adirondack State Land Master Plan that requires all existing improvements, structures, and facilities not essential to the protection of the wilderness to be removed.

f. Pharaoh Lake Corral-Horse Barn Complex

At the junction of two horse trails southeast of Pharaoh Lake, a rectangular horse barn was constructed, complete with hay racks and stalls. Seldom used by horsemen, the structure was used more frequently by campers. Heavily vandalized and in disrepair, this structure was removed in 1989.

g. Pharaoh Lake Lean-to Cluster

A cluster of three closely spaced lean-tos were located along the southeast shore of Pharaoh Lake to complement the former corral and horse barn complex. The lean-tos tended to concentrate users near a popular shoreline location and resulted in a high-impact camping

area. Their location did not meet the Adirondack State Land Master Plan separation distances as they were within sight and sound of each other and spaced less than one-quarter mile apart. The middle lean-to was removed in 1989, the site closed to camping, and the ground revegetated to native grasses and seedlings.

h. Lost Pond Leanto

The Lost Pond leanto located on the south shore of Lost Pond was removed in 1991. Located less than 50 feet from the pond and less than 1.5 miles from the trailhead, the site had been heavily impacted by overuse. At the time of removal, the base logs and roof had deteriorated to the point of being unsafe.

i. Pharaoh Lake Fire Tower

The Pharaoh Lake fire tower is listed as a non-conforming facility and must be scheduled for removal. However, the status of all fire towers in the Adirondack Park is currently under review by the Office of Parks, Recreation and Historical Preservation to determine their historical significance. The eventual disposition of the Pharaoh tower will be governed by the result of this study.

4. Interior Maintenance

Interior maintenance passed from the Division of Lands and Forests to the Division of Operations when the Conservation Department was reorganized in 1972. Maintenance crews service the area from work centers in Crown Point, Ray Brook, and Warrensburg.

5. Interior Management

The interior management program is administered by three forest rangers who are headquartered at Brant Lake, Schroon Lake, and

Ticonderoga. Since 1978, the region has been patrolled by assistant forest rangers (formerly wilderness rangers) on a seasonal basis summer and fall. Their duties include offering public assistance, wilderness education, reporting offenses to the forest ranger, documenting and evaluating facilities, trail conditions, questionnaires, and minor maintenance. Since 1984, one assistant forest ranger has been assigned to the area.

6. Wildlife

a. Hunting and Trapping Regulations

Regulations controlling season dates, method of taking, and bag limits for wildlife have been the principle wildlife management techniques applied to the area including the PLWC. All species harvest regulations, whether for big game, small game, or furbearers, were established to include land areas larger than the PLWC. Early regulations were written consistent for all of northern New York (equivalent to the Northern Zone).

More recently, DEC has subdivided the State into numerous Deer Management Units (DMU) for big game and Wildlife Management Units (WMU) for small game and furbearers. Each unit was defined according to its distinctive ecological and social characteristics. The PLWC lies within DMU 12 and WMU 22.

b. Nuisance Wildlife Policy

The Bureau of Wildlife may investigate nuisance wildlife complaints on a case-by-case basis. However, the Bureau does not respond with action to control nuisance wildlife except when the behavior of wildlife is deemed to threaten the lives of visitors.

No major conflicts between visitors to the PLWC and resident wildlife have been reported. Beaver activity occasionally floods trails or roads in the unit. Visitors must find suitable routes around obstructed trails.

c. Non-game Wildlife

Historical efforts by DEC toward management of non-game wildlife resources in the PLWC have included annual aerial surveys of the nesting success of ospreys throughout northern New York and periodic loon surveys. DEC has supported the compilation of the Breeding Bird Atlas, which includes the PLWC.

7. Fisheries

Fish management in the PLWC has emphasized native brook trout through an active reclamation and stocking program, but several waters have been stocked with lake trout, rainbow trout, brown trout, splake and kokanee salmon.

PLWC waters have been subject to the general angling regulations of the State. The use of fish as bait has been prohibited in area trout ponds to minimize the likelihood of bait pail introduction of competing and/or exotic fish species. Between 1950 and 1979, ten PLWC ponds with a total surface area of 255 acres were reclaimed with rotenone.

Most of the area's ponds have received at least one biological survey since the 1930's (Table 2). Since 1983, 19 ponds have been resurveyed by the Adirondack Lakes Survey Corporation.

Very little survey work has been undertaken on streams within the PLWC because of their remoteness and small size. Few area streams in the unit are actively managed.

B. Overall Goal

The overall goal for the PLWC, which contains a natural environment of recreational and historical significance, is to maintain it in perpetuity for the people of New York State as an area of wilderness that is not adversely affected by human activities.

The PLWC will be planned, managed, and operated as wilderness. The Adirondack State Land Master Plan defines wilderness as "an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. A wilderness is further defined to be an area of State land or water having a primeval character, without significant improvements or permanent human habitation, which is protected and managed so as to preserve, enhance, and restore, where necessary, its natural conditions, and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable and (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation".

This theme is reflected in the following goal statements for Land Resources, Fish and Wildlife, Public Use Management, and the maintenance of water quality.

1. Land Resources

a. Hague Brook Primitive Area

1. Acquire the private lands lying between the Primitive Area and the Pharaoh Lake Wilderness to allow closing of all deeded right-of-ways across the primitive area.

b. First Brother Primitive Area

1. Acquire those private lands lying between the primitive area and the Pharaoh Lake Wilderness Area.

c. Pharaoh Lake Wilderness

1. Perpetuate the area as a wilderness where the evidence of man is minor.

2. Maintain the opportunity for solitude and other socio-psychological experiences.

3. Preserve and protect the wilderness from influences that diminish wilderness character and value in accordance with the Adirondack State Land Master Plan.

2. Wildlife

a. All Areas

1. Maintain all native wildlife species at levels compatible with their natural environment.

2. Expand recreational opportunity to use the wildlife resources while avoiding detriment to the species or the environment.

3. Fisheries

The Guidelines for Fisheries Management in Wilderness, Primitive and Canoe Areas (Appendix 19) form the foundation for the following goals for PLWC waters:

a. Restore and perpetuate fish communities which replicate the natural resource including self-sustaining populations of indigenous fish species (Guidelines 1 and 3);

b. Provide recreational angling as part of a larger wilderness experience emphasizing quality over quantity (Guideline 2).

c. Protect the fishless state of naturally barren waters that have not been stocked (Guideline 5).

Management actions appropriate to achieve those goals include stocking and reclamation (Guidelines 4, 6 and 9 respectively).

4. Public Use Management

a. All Areas

1. Insure that public use is compatible with the wilderness values of the region.

5. Water Quality

a. All Areas

1. Preserve the aquatic environments in their present state within the area.

2. Periodically assess biotic conditions in major ponds, lakes, and streams, especially to determine if acid precipitation is impacting the area.

C. Objectives

1. Land Resources

a. Mitigate or prevent further soil compaction and/or vegetative loss at each of the following locations within the next three years:

1. Crane Pond

2. Goose Pond

3. Pharaoh Lake

4. Lost Pond

5. Rock Pond

b. Mitigate further soil compaction and/or vegetative loss at all other ponded waters during the next five years.

c. Reduce soil erosion and/or stream siltation occurring from lack of proper trail maintenance by preparing and analyzing a trail inventory and developing a plan for trail maintenance and/or rehabilitation for each of the years covered by this plan. The Divisions of Operations and Lands and Forests will jointly prepare such a plan.

d. Remove all non-conforming uses within the first two years of the plan.

e. Develop new and improved access to Springhill Ponds via State land.

f. Relocate and rehabilitate all pit privies to comply with the "150 feet setback rule" within the next five years.

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

h. Develop a location and inventory record of rare and endangered plant species as these are encountered.

i. Develop a lean-to policy for the PLWC that generates a list of sites where:

1. Existing lean-tos will be maintained and replaced if necessary;

2. Existing lean-tos will not be replaced;

3. Additional lean-tos will be built.

2. Wildlife

a. All Areas

1. Maintain annual hunting and trapping seasons as legitimate uses of the wildlife resources in the PLWC.

2. Encourage an increase in non-consumptive recreational uses of wildlife.

3. Identify and implement actions by 1993 to increase deer and black bear harvest in DMU 12.

4. Record critical habitats for endangered, threatened, and species of special concern, and develop recommendations to discourage public disturbance of these species or their habitats.

3. Fisheries

a. Increase the abundance of the depressed, native brook trout, through reduction in the distribution of nonnative and native-but-widely introduced fish species, while maintaining the security of all other native fishes. Changes in the fish communities are discussed in Sections IV.D and II.A.2.c. (Projected Use and Proposed Management, Fisheres; and Resource Inventory Overview, Natural Resource, Biological, Fisheries, respectively).

b. Increase knowledge of the aquatic resource through survey of previously unstudied waters.

The above objectives are based on a thorough review of the inventory data and on the Guidelines for Fisheries Management in Wilderness, Primitive and Canoe Areas. That review is provided in the Fisheries section under Projected Use and Proposed Management (Section IV.D.).

4. Public Use Management

a. Obtain better wilderness use data by installing additional trail registers within the next five years.

b. Develop improved means to educate wilderness users by assigning at least one additional wilderness ranger to the PLWC.

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

IV. PROJECTED USE AND PROPOSED MANAGEMENT

Accurate visitor use information is generally lacking. Past visitor use trends are inconsistent and future trends are difficult to predict. The overall consensus of field personnel indicates that PLWC use has been steadily increasing over the past decade. The shorelines of many lakes and ponds continue to receive heavy use.

If the overall capacity of the resource to withstand use (section II E) is not exceeded, then the PLWC can adequately absorb increased use without further environmental degradation. Localized use, especially on favored shorelines, will be monitored and evaluated.

Management of the area, directed by the Adirondack State Land Master Plan, will provide mitigative measures to accommodate increased use.

A. Facilities Removal

Non-conforming uses, as directed by the Adirondack State Land Master Plan, will be removed.

1. Pharaoh Mountain Fire Tower and Observer's Cabin

Both facilities are listed as non-conforming structures in wilderness according to the Adirondack State Land Master Plan and will be removed. The fire tower was deemed obsolete in 1984 after careful study and remains inactive. Aerial detection flights and an improved region-wide radio communications network have supplanted its fire detection role.

Removal of the tower complex has been delayed pending a review by the Office of Parks, Recreation and Historic Preservation. Eventual disposition of this facility will address any historical values associated with the tower as determined by the review.

2. Springhill Ponds-Pharaoh Lake Horse Trail

Although an appropriate wilderness use, the trail will be closed to horses and left as a foot trail. The trail has many wet spots and is infirm to horse tread. Closure would affect 3.8 miles of trail; however, the remaining horse trail system will be left intact. To close the trail, only a change in markers is needed and the subsequent amending of horse trail guidebooks.

Aa. Facilities Development

1. Trail-less Area

The Bald Ledge Primitive Area will remain undeveloped.

2. New Trail Construction

a. Springhill-Berrymill Ponds Connection

The most heavily used route to Springhill Ponds crosses private property and is subject to a verbal easement which has created administrative difficulties. A new trail, 1.5 miles, will be constructed to connect Springhill Ponds to the existing Berrymill Pond-New Hague Road Trail. This connection would place the trail entirely on State land and afford suitable parking space off the New Hague Road.

b. Crab Pond (P# 410) Marked Footpath

In accordance with Department policy, a "marked footpath" will be designated, marked, and minimally maintained between the Pharaoh Lake Trail and Crab Pond (P# 410). The footpath, designed to improve fisherman access, while preventing a proliferation of "herd paths", will commence at a point south of Mill Brook on the Pharaoh Lake

Trail and extend 1.6 miles eastward along the north slope of No. 8 mountain to the west shore of Crab Pond.

3. Trail Relocations and/or Improvements

a. Pharaoh Lake Shoreline

A "herd path" type trail now encircles Pharaoh Lake. 4.9 miles of this path should be relocated, improved, and upgraded to a designated, marked trail.

b. Pharaoh Mountain Trail from Crane Pond

Portions of the marked trail have deteriorated badly due to erosion and a herd path has now evolved around this section. The eroded section should be rehabilitated and closed. The herd path is on more durable terrain and can accommodate sustained use. Relocation would entail 0.6 mile of trail.

c. Blue Hill Trail, Route 74 to Crane Pond

Relocate the first 0.1 mile of the trail away from Route 74. Make the approach go directly into the wilderness rather than paralleling the highway.

d. Pharaoh Lake Trail (Mill Brook)

Sustained beaver activity at Mill Brook has created an extensive wetland and has flooded the main trail to Pharaoh Lake. Alternative sites to relocate the trail were found to be impractical; to the east, the wetland extends one mile downstream; to the west, adverse terrain makes any crossing difficult without extensive bridgework. Therefore, the DEC proposes to construct a 300 ft., elevated boardwalk adjacent to the present trail location until dry ground is reached. This action will require an Adirondack Park Agency wetlands permit.

4. Trail Registers

To gather public use data and to aid search and rescue efforts, three new trail registers will be installed and two existing registers refurbished.

a. Berrymill Pond Trailhead, Putnam Pond Public Campground

Install new register adjacent to parking area.

b. Lost Pond

Install new register at parking facility.

c. Tubmill Marsh

Install new register at parking facility.

d. Crane Pond

Refurbish and improve existing register and bulletin board.

e. Pharaoh Road at Mill Brook

Refurbish; this register is been continually vandalized.

5. Signs

Signs will be minimal and limited to directional, informational, and regulatory applications. All new facilities will be appropriately signed. Signs marking the wilderness boundary will be employed and be readily visible to inform people when and where legal restrictions apply.

6. Parking Facilities

a. New Construction

1. Springhill Ponds-Berrymill Pond

Trailhead, New Hague Road; a six car parking facility will be constructed on State land bordering the West Hague Road. Currently, only "off shoulder" highway parking exists.

2. Lost Pond Trailhead

Putnam Pond Public Campground; a new six car facility will be constructed near the existing trailhead. Current parking space is insufficient and, at times, has impeded traffic to the public campground and encroached on adjacent private lands.

b. Improved Parking Facilities

With closure of the Crane Pond Road, the parking area at the wilderness boundary will be improved and adequately screened from adjoining private property.

7. Fish Management Facilities

Fish barrier dams will be constructed as necessary on the outlets of ponded waters scheduled for reclamation (see section on proposed fisheries management). On-site surveys will be conducted to determine whether barriers exist, and if not, whether sites suitable to create barriers are present. In addition, inspections may be required to determine if the extent of wetlands makes reclamations impractical.

B. Maintenance and Rehabilitation of Facilities

1. Trails

Priority rehabilitation will be given to the following trails:

a. Pharaoh Mountain from Crane Pond

b. Goose Pond

c. Bear Pond

d. Rock Pond

e. Adirondack

f. Lost Pond

g. Blair Road Horse Trail

2. Bridges

Bridges will be maintained and/or replaced only when their absence would constitute a safety hazard rather than an inconvenience to the user. Priority replacement will be given to the Berrymill bridge which has completely deteriorated and has made winter crossings difficult.

3. Lean-tos

Lean-tos will be evaluated on a site specific basis. At time of replacement, poorly situated lean-tos will be removed and, if replaced, sites will be chosen to comply with Adirondack State Land Master Plan guidelines. A wilderness lean-to policy will be developed for the PLWC setting forth guidelines for the replacement, relocation, or complete removal of remaining and future-sited lean-tos.

4. Pit Privies

All the pit privies on the unit need to be rehabilitated and relocated. Most are too close to water. During the next 5 years, all privies will be relocated and rehabilitated. Areas that need constant attention are Crane Pond and Pharaoh Lake.

5. Trail Registers

All trail registers will be maintained annually. Areas needing frequent attention are:

a. Crane Pond

b. Pharaoh Lake Trail at Mill Brook

6. Signs

Missing and illegible signs will be replaced in conjunction with trail maintenance activities.

7. Established Camping Locations

Since litter tends to encourage more of the same, garbage and accumulated litter will be removed periodically. High use areas requiring top priority are:

a. Crane Pond-Goose Pond

b. Pharaoh Lake

c. Lost Pond

Fireplaces at all locations will be phased out and will be replaced with fire rings.

8. Boundary Lines

Approximately 25 miles of boundary line will be brushed, painted, and signed on a 5- to 10-year rotation. Specific lines and maintenance intervals will be determined by area forest rangers.

9. Fish Management Facilities

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

Fish barrier dams which must be constructed in conjunction with the reclamation projects scheduled for the term of this plan will be sited at unobtrusive locations to minimize visual impact and will be constructed of natural materials.

C. Public Use Management and Controls

The PLWC will be managed commensurate with a level of use that is less than current levels.

Capacity will be determined by the opportunity for relative solitude at overnight tentsites across the entire unit. Carrying capacity will be determined at each lake or pond dependent on the potential of each water body to provide solitude as required by the Master Plan. Some lakes, such as Pharaoh, due to its size, form, and vegetation, can offer a degree of solitude for several groups if widely dispersed. Smaller lakes or ponds may be limited to a single primitive camping site.

Ecological damage will be kept at the minimum. Master Plan guidelines will be managed for and monitoring will be necessary. The most sensitive areas, especially shorelines, will not be managed at a level above their socio-ecological carrying capacity. Management actions to achieve these standards will include the following:

1. Tentsite Designation

A tentsite designation program will be instituted in year one of this plan and completed by year five. Designated tentsites will comply with Master Plan guidelines for wilderness areas which require primitive tentsites to be out of sight and sound of each other and generally spaced one quarter mile apart except where severe terrain constraints prevent this attainment.

All camping will be addressed by 6NYCRR 190.3(b) which states, "Camping is prohibited within 150 feet of any road, trail, spring, stream, pond or other body of water except at camping areas designated by the Department". This rule and regulation allows the Department to control camping in heavily used areas where site degradation has

occurred or is likely to occur. However, sites that have proven durable over the years can be designated for continued use even though they are within the 150 foot distance.

In order to avoid exceeding the carrying capacity of popular locations within the PLWC, site designation will be instituted where historical use is significant enough to demand it. The following chart depicts the more heavily used camping areas in the PLWC and the current and projected status of camping sites over the next five years.

UNDEVELOPED CAMPING SITES - PHARAOH LAKE WILDERNESS COMPLEX

LOCATION	EXISTING	TO BE CLOSED	TO BE DESIGNATED
Pharaoh Lake	52	30	22
Putnam Pond-North Pond	9	0	9
Spectacle Pond	2	0	2
Gull Pond	1	0	1
Goose Pond	5	2	3
Crane Pond	26	18	8
Burge Pond	1	0	1
Oxshoe Pond	3	0	3
Crab Pond	6	3	3
Horseshoe Pond	1	0	1
Whortleberry Pond	7	0	7
Little Rock Pond	1	0	1
Rock Pond	6	3	3
Clear Pond	2	0	2
Grizzle Ocean	5	1	4
LOCATION	EXISTING	TO BE CLOSED	TO BE DESIGNATED

Springhill Ponds	5	0	5
Adirondack Trailhead	3	0	3
Mill Brook Trailhead	6	0	6
Pharaoh Lake Outlet	1	0	1
Lost Pond	5	2	3
Berrymill Pond	3	0	3
Heart Pond	1	0	1
Lilypad Pond	1	0	1
Bear Pond	1	0	1
Desolate Brook	3	0	3
Coffee Pond	2	0	2
Crab Pond (P# 430)	1	0	1
Crab Pond (P# 410)	0	0	1
Spuytenduivel Brook	1	0	1
Pharaoh Mt. Trail	1	1	0
Pharaoh Mt. Summit	1	0	1
Crane Pond Road	6	0	6
TOTALS	168	60	108

To implement the site designation plan, additional staff will be required for education activities and law enforcement.

All closed sites will be allowed to revegetate naturally. However, those sites not revegetated within 3 years will be restored with native grasses and seedlings.

2. Group-User Control

Current DEC policy requires all groups of 10 or more persons camping on Forest Preserve lands to obtain group camping permits.

Field studies in the PLWC indicated few, if any, of the unit's 164 primitive tentsites can accommodate large groups without causing adverse physical and sociological impacts. Research further shows that large groups often cause more tentsite deterioration and compaction, create congestion problems on trails, generally have a higher noise level, and cause greater visual impacts on other visitors.

In view of these factors, the DEC will control, and eventually eliminate, large group use of this wilderness area through the phase-out of group camping permits over a two year period. Year One of the phase out process will be educational in that all groups requesting permits will be advised of the impending change. Year Two group camping permits (i.e. groups larger than ten) will not be issued in the unit.

3. Use Redistribution

To redistribute use more evenly throughout the PLWC and its adjoining neighbors, the Hammond Pond and Lake George Wild Forests, the DEC needs to provide more information on alternative recreation opportunities.

Concentrations of users in the PLWC often result because many visitors are not aware of alternatives to the more popular areas. This is especially true of many large organized groups whose activities are not wilderness dependent and can be served best by wild forest areas. Informing visitors of lesser used areas in the PLWC, and alternative recreation opportunities, both within and outside the unit can reduce concentrated overuse by increasing users' knowledge of options and thereby redistributing use. Maps, brochures, and personal contacts can

be used to modify use patterns to more closely conform to management objectives. This information could result in more use during the "off season", more use on lightly used trails and entry points, greater use of lightly used isolated tentsites, and greater use of adjoining wild forests such as Hammond Pond. This information could enhance visitor satisfaction by advertising site specific attributes of these areas and improving public understanding and knowledge of basic wilderness ecology.

4. Horse Use On Designated Trails

Horse use will continue on all specifically marked horse trails except on the Pharaoh Lake-Springhill Ponds connection (Section IV A 3).

Road barriers installed to restrict illegal motorized use will be designed to accommodate horse and wagon entry where warranted.

5. Fisheries

No needs to limit or control public use of the area to protect the fishery resource have been identified. Closure of the Crane Pond and Pharaoh Lake Roads at the wilderness boundary will increase the hiking distances to many ponds and, thereby, may effectively reduce use levels.

6. Wildlife

No needs to limit or control public use of the area to protect the wildlife resource have been identified.

7. Rare and Endangered Species

No studies of rare and endangered plant and animal species have been undertaken by this plan. However, the DEC will continue to work closely with the New York Natural Heritage Program to locate and protect the presence and occurrence of rare and endangered species as they are

encountered. If required, public use will be diverted to less environmentally sensitive areas.

D. Fisheries

Unit inventory data for Pharaoh Lakes indicates brook trout have declined while other native fishes either remain abundant or have spread in recent times. Nonnative fishes are widespread.

Natives other than brook trout reported from the period of 1932 to 1957 are secure in the unit. Table 9 shows that the occurrence of several species has increased during the last 60 years. Based on the history of stockings and introductions, many of those species have been introduced to and/or spread within the unit. For example, the longnose dace and northern redbelly dace were not reported from the early period (1932-1957) and are believed to be recent introductions. The occurrence of early introductions is supported by similar data on nonnatives which shows they were widely established early in the period (Table 10). The same stockings that spread nonnatives such as golden shiners and yellow perch to 35 and 26 percent of the unit's waters, respectively, would have also spread natives to waters where they did not previously occur.

Two natives, pumpkinseed and blacknose dace, apparently have declined since 1957. However, the 1932-1957 data may reflect unnaturally high abundances for those species because of unauthorized introductions. In spite of the recent decline, pumpkinseeds remain abundant in the unit and do not warrant additional management. Pumpkinseeds and fish communities that include pumpkinseeds are also extremely abundant in the Adirondack ecological zone. ALSC data indicates pumpkinseeds are the fifth most widespread fish, and the fourth most widespread of the native fishes.

The apparent decline in blacknose dace is an anomaly because of their strong preference for stream habitat. Scott and Grossman (1973) states: "The blacknose dace prefers small, clear, swiftly flowing streams with gravelly substrate"; and, in reference to their role as fish forage: "... it is strictly a stream species and is not important in lakes". Thus, collections in ponds probably represent transient individuals found near inlets or outlets. Management for the blacknose dace in ponds is inappropriate.

Communities with native fishes are abundant in the Pharaoh Lakes unit. Four ponds contain natives only (Table 11) and about 25 ponds contain communities of natives and nonnatives. Indeed, as discussed above and indicated in Table 9, most natives presently occur in more ponds than historically.

As discussed in the Fisheries section of the Resource Inventory Overview, brook trout were clearly a significant component of the historic Pharaoh Lakes fish community. Based on the depressed native status of brook trout populations, combined with the increased distribution of native-but-widely introduced and nonnative fishes, efforts to restore natural fish communities in the PLWC must: reduce the distribution of nonnatives; reduce the distribution of native-but-widely introduced species; and increase the abundance and distribution of brook trout. Reclamations are the only practical technique available to reduce the distributions of nonnatives and native-but-widely introduced fishes and to achieve the low levels of competition necessary to restore brook trout. Therefore, the following eight reclamations have been proposed, subject to a prereclamation survey. As noted under "Facilities Development" and "Maintenance and Rehabilitation of Facilities", the prereclamation surveys

include assessment of physical and chemical characteristics or feasibility of constructing a fish barrier and configuration of wetlands.

a. Six reclamations (seven ponds) will be on waters which contain non-natives. Native fishes reported from the period of 1932-1957 (earliest available data) will remain secure within PLWC subsequent to the reclamations. The distribution of brown bullhead and creek chub, native-but-widely introduced species, will be somewhat reduced. The occurrence of white sucker and redbreast sunfish will more closely resemble the early period. The seven waters are Burge Pond, Crab Pond (P410), Crab Pond (P430), Oxshoe and Unnamed (P428) Ponds, Whortleberry Pond, and Gull Lake. All introductory stocking after reclamations will consist of wild (heritage) strains of brook trout. Ponds that do not develop adequate natural spawning will contiue to be managed as monocultures.

b. One proposed reclamation, Horseshoe Pond, contains: brook trout sustained by stocking; brown bullhead; and unidentified minnows. Brown bullheads are native to the Adirondack ecological zone, but widely introduced. They are present in 18 other ponds in the wilderness area including one apparent bullhead monoculture, Heart Pond. Based on bullhead's widely introduced status, and their abundance in the wilderness area, their presence makes Horseshoe eligible for reclamation. The unidentified minnows may include species which influence that eligibility. Horseshoe Pond will be surveyed prior to a reclamation with emphasis placed on identifying the minnow species present. If a native species in decline is identified then the reclamation will be cancelled.

c. Rock and Little Rock Ponds, proposed as one reclamation due to the physical connection between them, contain: brook trout sustained by stocking; brown bullhead; and common shiners. Observations indicate the nonnative, golden shiners are also present. The ponds will be surveyed and, if golden shiners are present, then the reclamations will proceed with reintroduction of common shiners. The historic occurrence level of common shiners in the PLWC would be maintained by reintroduction in Rock and Little rock Ponds. If golden shiners are absent then the reclamation will be switched to Clear and Mud Pond. The latter support nonnatives including golden shiners, bluntnose minnows, and kokanee.

Results of fish management activities proposed in this five-year unit management plan are (Table 11):

a. Ten newly reclaimed ponds. If all reclamations are completely successful, ten new brook trout monocultures would result, but experience indicates about 50 percent of reclamations fail to eliminate all fishes. Native fishes, including brown bullheads, creek chubs, and northern redbelly dace, have been known to survive reclamation attempts in Adirondack waters. Interestingly, Bradbury (1986) indicates that native species are most likely to remain established after reclamation. Therefore, in developing Table 11, it was assumed that if fish survived, they would be natives. The reclamations would then result in five new brook trout monocultures, and five new polycultures of brook trout with other natives.

b. Maintain one existing brook trout monoculture.

c. Maintain three additional ponds where only native fishes currently exist.

d. Sixteen ponds with nonnatives and natives; about a 36 percent reduction in the number of ponds containing nonnatives.

e. Two ponds with no fish or seasonal presence of fish.

f. Five ponds that have never received fishery surveys (Table 2). The unsurveyed ponds are generally very small, and are likely to support no fish or only species highly tolerant to extremes in temperature and dissolved oxygen such as brown bullhead. Their combined area is less than nine acres (0.7 percent of the ponded water in PLWC). Two of these ponds, Coffee and Unnamed (P435A), will be surveyed. Those two waters account for five of the nine acres of unsurveyed ponded waters.

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

- Intensive management by way of increment stocking through the fishing season to maximize the quantity of trout caught;
- Stocking of large-sized yearling trout for put-and-take fisheries;
- Regulations which maximize use such as year-round seasons;
- Reclamation for the benefit of nonnative species.

No fish management activities are proposed on waters naturally barren of fishes that have not been previously stocked, as per goal "c".

Stocking will only include native or historically associated fishes. Kokanee salmon were previously stocked in the PLWC and such stockings were discontinued based on the guidelines.

The intensity of management proposed above for the Pharaoh Lakes Wilderness is a result of the exceptional abundance of brook trout waters in the unit. Pharaoh Lake Wilderness includes 4.8 percent of wilderness, primitive, and canoe acreage in DEC Region 5, yet it contains 27 percent of the ponds stocked with brook trout in those land classes.

Retreatments of reclaimed ponds will not be automatically scheduled or planned. Retreatment needs will be based on biological surveys and incorporated in five-year revisions to the unit plan. Proposed treatments will be justified in accordance with unit plan goals and objectives based on the wilderness fish management guidelines. Remote waters such as those in wilderness areas typically remain free of competing fish much longer than roadside waters. This may be because of the difficulty of transporting live bait fish to remote wilderness ponds. There are numerous examples of remote waters that have remained free of competing species in excess of 15 to 20 years.

The following is a brief description of each pond in the PLWC. Definitions of fisheries management classifications referred to in this section of the unit management plan are noted below:

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 do frequently support bullheads.

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

Other Ponds and Lakes - Waters containing fish communities consisting of native and nonnative nongamefish which will be managed for their intrinsic ecological value without any new species introductions.

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

Unknown Ponds and Lakes - Waters which could not be assigned to the subprogram categories specifically addressed in this document due to a lack of or paucity of survey information. These waters usually contain native and nonnative fishes which will be managed for their intrinsic ecological value without any new species introductions.

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

1. **Alder Pond** (UH-P 420)

Alder Pond is an extremely shallow 32-acre warmwater pond containing a native and nonnative fish community. Alder Pond is located adjacent to Crane Pond and aquatic vegetation is abundant. Alder Pond has a maximum depth of 5.9 feet and a mean depth of 2 feet, thus is unsuitable for salmonid management.

Alder Pond will be managed as a warmwater pond.

Management Class: Warmwater

2. **Bear Pond** (CH-P 353)

Bear Pond is a 13-acre Adirondack brook trout pond containing a native fish community that was reclaimed in 1973 to eliminate nonnative yellow perch. Bear Pond has a natural barrier falls on its outlet and a wooded shoreline. Access is via a 1.5-mile trail from Rock Pond.

Bear Pond will be managed as an Adirondack brook trout pond to preserve and protect that native species.

Management Class: Adirondack Brook Trout

3. **Berrymill Pond** (CH-P 356)

Berrymill Pond is a 54-acre warmwater lake containing native and nonnative fishes accessible via a 1.5 mile trail. There is an extensive swamp on the inlet stream and the pond has a history of beaver activity.

Berrymill Pond will be managed as a warmwater fishery.

Management Class: Warmwater

4. **Bumbo Pond** (UH-P 435)

Bumbo Pond is a 6-acre warmwater pond lying on the wilderness boundary [not identified in previous drafts of this plan]. Bumbo Pond contains native and nonnative fishes consisting of yellow perch, northern pike, pumpkinseed, creek chub, and brown bullhead based on a 1956 survey. Bumbo Pond is accessible via a 0.25 mile bushwack up the outlet. Although not studied during the 1932 biological survey, brook trout were reported.

Bumbo Pond will be managed as a warmwater fishery.

Management Class: Warmwater

5. **Burge Pond** (UH-P 426)

Burge Pond is a 8-acre Adirondack brook trout pond with a native and nonnative fish community consisting of brown bullhead, golden shiner, and brook trout. Burge Pond has a natural fish barrier on its outlet and is

accessible by canoe across Crane Pond and an additional 0.6-mile hike by trail. The first fisheries survey occurred in 1958 when only brook trout and golden shiners were collected. Brown bullhead were first observed in 1963 suggesting their recent introduction. A 1987 ALSC survey documented the presence of brown bullhead, golden shiner and brook trout. Burge Pond does not contain rare, threatened, or endangered species. Competing species consisting of brown bullhead are native but widely introduced (NBWI) and golden shiners (nonnative) have wide geographical distribution throughout the Adirondacks and in the PLWC. Burge Pond is physically and chemically a "gem" and has the potential to support a high quality brook trout community in the absence of competing species.

Burge Pond will be reclaimed and managed as an Adirondack brook trout pond to enhance and restore a native fish community.

Management Class: Adirondack Brook Trout

6. **Clear Pond** (CH-P 358)

7. **Mud Pond** (CH-P 359) (Connected in a chain)

Clear Pond is a deep, 26-acre coldwater lake containing native and nonnative fishes consisting of white sucker, golden shiner, creek chub, bluntnose minnow, kokanee salmon and brook trout. Kokanee salmon stocking began in 1969 and discontinued in 1989. A brown trout and rainbow trout stocking policy implemented during 1989. Accessible via a 0.6-mile trail from the west shore of Putnam Pond or by a 3-mile trail from Putnam Pond Campground.

Mud Pond is a 2-acre Adirondack brook trout pond containing native and nonnative fish community consisting of creek chub, golden shiner, brown bullhead, white sucker, blacknosed dace, fathead minnow, and brook trout. Accessible via boating across Putnam Pond and a 0.5 mile portage. The pond is located on the outlet of Clear Pond and has a boggy shoreline and abundant aquatic vegetation.

Both ponds are alternate reclamation candidates to Rock and Little Rock Ponds. Clear and Mud Ponds will be reclaimed and managed as an Adirondack brook trout pond complex to enhance and restore a native fish community if the Rock Pond system is not reclaimed. Clear and Mud Ponds will be managed as coldwater ponds for brown trout and rainbow trout to preserve and protect its native fish community in the presence of nonnative species if not reclaimed.

Management Class: Coldwater

8. **Crab Pond** (UH-P 410)

Crab Pond (P-410) is an 11-acre Adirondack brook trout pond with a native and nonnative fish community consisting of brook trout, white sucker, creek chub, golden shiner, brown bullhead and northern redbelly dace. Crab Pond is accessible via a difficult 2-mile bushwack from the Pharaoh Lake Road.

The first fisheries survey occurred in 1958 followed by a survey by the Adirondack Lakes Survey Corporation in 1987. Species found in 1987 were also found in 1958. Crab Pond does not contain rare, threatened, or endangered species. Competing species consisting of brown bullhead and creek chub are native but widely introduced (NBWI) species. White sucker and northern redbelly dace were documented by a 1987 ALSC survey and have wide geographical distribution throughout the Adirondack upland. Northern redbelly dace are known to exist in at least 63 Adirondack lakes (George, 1980). Golden shiner are nonnative.

Crab Pond will be reclaimed and managed as an Adirondack brook trout pond to enhance and restore a native fish community.

Management Class: Adirondack Brook Trout

9. **Crab Pond** (UH-P 430)

Crab Pond (P-430) is a 32-acre Adirondack brook trout pond with a native and nonnative fish community consisting of brook trout, brown bullhead, creek chub, and golden shiner. Access is via a 2.2 mile trail from the Crane Pond Road.

Crab Pond was not netted during the 1932 biological survey, but brown bullhead were reported. A 1958 survey found brown bullhead (NBWI), creek chub (NBWI), and golden shiner (nonnative). Crab Pond (P 430) will be surveyed during the scope of this plan. Should brook trout competitors be documented by biological survey, the pond will be reclaimed if it does not contain rare, threatened or endangered species, or any species with limited distribution within the Adirondack ecological zone or the PLWC.

Crab Pond will be reclaimed and managed as an Adirondack brook trout pond to enhance and restore a native fish community.

Management Class: Adirondack Brook Trout

10. **Crane Pond** (UH-P 421)

A 167-acre two-story pond containing native and nonnative fishes. Popular with anglers as a fishing water and as a camping and "trailhead" area for access to interior fishing waters. Access via a 2-mile hike on Crane Pond Road. Stocking of kokanee salmon discontinued in 1989. Rainbow trout stocking policy implemented during 1989.

Crane Pond will be managed as a two-story pond to preserve and protect its native fish community in the presence of historically associated and nonnative species.

Management Class: Two-Story

11. **Coffee Pond** (UH-P 409A)

Coffee Pond is a small (approximately 4 acres) pond located approximately 1 mile southeast of Spectacle Pond [not identified in previous drafts of this

plan]. Coffee Pond has never been surveyed. There is no information available about the fish community in Coffee Pond. Coffee Pond is accessible via a 1 mile bushwack from Spectacle Pond.

Coffee Pond will be surveyed to determine the fish community present.

Management Class: Unknown

12. **Cotters Pond** (UH-P 436)

Cotters Pond is a 13-acre Adirondack brook trout pond [not identified in previous drafts of this plan]. Cotters Pond has a native and nonnative fish community consisting of brook trout, golden shiner, brown bullhead and bluntnose minnow. The outlet is intermittent and a rock ledge exists along one shore. Cotters Pond is accessible via a 0.5-mile trail from Route 73.

Cotters Pond will be managed as an Adirondack brook trout pond to preserve and protect its native fishes in the presence of nonnative species.

Management Class: Adirondack Brook Trout

13. **Devil's Washdish** (UH-P 413A)

A one-acre, shallow pond with an unknown fish community. Access is via a 3.2-mile trail from Putnam Pond Campground, then a 1.4 mile bushwack up Devil's Washdish Brook.

The Devil's Washdish will be managed for species existing in the pond for their intrinsic value.

Management Class: Unknown

14. **Glidden Marsh** (UH-P 429)

A 21-acre Adirondack brook trout pond with a native species association containing white sucker, brown bullhead, creek chub, pumpkinseed, northern redbelly dace, and brook trout. Access is via a 1.5 mile trail from Crane Pond Road. The pond has abundant aquatic vegetation with a boggy and wooded shoreline.

Glidden Marsh will be managed as an Adirondack brook trout pond to preserve and protect its native fish community.

Management Class: Adirondack Brook Trout

15. **Goose Pond** (UH-P 419)

A 66-acre, formerly reclaimed coldwater pond with a native and nonnative fish community consisting of
golden shiner, splake, rainbow trout, brook trout, and creek chub. Access is via 0.5-mile trail from Crane Pond Road. It has a scenic wooded shoreline with bare rock outcroppings.

Goose Pond will be managed as a coldwater pond to preserve and protect its native fish community in the presence of historically associated and nonnative species.

Management Class: Coldwater

16. **Gooseneck Pond** (UH-P 442)

A 77-acre, deep, two-story lake supporting populations of native and nonnative species including smallmouth bass, lake trout, rainbow trout and yellow perch. Serves as water supply for Village of Ticonderoga. It has a scenic wooded shoreline with prominent rocky ledges and white birch trees. Access is via gated road with a 0.6-mile hike along outlet.

Gooseneck Pond will be managed as a two-story pond to preserve and protect its native fish community in the presence of historically associated species and nonnative species.

Management Class: Two Story

17. **Grizzle Ocean** (CH-P 357)

A 19-acre formerly reclaimed Adirondack brook trout pond with native and nonnative fishes consisting of golden shiner and brook trout. Access is via a 1.7-mile trail from Putnam Pond Campground or by canoe access across Putnam Pond and a 0.6-mile hike. The pond has a scenic wooded shoreline and one leanto.

Grizzle Ocean will be managed as a Adirondack brook trout pond to preserve and protect its native fish community in the presence of nonnative species.

Management Class: Adirondack Brook Trout

18. **Gull Lake** (UH-P 418)

A 14-acre, deep, Adirondack brook trout pond containing native and nonnative species consisting of fathead minnow, golden shiner, brown bullhead, brook trout, longnose dace, and bluntnose minnow. Access via a 0.5-mile trail from the East Shore Road. It has a scenic wooded shoreline.

Although not netted during the original biological survey, the survey report indicates that Gull Lake was a good brook trout pond and stocking was initiated. This suggests that brook trout may have been the only species present in the 1930's. A 1954 survey found brown bullhead (NBWI), common shiner, and creek chub (NBWI). Brook trout were reported. A 1987 ALSC survey found brook trout, golden shiner (nonnative), bluntnose minnow (nonnative), fathead minnow (nonnative), longnose dace, and brown bullhead (NBWI). Bluntnose minnow, golden shiner, fathead minnow, and longnose dace became established after 1964. Gull Lake does not contain rare, threatened, or endangered species based on both the 1954 and 1987 biological surveys. Competing species enumerated above have wide geographical distribution through the Adirondack upland.

Gull Lake will reclaimed and be managed as an Adirondack brook trout pond to enhance and restore a native fish community.

Management Class: Adirondack Brook Trout

19. **Harrison Marsh** (UH-P 407)

A 4-acre pond with a boggy shoreline and a history of beaver activity that is chemically unsuitable for trout. Contains native and nonnative species consisting of white sucker, northern redbelly dace, brown bullhead, creek chub, and golden shiner. Access via a 0.4-mile portage on Gull Pond trail, canoe across Gull Pond, then 0.2-mile portage on trail.

Harrison Marsh will be managed to preserve and protect its native fish community in the presence of nonnative species.

Management Class: Other

20. **Heart Pond** (CH-P 361)

A 9-acre pond containing a native fish community consisting of brown bullheads. Accessible by canoe across Putnam Pond, then to North Pond, then bushwack 0.2 miles.

Heart Pond will be managed to preserve and protect the native fish community for its intrinsic value.

Management Class: Other

21. **Honey Pond** (UH-P 422)

A 2-acre pond containing a native and unknown fish community consisting of brown bullheads and unidentified minnows. The pond is accessible via a 2.3-mile trail from Crane Pond Road.

Honey Pond will be managed to preserve and protect the fish species present for their intrinsic value.

Management Class: Unknown

22. **Horseshoe Pond** (UH-P 431)

Horseshoe Pond is a 4-acre Adirondack brook trout pond with a fish community consisting of brook trout, brown bullhead, and unidentified minnow species. The pond is accessible via a 2.3-mile trail from Crane Pond Road.

Horseshoe Pond was netted in the 1950's by a fish salvage crew which reported abundant catches of stunted yellow perch. This indicates a very early introduction of nonnative species. Pumpkinseeds were also found at that time but no gamefish were present or observed. A 1964 survey found

yellow perch (nonnative), redbreast sunfish, and brown bullhead (NBWI). Northern pike (nonnative) were also reported.

Horseshoe Pond will be surveyed during the scope of this plan to confirm that it does not contain rare, threatened or endangered species, or any species with limited distribution within the Adirondack ecological zone whose condition will not be improved or enhanced via reclamation and restocking. If nonnative species are found during the survey the pond will be reclaimed and managed as an Adirondack brook trout pond to restore a native fish community. If only native species are present the pond will be stocked with native brook trout for three years after which the pond will be re-surveyed to determine if the pond is N.S.A.

Management Class: Adirondack Brook Trout

23. **Lilypad Pond** (UH-P 423)

A 2-acre Adirondack brook trout pond containing a native fish community consisting of brook trout. Lilypad Pond is located south of Honey Pond and is accessible via a 2.8-mile trail from Route 74 or slightly farther by trail from Crane Pond.

Lilypad Pond will be managed as an Adirondack brook trout pond to preserve and protect the native fish community.

Management Class: Adirondack Brook Trout

24. **Rock Pond** (UH-P 424)

25. **Little Rock Pond** (UH-P 425) (Physically connected)

Fifty-six acre Rock and 7-acre Little Rock Ponds are formerly reclaimed Adirondack brook trout ponds with native fishes and reports of nonnative golden shiners. Accessible via canoe across Putnam Pond and a 0.7-mile portage to Rock Pond. Little Rock Pond also known as Lilypad Pond is physically connected to Rock Pond as an embayment. Rock Pond has a scenic wooded and swampy shoreline with extensive rocky outcroppings. Little Rock Pond has a boggy shoreline with abundant aquatic vegetation.

Creek chubs, brown bullhead, yellow perch and pumpkinseed were documented in a 1955 survey. The ponds were reclaimed in 1956 and restocked with brook trout. A 1966 survey found brook trout and brown bullhead. Shiners (spp.) believed to be golden shiners were first observed in 1979 by a DEC fisheries survey team and by a fisheries biologist while fishing, but none were captured.* Competing species consisting of brown bullhead (NBWI) have wide geographical distribution throughout the Adirondacks and in the PLWC.

* ALSC documented brook trout, common shiner, and brown bullhead.

Rock and Little Rock Ponds will be surveyed to identify the species of shiner present. If golden shiners or other nonnative species are confirmed by the survey the pond will be reclaimed, restocked with heritage strain brook trout and common shiners, and managed as an Adirondack brook trout pond complex to enhance and restore a native fish community. If only

native species are found, the reclamation will be cancelled in favor of Clear and Mud Ponds.

Management Class: Adirondack Brook Trout

26. **Lost Pond** (CH-P 354)

A 28-acre, previously reclaimed coldwater pond with a native and nonnative fish community consisting of brown trout, brook trout, golden shiner, blacknosed dace, and banded killifish. Accessible via a 1.5-mile trail from the Putnam Pond Campground Road. It has a scenic wooded shoreline with rocky ledges and boulders.

Lost Pond will be managed as a coldwater pond to preserve and protect its native fish community in the presence of historically associated and nonnative species.

Management Class: Coldwater

27. **Otter Pond** (UH-P 441)

A 4-acre Adirondack brook trout pond with a native fish community containing brown bullhead, pumpkinseed, and brook trout. Formerly stocked with brown trout. Accessible via a 0.3 mile trail from a side road off Route 74. It has a scenic wooded shoreline.

Otter Pond will be managed as an Adirondack brook trout pond to preserve and protect the native fish community.

Management Class: Adirondack Brook Trout

28. **Oxshoe Pond** (UH-P 427)

29. **Unnamed Pond** (UH-P 428) (Physically connected)

Oxshoe Pond

Oxshoe Pond is a formerly reclaimed 15-acre Adirondack brook trout pond containing a native and nonnative fish community consisting of brook trout, golden shiner and brown bullhead. Oxshoe Pond is accessible via a 1.3-mile trail from Crane Pond and a 2.5-mile trail from Pharaoh Lake.

Oxshoe Pond was not studied during the 1932 biological survey. A survey prior to reclamation in 1950 found northern pike, brown bullhead, golden shiner, and pumpkinseed. A biological survey conducted in 1979 found bullheads, golden shiners, and brook trout; the same species were documented in a survey performed in 1964. Oxshoe Pond does not contain rare, threatened or endangered species. The brown bullhead (NBWI), and golden shiners (nonnative) have wide geographical distribution throughout the Adirondacks and in the PLWC.

Oxshoe Pond will be reclaimed in conjunction with unnamed pond (P-428) and managed as an Adirondack brook trout pond to enhance and restore a native fish community.

Management Class: Adirondack Brook Trout

Unnamed Pond (UH-P 428)

This tiny unnamed pond has never been surveyed but was reported to be a "warm pond" in the 1932 biological survey. The pond is located adjacent to Oxshoe Pond and is accessible via a 500 foot bushwack from Oxshoe Pond. The outlet of this unnamed pond flows into Oxshoe Pond. It probably was directly connected to Oxshoe during its early history and is a physically connected via wetland today. This unnamed pond is considered to be part of Oxshoe Pond complex.

This unnamed pond will be reclaimed and managed as an Adirondack brook trout pond as part of the Oxshoe Pond complex to enhance and restore a native fish community.

Management Class: Adirondack Brook Trout

30. **Pharaoh Lake** (UH-P 412)

This popular 441-acre, Adirondack brook trout pond contains a native and nonnative fish community consisting of brook trout, lake trout, golden shiner, brown bullhead, common shiner, white sucker and pumpkinseed. Pharaoh Lake is the largest water in the unit and has scenic shorelines and islands. According to angler reports, lake trout have become established, though the source of their introduction is unknown. Accessible via a 3.5-mile trail from the Mill Brook trailhead, 4-mile trail from Crane Pond Road, or a 3.5-mile trail from Putnam Pond. Closure of the Pharaoh Lake Road at the wilderness boundary will add 1 mile to the existing trail.

Pharaoh Lake will be managed as an Adirondack brook trout water to preserve and protect its native fish community in the presence of historically associated and nonnative species.

Management Class: Adirondack Brook Trout

31. **Spectacle Pond** (UH-P 409)

A 17-acre Adirondack brook trout pond with native and nonnative fishes consisting of brown bullhead, creek chub, fathead minnow, golden shiner, pearl dace, and brook trout. Spectacle Pond is accessible via a 1.3-mile trail from the East Shore Road.

Spectacle Pond will be managed as an Adirondack brook trout pond to preserve and protect its native fish community in the presence of nonnative species.

Management Class: Adirondack Brook Trout

32. **Springhill Pond (Lower)** (UH-P 414 connected with 2 other ponds in a chain)

The largest (29-acres) in this chain of three Adirondack brook trout ponds was previously reclaimed and contains native brook trout and historically associated rainbow trout. Lower Springhill Pond is accessible via a 2.5-mile trail leading from the West Hague Road.

Lower Springhill Pond will be managed as an Adirondack brook trout pond as part of a three pond chain of lakes to preserve and protect the existing fish community.

Management Class: Adirondack Brook Trout

33. **Springhill Pond (Middle)** (UH-P 415 connected with 2 other ponds in a chain)

The smallest (1 acre) in this chain of three ponds was previously reclaimed. Trout may enter the pond seasonally from other connected ponds. Middle Springhill Pond is accessible via a 2.5-mile trail leading from the West Hague Road.

Middle Springhill Pond will be managed as an Adirondack brook trout pond as part of a three pond chain of lakes.

Management Class: Adirondack Brook Trout

34. **Springhill Pond (Upper)** (UH-P 416 connected with 2 other ponds in a chain)

The second largest (7-acres) in this chain of three ponds was previously reclaimed but did not support fishes during a 1979 survey. Upper Springhill Pond is accessible via a 2.6-mile trail leading from the West Hague Road. Fishes may enter the pond seasonally from the other connected ponds.

Upper Springhill Pond will be managed as an Adirondack brook trout pond as part of a three pond chain of lakes.

Management Class: Adirondack Brook Trout

35. **Unnamed Pond** (UH-P 421A)

A shallow, 23-acre warmwater pond containing a native and nonnative fish community consisting of golden shiner, bluntnose minnow, creek chub, white sucker, brown bullhead, and redbreast sunfish. This unnamed pond is accessible via a 0.25 mile bushwack from Crane Pond.

This unnamed pond will be managed as a warmwater pond to preserve and protect its native fish community in the presence of nonnative species. This unnamed pond will be managed as a warmwater fishery.

Management Class: Warmwater

36. **Unnamed Pond** (UH-P 409B)

This tiny (approximately 1 acre) unnamed pond has never been surveyed. The status of the current fish community is unknown. The outlet of Coffee Pond flows into this unnamed pond. Coffee Pond probably was physically connected to the unnamed pond during its early history and may be a physically connected wetland today. This unnamed pond is likely to contain the same fish community as Coffee Pond.

This unnamed pond will be managed to preserve and protect the fish species present for their intrinsic value.

Management Class: Unknown

37. **Unnamed Pond** (UH-P 429A)

This tiny (less than 1 acre) unnamed pond has never been surveyed. The status of the current fish community is unknown. The pond is accessible via a 1.5-mile trail from Pharaoh Lake, then by a 1 mile bushwack to the pond.

This unnamed pond will be managed to preserve and protect the fish species present for their intrinsic value.

Management Class: Unknown

38. **Unnamed Pond** (UH-P 435A)

This small (approximately 1 acre) unnamed pond has never been surveyed. The status of the current fish community is unknown. The pond is accessible via a 1-mile trail from Smith Bay on Paradox Lake to Crane Pond and lies between Blue Hill and Sucker Hole Hill.

This unnamed pond will be surveyed to determine the fish species present.

Management Class: Unknown

39. **Whortleberry Pond** (UH-P 411)

A 42-acre Adirondack brook trout pond with a native and nonnative fish community consisting of brook trout, white sucker, golden shiner, creek chub, and redbreast sunfish. Accessible via a 2.8-mile trail from the Pharaoh Lake Road. Whortleberry Pond was not studied during 1932 biological survey. Brook trout, white sucker, golden shiner (nonnative), and redbreast sunfish were reported in a 1956 survey. A biological survey conducted in 1988 found the same species as found in 1956. Whortleberry Pond does not contain rare, threatened, or endangered species. Competing species consisting of white sucker, golden shiner (nonnative), and redbreast sunfish have wide geographical distribution throughout the Adirondack upland.

Whortleberry Pond will be reclaimed and managed as an Adirondack brook trout pond to enhance and restore a native fish community.

Management Class: Adirondack Brook Trout

40. **Wilcox Pond** (UH-P 417)

A 3-acre pond containing a native and nonnative fish community consisting of pumpkinseed, white sucker, creek chub, golden shiner, brown bullhead, and northern redbelly dace. Wilcox pond has a boggy shoreline. Access is via a 0.3-mile trail from East Shore Road.

Wilcox Pond will be managed to preserve and protect its existing fish community for its intrinsic value.

Management Class: Other

41. **Wolf Pond** (UH-P 561)

A shallow, 19-acre Adirondack brook trout pond with a boggy shoreline supports unidentified minnow species and brook trout. Beaver are active in the outlet and tributaries of the pond. Access is via a 3.5-mile trail from Putnam Pond Campsite.

Wolf Pond will be managed as Adirondack brook trout pond to preserve and protect the existing fish community.

Management Class: Adirondack Brook Trout

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* Distance to ponds accessible from the Pharaoh Lake Road and Crane Pond Road increased by 1-2 miles upon closure of the roads at the wilderness boundary.

Note: The Pharaoh Lake Wilderness is likely to contain a number of small wetland ponds with beaver dams on their outlets. In some years these pond/wetland complexes may be a nearly dry wetland, while during wet years or during years when the beaver are active contain a small impoundment. These ponds/wetlands will be managed to preserve and protect the existing fish communities for its intrinsic value. For purposes of this plan only waters officially recognized (those with P numbers) by the NYS Biological Survey are included.

E. Wildlife

Hunting and non-hunting publics have mutual interest in assuring the perpetuation of wildlife species in order to see them in their natural environment. Management of the wildlife resource in the PLWC can only occur through the application of harvest regulation and managing public use by controlling access and/or directing the public away from sensitive areas such as significant wildlife habitats or endangered and threatened species.

Game species will continue to be managed by appropriate hunting or trapping seasons as part of larger management units. An expansion of hunting opportunity for white-tailed deer and black bear is planned in DMU 12, of which the unit forms a part. The harvest of other furbearers in the unit, except fisher, will continue at current levels. Fisher harvest levels will be reduced in order to allow a stable population to be maintained.

If endangered, threatened, or species of special concern are found to reside in the PLWC, management action will be directed toward minimizing human disturbance to the species or their habitats when possible.

Moose is a species that was once considered extirpated and can now be found in the Adirondacks in limited numbers. It is possible that moose may someday become a resident of the PLWC or wander through the area regularly. Management options for the species will be considered by the Bureau of Wildlife when the populations warrant.

F. Wild, Scenic, and Recreational Rivers

No wild, scenic or recreational rivers are found within nor border the PLWC.

G. Fire Management

Department policy calls for the extinguishing of all wildfires regardless of cause and location. Fire protection for the area is afforded by Article 9 of the Environmental Conservation Law. The Towns of Schroon and Ticonderoga of Essex County, and Hague and Horicon of Warren County enclose the PLWC and are designated Department "fire towns". By law, the Department provides prevention, detection, and suppression services.

"Let Burn" policies, employed by various Federal agencies on western wilderness areas, have been reviewed by the Department and are deemed not adaptable to this area. Such policies are impractical to apply, as this area has an irregular boundary that is interspersed with private land.

The Pharaoh Mountain fire tower is currently being reviewed for its historical significance. The tower has not been manned since 1984 and is no longer cost effective. Its use as a fire detection unit has been largely supplanted by aerial detection flights. The Belfry Mountain fire tower (Hammond Pond Wild Forest) to the north and the Black Mountain fire tower (Lake George Wild Forest) to the south will be retained and used in conjunction with aerial detection flights to provide fire detection.

Forest ranger headquarters are located in Brant Lake, Schroon, and Ticonderoga. Fire control maintenance facilities are located at the Crown Point Reservation and at Warrensburg. These facilities will be maintained during the life of this plan. Wilderness designation challenges fire managers to select suppresion and "mop-up" tactics commensurate with a fire's potential or existing behavior yet leave minimal environmental impact upon the wilderness. Actual fire conditions and good judgement will dictate the actions taken. However, "light hand on the land" tactics will

be employed when and where appropriate to suppress fires while maintaining a high standard of caring for the land.

DEC used this approach in 1988 to suppress a lightning-caused fire between Crab and Crane Ponds. Using hand tools and fire pumps, fire lines were constructed around a 32-acre site that had an actual burn area of about 18 acres. The area sustained minimal environmental damage in suppressing the fire.

H. Administration

1. Staffing

The PLWC and associated areas will be administered under the direction of an area manager appointed by the Regional Director. It is recommended the individual in charge of Division of Lands and Forests functions at the Warrensburg sub-office be appointed area manager.

All land use activities which are proposed or occur in this area should be cleared through the area manager. These include not only activities contemplated by Lands and Forests personnel but also those undertaken by the Division of Operations, Division of Fish and Wildlife or any other arm of the Department. It is crucial to the administration of this area that it be managed as a coordinated unit and not segregated by county, district or divisional lines.

Forest rangers whose districts encompass part of the PLWC area will have direct on-the-ground administrative Division of Lands and Forests responsibilities coordinated through the area manager.

The assistant forest ranger program will be used to increase patrols of the area during busy seasons and assist in designating campsites. This program has proven to be very effective in communicating with and

educating public users. The assistant forest rangers will work with and be responsible to local forest rangers. Their scope of duties will include monitoring trailheads, interior patrol, public safety, minor law enforcement, facility security, public education, fire, search and rescue, and level 1 trail maintenance.

Field staffing should be at least a level of two assistant forest rangers, one more than currently assigned, on a seasonal basis from the early spring fishing season until the end of the big game season.

Winter use, presently increasing at a rapid rate, should be monitored over the next five years through the use of trail registers and existing forest ranger staff to determine whether seasonal staffing should be adjusted.

The present trail crew will work under the supervision of the Division of Operations. It currently consists of 2-3 seasonal laborers and has maintenance responsibilities for this area, the Hoffman Notch Wilderness, and the Hammond Pond Wild Forest. This crew has been supplemented by additional crews from Newcomb, Ray Brook, and Warrensburg. Due to the extensive trail mileage and facilities in this area of maintenance responsibility, two additional laborers and one trail crew supervisor will be added to the present staff.

2. Budgeting

Project expenses to be incurred by this plan are detailed in Section V, Schedule for Implementation.

Area managers will be responsible for all budgeting for the unit. Administrative budgeting will be the function of the Division of Lands and Forests in consultation with the Division of Operations and Fish and Wildlife staff. Construction and maintenance budgets are developed by

the Division of Operations and the Division of Lands and Forests in consultation with Fish and Wildlife.

3. Education

Increased programs in outdoor education are continually needed. Education efforts should be targeted towards proper human waste disposal and towards reduced littering and vandalism. A minimum of two assistant forest rangers are required to supplement the forest ranger staff's educational and law enforcement responsibilities.

Increased emphasis should be directed to the further education of fishermen, hunters, hikers, and especially to the many large organized groups that use the PLWC.

Bulletin boards, similar to those used in the High Peaks Wilderness, are needed at each trail register. Information should be kept brief but should be current and inform the public of the pertinent rules and regulations and the general guidelines for proper and safe wilderness use. Emphasis will be towards minimum impact camping and hiking; the "no trace" commitment.

Upon approval of this plan, a brochure will be prepared describing the area's many resources and provisions for protecting those resources and the safety of the user.

I. Problem Areas

1. Accessibility

a. Bald Ledge Primitive Area

Improve access through new acquisitions and/or easements.

2. Law Enforcement

Littering and vandalism are major problems due to the lack of necessary personnel. The PLWC occupies a small portion of three forest ranger districts. These districts also include portions of the Dix Wilderness, the Hoffman Notch Wilderness, the Hammond Pond Wild Forest and the Lake George Wild Forest. On busy weekends and holidays, these rangers and the one assistant forest ranger are "stretched pretty thin". Additional assistant forest rangers would greatly aid law enforcement and education efforts.

Illegal trail marking continues to be a problem along the East Shore Road of Schroon Lake and along the southern bounds of the unit near Whortleberry Pond where multiple private ownerships border the wilderness. Repeated measures have been taken to erase such trails. Efforts will be made to educate users to refrain from illegally identifying these access routes into the wilderness.

3. Land Titles

There are no known land title problems. However, there are three deeded easements across the unit that affect management.

The Bald Ledge Primitive Area is bisected by a private road, 0.5 mile in length that leads to private property. This deeded easement has prevented the primitive area from being classified as wilderness.

The Town of Ticonderoga has a deeded easement to the water supply at Gooseneck Pond. The Town's legal right to the municipal water supply is further guaranteed by the Environmental Conservation Law, Section 15, Article 1509. The area involved occupies 1.0 acre and has 0.1 mile of road. Motorized access to this road is restricted to administrative use only.

The Hague Brook Primitive Area contains an access road to a parcel of private land lying between this area and the Pharaoh Lake Wilderness Area. The owner of this inholding is reputed to have deeded rights to use unspecified roads within the area. This matter is under review by Department staff.

4. Environmental Problems

a. Land Resources

Heavy localized public use has led to shoreline degradation of many lakes and ponds. Crane, Bear, Goose, Grizzle Ocean, Lost, and Rock Ponds, and Pharaoh Lake all show signs of vegetative loss, soil erosion, compaction, and varying amounts of litter and debris. On clear days, litter is even evident on the bottoms of many of the ponds, lakes and streams. Although no outbreaks of Giardia or fecal contamination have been reported to the Department, it is an over-riding concern and presents a potential problem.

b. Fisheries

1. Acid Precipitation

A serious threat to the fishery resource of the Adirondack Park is acid precipitation. To date, because the PLWC is located on the eastern side of the Park, area waters have not been greatly impacted. It is unlikely that any impact will be detected during the time frame of this plan.

If significant pond acidification does occur, there will be a reduction in public use stemming from the resultant reduction in recreational fishing opportunity. The impact of acid rain on

other resources, principally forest vegetation, is now being investigated throughout the Adirondack Park.

J. Land Acquisition

In 1985, the last in-holding of the Pharaoh Lake Wilderness was purchased. The project, Q-AFP Essex 205, included 1.12 acres and 0.75 mile of road, northwest of Lost Pond.

Future acquisition efforts should be directed to purchase of those tracts between the Pharaoh Lake Wilderness appendages and the Bald Ledge Primitive Area, First Brother Primitive Area, and the Hague Brook Primitive Area and especially towards any deeded easement leading to these tracts. To the extent practical, the ultimate boundaries of the PLWC should be Route 74 on the north, Route 8 and the Beaver Pond Road on the south, and County Route 33 on the east.

Through negotiated sale between willing vendors, acquisition efforts for the PLWC will be directed towards the following parcels should they become available for purchase:

LOT	TRACT	TOWN	COUNTY	APPROX. ACRES
29	Ellice	Ticonderoga	Essex	100
30	Ellice	Ticonderoga	Essex	100
31	Ellice	Ticonderoga	Essex	100
32	Ellice	Ticonderoga	Essex	100
33	Ellice	Ticonderoga	Essex	100
34	Ellice	Ticonderoga	Essex	100
35	Ellice	Ticonderoga	Essex	100
36	Ellice	Ticonderoga	Essex	100
37	Ellice	Ticonderoga	Essex	100
39	Ellice	Ticonderoga	Essex	100
40	Ellice	Ticonderoga	Essex	100
1A	Ellice	Ticonderoga	Essex	100
2B	Ellice	Ticonderoga	Essex	100
3C	Ellice	Ticonderoga	Essex	100
5B	Ellice	Ticonderoga	Essex	100
7C	Ellice	Ticonderoga	Essex	100
*	Ellice	Ticonderoga	Essex	368
7	Ellice	Ticonderoga	Essex	102

165	Ellice	Ticonderoga	Essex	100
166	Ellice	Ticonderoga	Essex	102
181	Ellice	Ticonderoga	Essex	102
1	Paradox	Ticonderoga	Essex	116
10	Paradox	Ticonderoga	Essex	140
11	Paradox	Ticonderoga	Essex	140
24	Paradox	Ticonderoga	Essex	100
38	Paradox	Ticonderoga	Essex	100
56	Paradox	Schroon	Essex	200
67	Paradox	Schroon	Essex	200
68	Paradox	Schroon	Essex	140
69	Paradox	Schroon	Essex	140
31	Brant Lake	Horicon	Warren	180
40	Brant Lake	Horicon	Warren	180
135	Brant Lake	Horicon	Warren	180
197	Brant Lake	Horicon and Schroon	Warren and Essex	140
43	Hague	Hague	Warren	180
44	Hague	Hague	Warren	90
47	Hague	Hague	Warren	20
86	Ellice	Hague	Warren	100
87	Ellice	Hague	Warren	100
88	Ellice	Hague	Warren	100
94	Ellice	Hague	Warren	50
TOTAL ACRES				4970

*Unnumbered lots - Bald Ledge Area

K. Adirondack State Land Master Plan Amendments

None required.

L. State Environmental Quality Review (SEQR) Requirements

An environmental impact statement will accompany this plan as a separate document.

M. Relationship of Management Area to Adjoining Forest Preserve

The PLWC borders the Hammond Pond Wild Forest on the north and the Lake George Wild Forest on the south. The Master Plan apportioned these three units of forest preserve among those visitors seeking a wilderness exper-

ience, free of motor vehicles with a degree of solitude, and those desiring a more intensive, often motorized, form of recreation.

Management of each area should be coordinated with adjoining units and commensurate with each area's classification.

Planning and development of the adjoining wild forest areas should be directed towards a redistribution of use and greater accommodation of large groups. Both the Lake George Wild Forest (Black Mountain Section) UMP, December 1985, and the Hammond Pond Wild Forest UMP, March 1988, address these issues.

V. SCHEDULE FOR IMPLEMENTATION

YEAR	ACTIVITY	COST
I	1. Remove Pharaoh Mt. fire tower and observer's cabin	
	2. Designate remote tentsites	5,000
	3. Relocate Crane Pond pit privies (3)	600
	4. Rehabilitate Crane Pond and Pharaoh trail registers	500
	5. Boundary line maintenance, 6.0 miles	1,800
	6. Annual facilities maintenance; trails, leantos, signs, litter removal, etc.	30,000
	7. Develop a PLWC wilderness lean-to policy	0
	8. Improve the Crane Pond Road parking area at wilderness boundary	1,500
	9. Assistant forest ranger staff; 2 positions, 20 weeks each	11,500
	10. Blue Hill trailhead - relocate 0.1 mile of trail	1,000
	11. Construct elevated boardwalk at Mill Brook Trail	3,000
	12. Mark foot path to Crab Pond (P# 410)	150
	13. Reconnaissance surveys as needed and one reclamation. Survey Coffee and Unnamed Pond (P435A).	12,000
	TOTAL	$67,050
II	1. Change Pharaoh Lake-Springhill Ponds from a horse trail to a foot trail	200
	2. Relocate Pharaoh Mt. trail, 0.6 mi.	1,000
	3. Relocate Pharaoh Lake pit privies (7)	1,400
	4. Boundary line maintenance; 6.0 miles	1,800
	5. Annual maintenance of facilities	31,000
	6. Assistant forest ranger staffing; 2 positions, 20 weeks each	12,100
	7. Prepare area map and educational brochure	1,000

	8. Conduct seven pond reclamations. Begin surveys to assess the effectiveness of the reclamations.	57,000
	TOTAL	$105,500
III	1. Relocate Pharaoh Lake shoreline trail; 4.9 mi.	4,000
	2. Install Berrymill trail register	250
	3. Reconstruct Berrymill bridge	1,000
	4. Construct a six car parking lot at Lost Pond trailhead	2,500
	5. Relocate 9 pit privies	1,800
	6. Boundary line maintenance; 6.0 miles	1,800
	7. Annual maintenance of facilities	32,000
	8. Assistant forest ranger staffing; 2 positions, 20 weeks each	12,700
	9. Misc. closed campsite rehabilitation projects	1,000
	10. Complete surveys to assess the effectiveness of the reclamations.	10,000
	TOTAL	$67,050
IV.	1. Construct six car parking facility; New Hague Road-Berrymill trailhead	3,000
	2. Boundary line maintenance; 6.0 mi.	1,800
	3. Annual maintenance of facilities	33,000
	4. Misc. closed campsite rehabilitation projects	1,000
	5. Assistant forest ranger staffing; 2 positions, 20 weeks each	
	TOTAL	$38,800
V	1. Construct Springhill Pond-Berrymill Trail, 1.5 mi.	2,000
	2. Reinventory natural resources and public use	8,000
	3. Boundary line maintenance; 6.0 miles	1,800

4. Annual maintenance of facilities	34,000
5. Assistant forest ranger staffing; 2 positions 20 weeks each	14,200
6. Initiate surveys to assess natural reproductions. Three to five years may be required for brook trout natural reproduction to become established, so surveys to assess the status of natural reproduction may not occur during this five-year plan.	5,000
TOTAL	$65,000

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GENERAL DEFINITIONS

As used in this plan, the following terms shall have the following meanings:

ACID BOG PONDS	Naturally acidic ponds with marginal to lethal pH values and characteristic bog vegetation.
ACIDIFIED PONDS	Ponds exhibiting marginal to lethal pH values from natural causes or as a result of acid precipitation. Many have pH values below 5, are no longer capable of supporting fish species, and are at elevations in excess of 2,000 feet.
BEAVER PONDS	Impoundments created by dam building activities of beaver.
BOAT LAUNCHING SITES	Developed sites which provide public access to relatively large waters by providing ramps for launching trailered boats along with parking facilities for vehicles and trailers.
CHEMICALLY UNSUITABLE WATERS	Waters either heavily polluted or eutrofied. Generally exhibiting dissolved oxygen deficits or other severe water chemistry problems.
ENDANGERED SPECIES	Fish species or strains which are in imminent danger of extinction in this geographic area. Example-Round Whitefish.
FISH BARRIER DAM	A man-made device or structure used to prevent the upstream or downstream migration of fish for the purpose of protecting a high-value fishery or population of fish indigenous to the protected body of water.
FISHING ACCESS SITE	A developed site on a lake or river which provides public access and parking space for vehicles and is generally, but not always, limited to hand launching.
FORAGE FISHES	Small fishes which serve as food for larger, carniverous fishes; e.g., rainbow smelt represents a traditional forage fish for landlocked salmon.
FOOT TRAIL	A marked and maintained path or way for foot travel.
HERITAGE BROOK TROUT PONDS	Ponds supporting recognized native, wild strains of brook trout, undiluted by hatchery plantings, preserved for the sake of their pure gene pools.

GENERAL DEFINITIONS

LEANTO	An open front shelter made of natural materials suitable for temporary or transient residence.
MOTOR VEHICLE	A device for transporting personnel, supplies or material that uses a motor or an engine of any type for propulsion and has wheels, tracks, skids, skis, air cushion or other contrivance for traveling on, or adjacent to air, land and water or through water.
MOTORBOAT	A device for transporting personnel or material that travels over, on or under the water and is propelled by a non-living power source on or within the device.
MULTI-SPECIES WATERS	Waters which support more than one fish species. The great bulk of Adirondack Zone waters meets this definition.
NATIVE SPECIES WATERS	Waters supporting native Adirondack Zone fish species. Example: brook trout, lake trout, round whitefish.
NATURAL MATERIALS	Construction components drawn from the immediate project site or materials brought into the construction site that conform in size, shape and physical characteristics to those naturally present in the vicinity of the project site. Such materials include stone, logs and sawn and treated timber. Natural materials may be fastened or anchored by use of bolts, nails, spikes or similar means.
NONNATIVE SPECIES WATERS	Waters supporting introduced, non native fish species, such as yellow perch and black bass.
NONSTOCKED WATERS	Waters not receiving fish from State and/or private fish stocking or fish transfer programs. Generally N.S.A., chemically unsuitable, warm, small or dry.
NONTROUT WATERS	Waters which do not maintain year-round water quality to sustain salmonids on a year-round basis.
pH VALUE	Represents the effective concentration of hydrogen ion. The practical pH scale extends from 0 (very acid) to 14 (very alkaline). Waters with a pH value below 7 are acid while those above this value are alkaline.

GENERAL DEFINITIONS

PRIMITIVE TENT SITE	An undeveloped camping site providing space for not more than three tents, which may have an associate pit privy and fire ring, designed to accommodate a maximum of eight people.
RECLAMATION	A management technique involving the application of a fish toxicant such as "rotenone" to eliminate undesirable fish populations.
SCENIC RIVERS	Sections of rivers defined in the Wild, Scenic and Recreational Rivers Act as meeting the intermediate "scenic" classification which permits relatively little development, improvement and road access.
SPECIAL ANGLING REGULATIONS	Departures from the statewide angling regulations. These are currently expressed as options in the fishing guide. May be more liberal or more restrictive than the Statewide regulations.
STOCKED WATERS	Waters included in state and/or private fish stocking or fish transfer programs.
STREAM ORDER	A system of stream classification based on the position of a stream in the hierarchy of tributaries. First order streams are headwater streams that have no tributaries, and the junction of two first order streams forms a second order stream. A third order stream is formed when two second order streams merge, and so on. The union with streams of a lower order does not increase the order of the receiving stream, ie, a third order stream may receive several first and second order tributaries, but it only increases in order when it merges with another third order stream.
TRAIL HEAD	A point of entrance to state land which may contain some or all of the following: vehicle parking, trail signs, and visitor registration structures.
TWO-STORY PONDS AND LAKES	Waters which simultaneously support and are managed for fishable populations of cold-water and warmwater game fishes. The bulk of lake trout and rainbow trout resources fall within this class of waters.
WARM STREAMS	Streams with summer water temperatures too warm for salmonid survival and not considered for salmonid stocking.

GENERAL DEFINITIONS

WARMWATER STREAMS	Streams or stream sections which support and are managed for fishable populations of warmwater fishes and where high summer water temperatures preclude year-round survival of coldwater fishes.
WILD, SCENIC AND RECREATIONAL RIVERS	Sections of rivers defined in the Wild, Scenic and Recreational Rivers Act as possessing outstanding values (natural, scenic, ecological, recreational, etc.) that shall be preserved in a free-flowing condition.

Table 1. Pharaoh Lake Wilderness Complex - Ponded Water Inventory Data

Name	P#	File	Watershed*	County	USGS Quad (15')	Mgmt. Class	Area (acres)	Max. Depth (feet)	Est. Mean Depth (feet)	Planimetered Mean Depth (feet)	Est. Volume (acre-feet)	Planimetered Vol. (acre-feet)
Alder Pond	420	742	UH	Essex	Paradox Lake	Warmwater	31.9	5.9	-	2.0	-	63
Bear Pond	353	400	CH	Essex	Paradox Lake	Adk. Brook Trout	12.8	11.5	-	5.9	-	76
Berrymill Pond	356	403	CH	Essex	Paradox Lake	Warmwater	54.1	19.0	-	6.6	-	355
Bumbo Pond	435	762	UH	Essex	Paradox Lake	Warnwater	6.0	-	-	-	-	-
Burge Pond	426	748	UH	Essex	Paradox Lake	Adk. Brook Trout	8.4	18.0	-	9.2	-	77
Clear Pond	358	405	CH	Essex	Paradox Lake	Coldwater	26.0	60.0	-	28.9	-	751
Crab Pond	430	731	UH	Essex	Paradox Lake	Adk. Brook Trout	32.0	30.0	15.0	-	480	-
Crab Pond	410	752	UH	Warren	Paradox Lake	Adk. Brook Trout	11.1	33.1	-	13.5	-	150
Crane Pond	421	743	UH	Essex	Paradox Lake	Two-Story	166.8	106.0	-	38.1	-	6,348
Coffee Pond	409A	-	UH	Essex	Paradox Lake	Unknown	-	-	-	-		
Cotters Pond	436	763	UH	Essex	Paradox Lake	Adk. Brook Trout	13.1	16.0	8.0	-	105	-
Devil's Washdish	413A	-	UH	Essex	Paradox Lake	Unknown	1.0	-	-	-	-	-
Glidden Marsh	429	751	UH	Essex	Paradox Lake	Adk. Brook Trout	21.0	26.9	-	6.9	-	145
Goose Pond	419	741	UH	Essex	Paradox Lake	Coldwater	66.5	100.1	-	49.9	-	3,315
Gooseneck Pond	442	770	UH	Essex	Paradox Lake	Two-Story	77.0	69.0	34.5	-	2,656	-
Grizzle Ocean	357	404	CH	Essex	Paradox Lake	Adk. Brook Trout	19.0	33.1	-	15.7	-	300
Gull Lake	418	740	UH	Essex	Paradox Lake	Adk. Brook Trout	13.8	48.9	-	16.4	-	227
Harrison Marsh	407	727	UH	Essex	Paradox Lake	Other	4.2	9.8	-	4.9	-	21
Heart Pond	361	407	CH	Essex	Paradox Lake	Other	8.9	4.9	-	2.6	-	23
Honey Pond	422	744	UH	Essex	Paradox Lake	Unknown	2.0	3.0	1.5	-	3	-
Horseshoe Pond	431	753	UH	Essex	Paradox Lake	Adk. Brook Trout	4.0	29.0	14.5	-	58	-
Lilypad Pond	423	745	UH	Essex	Paradox Lake	Adk. Brook Trout	2.4	20.0	10.0	-	24	-
Little Rock Pond	425	747	UH	Essex	Paradox Lake	Adk. Brook Trout	7.4	26.9	-	11.5	-	85
Lost Pond	354	401	CH	Essex	Paradox Lake	Coldwater	27.9	34.1	-	17.1	-	476
Mud Pond	359	406	CH	Essex	Paradox Lake	Coldwater	2.0	4.9	-	2.6	-	5
Otter Pond	441	769	UH	Essex	Paradox Lake	Adk. Brook Trout	4.0	22.0	11.0	-	44	-
Oxshoe Pond	427	749	UH	Essex	Paradox Lake	Adk. Brook Trout	15.0	55.0	27.5	-	412	-
Pharaoh Lake	412	733	UH	Essex	Paradox Lake	Adk. Brook Trout	441.1	107.0	53.5	-	23,594	-
Rock Pond	424	746	UH	Essex	Paradox Lake	Adk. Brook Trout	56.1	65.0	-	19.7	-	1,104
Spectacle Pond	409	-	UH	Essex	Paradox Lake	Adk. Brook Trout	16.8	19.0	-	7.2	-	121
Springhill Pond (Low)	414	735	UH	Essex	Paradox Lake	Coldwater	28.0	21.0	10.5	-	294	-
Springhill Pond (Mid)	415	736	UH	Essex	Paradox Lake	Adk. Brook Trout	1.0	10.0	5.0	-	5	-
Springhill Pond (Up)	416	737	UH	Essex	Paradox Lake	Adk. Brook Trout	7.0	8.0	4.0	-	28	-
Unnamed Pond	421A	-	UH	Essex	Paradox Lake	Warmwater	23.0	7.0	3.5	3.2	81	1,745
Unnamed Pond	428	750	UH	Essex	Paradox Lake	Adk. Brook Trout	2.0	-	-	-	-	-
Unnamed Pond	409B	-	UH	Essex	Paradox Lake	Unknown	-	-	-	-	-	-
Unnamed Pond	429A	-	UH	Essex	Paradox Lake	Unknown	-	-	-	-	-	-
Unnamed Pond	435A	-	UH	Essex	Paradox Lake	Unknown	-	-	-	-	-	-
Whortleberry Pond	411	632	UH	Essex	Paradox Lake	Adk. Brook Trout	42.0	40.0	20.0	-	840	-
Wilcox Pond	417	739	UH	Essex	Paradox Lake	Other	3.0	8.9	-	4.6	-	14
Wolf Pond	561	961	UH	Essex	Paradox Lake	Adk. Brook Trout	19.0	11.0	5.5	-	104	-

* Watershed

CH Champlain
UH Upper Hudson

Total Adk. Brook Trout	(21)	748.9 acres
Total Two-Story	(2)	243.8 acres
Total Warmwater	(4)	115.0 acres
Total Coldwater	(5)	150.4 acres
Total Other	(3)	16.1 acres
Total Unknown	(6)	(3.0 acres partial)
TOTAL	(41)	1277.2 acres

Table 2. Pharaoh Lake Wilderness Complex - Ponded Water Survey Data

Name	P #	Most Recent Chemical Survey					Most Recent Biological Survey				
		Date	Source	ANC (ueq/l)	pH	Conductivity	Date	Source	No. Gillnets**	Fish Species Present and Number Caught*	ST/Gillnet**
Alder Pond	420	1987	ALSC	214.3	7.31	35.5	1987	ALSC	2	Bhc-38; YP-31; PKS-26; WS-25; GS-11; CC-9; RbS-1; RB-1	0.0
Bear Pond	353	1984	ALSC	128.7	7.14	31.1	1984	ALSC	2	ST-26. Recently infested w/ competing fish.	13.0
Berrymill Pond	356	1984	ALSC	83.3	6.86	25.6	1984	ALSC	3	Bhc-44; YP-43; NP-9; PS-8; GS-2	0.0
Bumbo Pond	435	762	DEC	-	-	-	1956	DEC	-	YP,NP,PKS,CC,BhC	0.0
Burge Pond	426	1987	ALSC	123.9	7.07	23.6	1987	ALSC	1	ST-1; Bhc-42; GS-8	1.0
Clear Pond	358	1984	ALSC	107.8	7.13	32.0	1984	ALSC	4	ST-3; WS-108; GS-60; CC-46; BnM-27; KOK-5	0.8
Crab Pond	430	1982	DEC	87.0	-	27.5	1958	DEC	2	ST-5; Bhc, CC, GS observed.	2.5
Crab Pond	410	1987	ALSC	132.0	7.08	31.0	1987	ALSC	2	CC-16; WS-15; Bhc-12; NRD-11; ST-6	3.0
Crane Pond	421	1987	ALSC	140.1	7.17	30.9	1987	ALSC	5	WS-67; LT-16; RB-13; Bhc-9; RbS-9; YP-9; SmB 6; KOK-6; BK-3; PKS-3; LLS-1	0.0
Coffee Pond	409A	-	-	-	-	-	-	DEC	-	Not Seen	-
Cotters Pond	436	1981	DEC	231.0	7.50	-	1964	DEC	-	ST-7; GS-2; BhC-3; minnow (spp.)	-
Devil's Washdish	413A	-	-	-	-	-	-	-	-	- Not seen	-
Glidden Marsh	429	1987	ALSC	219.0	7.34	32.5	1987	ALSC	2	ST-6; WS-59; Bhc-18; CC-12; PKS-2; NRD-1	3.0
Goose Pond	419	1987	ALSC	126.8	7.15	30.5	1987	ALSC	4	ST-3; GS-60; Spl-22; RT-18; CC-1	0.8
Gooseneck Pond	442	1979	DEC	109.0	-	41.2	-	-	-	RT, LT, Sm B, YP	-
Grizzle Ocean	357	1984	ALSC	86.7	6.87	28.6	1984	ALSC	2	ST-19; GS-96	9.5
Gull Lake	418	1987	ALSC	136.7	7.16	27.3	1987	ALSC	2	FhM-302; GS-82; Bhc-18; ST-11; LND-8; BnM-5	5.5
Harrison Marsh	407	1987	ALSC	245.1	7.37	35.5	1987	ALSC	1	WS-42; NRB-14; Bhc-9; CC-4; GS-3	0.0
Heart Pond	361	1984	ALSC	91.2	6.69	31.6	1984	ALSC	1	Bhc-85	0.0
Honey Pond	422	-	-	-	-	-	1963	DEC	1	Bhc-6; minnows (spp.) observed	0.0
Horseshoe Pond	431	-	-	-	-	-	1964	DEC	1	ST-2; Bhc-1; minnows (spp.) observed	2.0
Lilypad Pond	423	1982	DEC	237.0	-	36.7	1967	DEC	1	ST-8	8.0
Little Rock Pond	425	1987	ALSC	307.3	7.50	43.9	1987	ALSC	1	ST-4; CS-35	4.0
Lost Pond	354	1984	ALSC	321.0	6.98	50.8	1984	ALSC	3	ST-6; GS-90; BT-23; BND-1; BK-1	2.0
Mud Pond	359	1984	ALSC	208.2	7.43	33.4	1984	ALSC	1	ST-1; CC-93; GS-40; Bhc-31; WS-14; BND-2; FhM-1	1.0
Otter Pond	441	-	-	-	-	-	1988	DEC	2	ST-2; Bhc-140; PKS-4	1.0
Oxshoe Pond	427	1979	DEC	-	-	37.0	1979	DEC	2	ST-8; Bhc-32; GS-1	4.0
Pharaoh Lake	412	1979	DEC	109.0	-	42.3	-	-	-	ST, LT, Bhc, PKS	-
Rock Pond	424	1987	ALSC	129.6	7.15	35.0	1987	ALSC	4	ST-18; Bhc-8; CS-1; BT-1; minnows observed	4.5
Spectacle Pond	409	1987	ALSC	362.4	7.48	47.3	1987	ALSC	2	ST-11; Bhc-76; CC-50; FhM-25; GS-24; PD-6	5.5
Springhill Pond (Low)	414	1979	DEC	6.0	-	27.5	1988	DEC	4	ST-23; RT-32; BT-1	5.8
Springhill Pond (Mid)	415	-	DEC	0.9	-	35.4	-	-	-	No fish	-
Springhill Pond (Up)	416	1979	DEC	18.0	-	35.4	1979	DEC	2	No fish	0.0
Unnamed Pond	421A	1987	ALSC	337.5	7.19	43.1	1987	ALSC	2	GS-1; BnM-1; CC-3; WS-29; Bhc-4; RbS-2	0.0
Unnamed Pond	428	-	-	-	-	-	-	-	-	(See Oxshoe)	-
Unnamed Pond	409B	-	-	-	-	-	-	-	-	Not seen	-
Unnamed Pond	429A	-	-	-	-	-	-	-	-	Not seen	-
Unnamed Pond	435A	-	-	-	-	-	-	-	-	Not seen	-
Whortleberry Pond	411	1979	DEC	229.0	-	51.4	1988	DEC	3	ST-10; WS-22; RbS-14; CC-12. GS, RbS, CC	3.3
Wilcox Pond	417	1987	ALSC	404.2	7.59	51.1	1987	ALSC	1	PKS-61; WS-36; CC-23; GS-18; Bhc-16; NRD-14	0.0
Wolf Pond	561	1979	DEC	154.0	-	41.6	1932	DEC	-	Minnows (spp.)	-

* Fish species caught by various gear (Entries without numbers indicate fish species thought to be present. No biological survey conducted.)
** 150-foot Swedish gillnet

LLS	Landlocked salmon	BT	Brown trout	KOK	Kokanee salmon	PD	Pearl dace	SmB	Smallmouth bass
BND	Blacknose dace	CC	Creek chub	LND	Longnose dace	PKS	Pumpinseed	Spl	Splake
Bhc	Brown bullhead	CS	Common shiner	LT	Lake trout	RB	Rock bass	ST	Brook trout
BK	Banded killifish	FhM	Fathead minnow	NRD	Northern redbelly dace	RbS	Redbreast sunfish	WS	White sucker
BnM	Bluntnose minnow	GS	Golden shiner	NP	Northern pike	RT	Rainbow trout	YP	Yellow perch

Not seen - No biological survey

TABLE 3.

CLASSIFICATION OF COMMON ADIRONDACK UPLAND FISH FAUNA INTO NATIVE, NONNATIVE, AND NATIVE BUT WIDELY INTRODUCED
Adapted from George, 1980

NATIVE TO ADIRONDACK UPLAND

Blacknose dace
White sucker
Longnose sucker
Northern redbelly dace
Redbreast sunfish
Finescale dace
Longnose dace
Slimy sculpin
Lake chub
Redhorse suckers (spp.)
Common shiner

NATIVE SPECIES WIDELY INTRODUCED[1]

Brook trout
Brown bullhead
Pumpkinseed
Lake trout
Creek Chub

NONNATIVE

Golden shiner
Chain pickerel
Bluntnose minnow
Largemouth bass
Johnny darter
Brown trout
Splake
Whitefish
Rainbow smelt
Northern pike
Rock bass
Smallmouth bass
Yellow perch
Fathead minnow[2]
Rainbow trout
Atlantic salmon
Banded killifish

[1] These native fishes are known to have been widely distributed throughout Adirondack uplands by DEC, bait bucket introduction, and unauthorized stocking. This means that their presence does not necessarily indicate endemicity. Other native species listed above also may have been moved from water to water in the Adirondack Upland, but the historical record is less distinct.

[2] Not mentioned by Mather (1884) from Adirondack collections, minor element southern Adirondack Uplands (Greeley 1930-1935).

Table 4. Gradients for sections of streams draining the Pharaoh Lakes Wilderness area.

Stream	Gradient (ft/mi)	Length of section (mi)
Alder Creek	236	1.0
Spectacle Brook	288	0.8
Pharaoh Lake Brook	200	0.8
Springhill Ponds Outlet	316	2.4
Putnam Creek (downstream of Putnam Pond)	228	1.0
Gooseneck Pond Outlet	584	0.5

Table 5: Sample of Historic Brook Trout Monocultures*

Water	Key #/ Watershed	Survey Year	Source
Brook Trout Lake	P 874 O&B	1950	DEC Fish Mgmt.
Unnamed Pond	P 113 C	1986	ALSC
Unnamed Pond	P 259 C	1986	ALSC
Bickford Pond	P 273 STL	1984	ALSC
Mud Pond	P 1008 O&B	1986	ALSC
Metcalf Lake	P 897 MH	1934	Biological Survey
Blueberry Pond	P 197 RAQ	1933	Biological Survey
Horn Lake	P 854 O&B	1989	DEC Fish Mgmt.
Hardscrabble Pond	P 1015 O&B	1985	ALSC

* These waters have no known history of stocking or fish management prior to the survey date shown.

Table 6. Adirondack Pond Statistics

- 2,900 ponds
- 400 Brook trout ponds in public ownership
- 40 Brook trout ponds in public ownership capable of supporting self-sustaining populations (10%)

Table 7. Adirondack brook trout waters not stocked or reclaimed with only one other native species present, from 1,123 Adirondack ecological zone waters.*

Pond	Watershed	Species
Unnamed Pond	P 9 STL	Brook trout, northern redbelly dace
Train Pond	P 96 STL	Brook trout, creek chubs
Unnamed Pond	P 170 O&B	Brook trout, brown bullhead
Deer Pond	P 379 O&B	Brook trout, brown bullhead
Merrill Pond	P 45 CH	Brook trout, brown bullhead
Weller Pond	P 97 STL	Brook trout, brown bullhead
Lone Pond	P 61 RAQ	Brook trout, pumpkinseeds
House Pond	P 770 MH	Brook trout, brown bullhead
Unnamed Pond	P 127C UH	Brook trout, brown bullhead
Kildare Pond	P 33 RAQ	Brook trout, creek chub
Kettle Pond	P 35A RAQ	Brook trout, creek chub
Shaw Pond	P 222 RAQ	Brook trout, creek chub
Upper Preston Pond	P 239 RAQ	Brook trout, creek chub
Middle Cat Pond	P 269 RAQ	Brook trout, brown bullhead
Finch Pond	P 803 MH	Brook trout, brown bullhead

* Includes public and private waters. Brook trout abundance is highly variable. Stocking records on private waters may be incomplete. Most ponds on public lands capable of supporting trout are actively managed and, therefore, were excluded.

Table 8. Adirondack brook trout waters not stocked or reclaimed with two other native species present, from 1,123 Adirondack ecological zone waters.*

Pond	Key #/ Watershed	Species
Clear Pond	P 174 STL	Brook trout, creek chub, & slimy sculpin
Whackers Pond	P 214 STL	Brook trout, creek chub, & brown bullhead
The Gulf	P 135 O&B	Brook trout, creek chub, & brown bullhead
Mullins Flow	P 168 O&B	Brook trout, creek chub, & brown bullhead
Wolf Pond	P 171 O&B	Brook trout, white suckers, & brown bullhead
Unnamed Pond	P 288A O&B	Brook trout, lake chub, & brown bullhead
Unnamed Pond	P 313A O&B	Brook trout, blacknose dace, & creek chub
Scott Pond	P 322 O&B	Brook trout, blacknose dace, & white suckers
Colvin Pond	P 323 O&B	Brook trout, northern redbelly dace, and longnose dace
Doe Pond	P 650A O&B	Brook trout, white suckers, & brown bullhead
Lake Julia	P 988 O&B	Brook trout, white suckers, & creek chub
Dix Pond	P 460A UH	Brook trout, white suckers, & creek chub
Tupper Lake Reservoir	P 110 RAQ	Brook trout, northern redbelly dace, & creek chub
Triangle Pond	P 166 RAQ	Brook trout, brown bullhead, & pumpkinseed
Unnamed Pond	P 225C RAQ	Brook trout, northern redbelly dace, & creek chub
Beaver Pond	P 671 UH	Brook trout, brown bullhead, & white sucker

* Includes public and private waters. Brook trout abundance is highly variable. Stocking records on private waters may be incomplete. Most ponds on public lands capable of supporting trout are actively managed and, therefore, were excluded.

Table 9. Fish Community Changes in the Pharaoh Lakes Wilderness Unit, Native Species Sustained by Natural Reproduction.

Species[1]	Percent Occurrence 1932 - 1957	1958 - 1989
Blacknose dace	13%	6%
Brown bullhead	45%	51%
Creek chub	29%	35%
Common shiner	6%	6%
Longnose dace	0%	3%
N. redbelly dace	0%	13%
Pumpkinseed	35%	23%
Redbreast sunfish	10%	13%
White sucker	19%	29%

Based on 31 waters.

[1] One pound is known to have supported brook trout sustained by natural reproduction during the period 1958-1989. Comparable data is not available for the early period.

Table 10: Fish Community Changes in the Pharaoh Lakes Wilderness Unit, Nonnative Species Sustained by Natural Reproduction.

Species	Percent Occurrence 1932 - 1957	1958 - 1989
Banded killifish	10%	6%
Bluntnose minnow	0%	6%
Fathead minnow	0%	10%
Golden shiner	35%	48%
Northern pike	10%	3%
Rock bass	0%	6%
Yellow perch	26%	13%
Smallmouth bass	13%	6%

Based on 31 waters.

Table 11. Summary of Existing and Anticipated Fish Communities in the Pharaoh Lakes Wilderness Unit Ponds.

Community	Number of Ponds		
	Presently	All reclamations successful*	50% successful reclamations*
Natives only:			
- Excluding brook trout monocultures	3	3	8
- Brook trout monocultures	1	11	6
Nonnatives and natives	25	16	16
Unknown or never surveyed	10	5**	5**
No fish or seasonal presence of fish	2	2	2

* Four ponds (Rock, Little Rock, Coffee and Unnamed (P435A)) counted presently as unknown will be surveyed, and will subsequently be added to one the unknown categories. A fifth pond, Horeshoe, is counted presently as unknown due to unidentified minnows, and will be surveyed. It is anticipated to be reclaimed and therefore was counted as a brook trout monoculture in the post-reclamation columns.

** Two of these will also be surveyed.

APPENDIX 12

BIRDS		UMA Status and Seasonal Occurrence	References	Plant Community (Habitats) R - Reproduction F - Feeding B - Both																					
				Wet Meadow	Dry Meadow	Shrub Meadow	Northern Hardwoods	Mixed Conifers	Mixed Hardw./Conifer	Pine Plantation	Alpine	Edges	Open Water	Marsh, Swamps	Bogs	Rivers, Streams	Lakes, Ponds	Logs	Snags	Burrows	Cliffs	Caves	Talus	Comments-
				Marsh Riparian														Unique							
Loons:	Gaviidae																								
Common Loon	Gavia immer												F	R			B								
Red-throated Loon	Gavia stellata												F	R			B								
Grebe:	Podicipedidae																								
Pied-billed Grebe	Podilymbus podiceps												F	B	R		F								
Horned Grebe	Podiceps auritus												F	F			F								
Herons, Bitterns	Ardeidae																								
Great Blue Heron	Ardea herodias								R			R		F		B	F								
Green-backed Heron	Butorides striatus						R							F		F	F								
Cattle Egret	Bubulcus ibis				F								F	F		F	F								
Black-crowned Night-Heron	Nycticorax nycticorax						R	R	R					F		F	F								
Least Bittern	Ixobrychus exilis													B		F	F								
American Bittern	Botaurus lentiginosus			B										B	R		B								
Geese, Ducks:	Anatidae																								
Canada Goose	Branta canadensis			B										B			B								
Brant	Branta bernicla												F	F			F								
Snow Goose	Chen caerulescens												F	F			F								
Mallard	Anas platyrhynchos			B	B								F	B		B	B								
American Black Duck	Anas rubripes			B	B		R						F	B	R	B	B		R						
Blue-winged Teal	Anas discors			B	R								F	B		F	F								
Wood Duck	Aix sponsa						R		R					B	R	B	B		R						
Ring-necked Duck	Aythya collaris												F	B		F	F								
Common Goldeneye	Bucephala clangula			F			R		R				F	B	R	F	F		R						
Northern Pintail	Anas Acuta												F	F			F								
Gadwall	Anas strepera			F									F	F			F								
Green-winged Teal	Anas crecca			B	R								F	B			F								
Hooded Merganser	Lophodytes cucullatus						R		R					B		F	F		R						
Common Merganser	Mergus merganser												F	B	R	B	F		R	R					

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Vultures:	Cathartidae																						
Turkey Vulture	Cathartes aura				F	F	F	F	F			F		F		F	F						
Hawks, Eagles:	Accipitridae																						
Northern Goshawk	Accipiter gentilis						B		B														
Sharp-shinned Hawk	Accipiter striatus						B		B														
Red-tailed Hawk	Buteo jamaicensis			F	F	F	B		B			F							R		R		
Red-shouldered Hawk	Buteo lineatus						F					F		F									
Cooper's Hawk	Accipiter cooperii						F		F	F		F		F									
Broad-winged Hawk	Buteo platypterus						B	B	B	B		F		B									
Bald Eagle	Haliaeetus leucocephalus												F			F	F						
Golden Eagle	Aquila chrysaetos			F	F	F			B			F							R				
Northern Harrier	Circus cyaneus			B	B	B						F		B	B								
American Kestrel	Falco sparverius				F	F						B							R				
Peregrine Falcon	Falco peregrinus			F	F	F	F		F			F		F									
Merlin	Falco columbarius				F	F	F					F											
Osprey:	Pandionidae																						
Osprey	Pandion haliaetus			R	R								F	B		F	F		R				
Turkeys:	Meleagridae																						
Wild Turkey	Meleagris gallopavo			F	F	B	F	F	F			B											
Grouse:	Tetraonidae																						
Ruffed Grouse	Bonasa umbellus						B		B			F						R					
Spruce Grouse	Canachites canadensis							B						B	B								
Rails and Coots:	Rallidae																						
Virginia Rail	Rallus limicola			B									B	B	B	B							
Sora	Porzana carolina			B	F									B									
American Coot	Fulica americana			F										F		F	F						

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Plover:	Charadriidae																							
Killdeer	Charadrius vociferus			B	B	B								F		F	F							
Semipalmated Plover	Charadrius semipalmatus			F	F																			
Lesser Golden Plover	Pluvialis dominica																							
Sandpipers, Phalaropes:	Scalopacidae																							
American Woodcock	Philohela minor			B	F	F						B		B										
Common Snipe	Capella gallinago			B										B	B									
Spotted Sandpiper	Actitis macularia			B										B	B	F	F							
Gulls:	Laridae																							
Ring-billed Gull	Larus delawarensis			F	F							F				B								
Herring Gull	Larus argentatus			F	F								F				B							
Doves:	Columbidae																							
Mourning Dove	Zenaida macroura				F			B	B	B		B												
Cuckoos:	Cuculidae																							
Black-billed Cuckoo	Coccyzus erythrophthalmus				F	B			B			B												
Yellow-billed Cuckoo	Coccyzus americanus			F	F	F						F												
Barn Owls:	Tytonidae																							
Common Barn Owl	Tyto alba			F	F	F						F												
Typical Owls:	Strigidae																							
Common Screech Owl	Otus asio				F	F			B			F							R					
Long-eared Owl	Asio otus						F	F	F										R					
Short-eared Owl	Asio flammeus			F	F									F										
Great Horned Owl	Bubo virginianus				F	F	B		B			B		B					R		R			
Barred Owl	Strix varia						B							B					R					
Northern Saw-whet Owl	Aegolius acadicus					F		B				B		B					R					

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Plover:	Charadriidae																							
Killdeer	Charadrius vociferus			B	B	B								F		F	F							
Semipalmated Plover	Charadrius semipalmatus			F	F																			
Lesser Golden Plover	Pluvialis dominica			F																				
Sandpipers, Phalaropes:	Scalopacidae																							
American Woodcock	Philohela minor			B	F	F						B		B										
Common Snipe	Capella gallinago			B										B	B									
Spotted Sandpiper	Actitis macularia			B										B	B	F	F							
Gulls:	Laridae																							
Ring-billed Gull	Larus delawarensis			F	F							F				B								
Herring Gull	Larus argentatus			F	F								F				B							
Doves:	Columbidae																							
Mourning Dove	Zenaida macroura				F			B	B	B		B												
Cuckoos:	Cuculidae																							
Black-billed Cuckoo	Coccyzus erythrophthalmus				F	B			B			B												
Yellow-billed Cuckoo	Coccyzus americanus			F	F	F						F												
Barn Owls:	Tytonidae																							
Common Barn Owl	Tyto alba			F	F	F						F												
Typical Owls:	Strigidae																							
Common Screech Owl	Otus asio				F	F			B			F						R						
Long-eared Owl	Asio otus						F	F	F									R						
Short-eared Owl	Asio flammeus			F	F									F										
Great Horned Owl	Bubo virginianus				F	F	B		B			B		B				R		R				
Barred Owl	Strix varia						B							B				R						
Northern Saw-whet Owl	Aegolius acadicus					F		B				B		B				R						

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				Plant Community (Habitats) R - Reproduction F - Feeding B - Both									Marsh Riparian						Unique					
Swifts:	Apodidae																							
Chimney Swift	Chaetura pelagica				F	F							F	F		F	F		R			R		
Nightjars:	Caprimulgidae																							
Whip-Poor-Will	Caprimulgus vociferus								B			R												
Hummingbirds:	Trochilidae																							
Ruby-throated Hummingbird	Archilochus colubris				F	F	B		B															
Kingfisher:	Alcedinidae																							
Belted Kingfisher	Megaceryle alcyon												F	B		B	B			R				
Woodpeckers:	Picidae																							
Northern Flicker	Colaptes auratus				F	F	F		F			F						F	B					
Red-headed Woodpecker	Melanerpes erythrocephalus			F	F	F								B					B					
Three-toed Woodpecker	Picoides tridactylus							B						B	B				B					
Pileated Woodpecker	Dryocopus pileatus						B	F	B	F								F	B					
Yellow-bellied Sapsucker	Sphyrapicus varius						B		B			B							B					
Hairy Woodpecker	Picoides villosus						B		B			F							B					
Downy Woodpecker	Picoides pubescens						B		B			B							B					
Black-backed Three-toed Woodpecker	Picoides arcticus							B						B	B									
Flycatchers:	Tyrannidae																							
Eastern Kingbird	Tyrannus tyrannus			F	F	B						B		B										
Great Crested Flycatcher	Myiarchus crinitus						B												R					
Eastern Phoebe	Sayornis phoebe						B		B			B			B				R	R				
Yellow-bellied Flycatcher	Empidonax flaviventris							B							B			R						
Alder Flycatcher	Empidonax alnorum			B	B	B								B	B	B								
Least Flycatcher	Empidonax minimus				B	B	B					B												
Eastern Wood-Pewee	Contopus virens						B	B	B	B		B			B									
Olive-sided Flycatcher	Nuttallornis borealis							B	B			B		B										

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				Plant Community (Habitats) R - Reproduction F - Feeding B - Both									Marsh Riparian						Unique					
Thrushes and Bluebirds:	Turdidae																							
American Robin	Turdus migratorius			F	F	B	B	B	B	B		B		B										
Wood Thrush	Hylocichla mustelina						B		B			B												
Swainsons Thrush	Catharus ustulatus							B	B															
Hermit Thrush	Catharus guttatus								B			B		B	B									
Gray-cheeked Thrush	Catharus minimus							B			B													
Veery	Catharus fuscescens						B							B										
Eastern Bluebird	Sialia sialis				F	B						B							R					
Kinglets and Gnatcatchers:	Sylviidae																							
Golden-crowned Kinglet	Regulus satrapa							B	B	B														
Ruby-crowned Kinglet	Regulus calendula							B	B		B			B	B									
Blue-gray Gnatcatcher	Polioptila caerulea								F					F		F	F							
Shrikes:	Laniidae																							
Northern Shrike	Lanius excubitor					F						F		F										
Waxwings:	Bombycillidae																							
Cedar Waxwing	Bombycilla cedrorum			F	F	F			B			B												
Vireos:	Vireonidae																							
Solitary Vireo	Vireo solitarius						B		B															
Red-eyed Vireo	Vireo olivaceus						B		B															
Philadelphia Vireo	Vireo philadelphicus						B					B												
Wood Warblers:	Parulidae																							
Black and White Warbler	Mniotilta varia						B	B								R	R							
Nashville Warbler	Vermivora ruficapilla				B	B						B			B									
Northern Parula Warbler	Parula americana					B		B						B	B									
Yellow Warbler	Dendroica petechia					B						B		B	B									
Magnolia Warbler	Dendroica magnolia							B	B					B	B									

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Black-throated Blue Warbler	Dendroica caerulescens								B			B												
Yellow-rumped Warbler	Dendroica coronata							B			B				B									
Black-throated Green Warbler	Dendroica virens							B	B															
Blackburnian Warbler	Dendroica fusca							B	B	B														
Chestnut-sided Warbler	Dendroica pensylvanica			B	B							B		B										
Bay-breasted Warbler	Dendroica castanea							B				B												
Black-poll Warbler	Dendroica striata							B	B		B				B									
Tennessee Warbler	Vermivora peregrina				B	B			B			B			B									
Cape May Warbler	Dendroica tigrina					F	B	F	F															
Pine Warbler	Dendroica pinus						B	B	B															
Oven-bird	Seiurus aurocapillus					B	B	B																
Northern Waterthrush	Seiurus noveboracensis					F		F				F		B	B					R				
Mourning Warbler	Oporornis philadelphia				B	B						B												
Common Yellowthroat	Geothlypis trichas					B						B		B	B									
Canada Warbler	Wilsonia canadensis					B						B		B	B									
American Redstart	Setophaga ruticilla			F	F	B	B																	
lackbirds, Orioles:	Icteridae																							
Northern Oriole	Icterus galbula					B	F					B		B										
Rusty Blackbird	Euphagus carolinus													B	B									
Common Grackle	Quiscalus cuiscula			B	B			B						B					B					
Red-winged Blackbird	Agelaius phoeniceus			B	F									B										
Brown-headed Cowbird	Molothrus ater				B							B							B					
Bobolink	Dolichonyx oryzivorus				B	B																		
Eastern Meadowlark	Sturnella magna				B	B																		
rlings:	Sturnidae																							
European Starling	Sturnus vulgaris				F	F						B							R					
ver Finches:	Ploceidae																							
House Sparrow	Passer domesticus				F							B							R					
nagers:	Thraupidae																							
Scarlet Tanager	Piranga olivacea					F	B					F												

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				Plant Community (Habitats) R - Reproduction F - Feeding B - Both									Marsh Riparian						Unique					
Swallows:	Hirundinidae																							
Tree Swallow	Iridoprocne bicolor												F	B	B	F	F		R					
N. Rough-winged Swallow	Stelgidopteryx ruficollis																							
Bank Swallow	Riparia riparia			F	F	F						B				F	F			R		R		
Barn Swallow	Hirundo rustica															F								
Cliff Swallow	Petrochelidon pyrrhonota			F	F	F						B				F	F					R		
Purple Martin	Progne subis			F	F	F						B				F	F					R		
					F	F						B							R			R		
Crows; Jays:	Corvidae																							
American Crow	Corvus brachyrhynchos				F				B			B												
Gray Jay	Perisoreus canadensis							B						B	B									
Blue Jay	Cyanocitta cristata						B	B	B	B		B												
Northern Raven	Corvus corax						B												R			R		
Titmice and Chickadees:	Paridae																							
Black-capped Chickadee	Parus atricapillus						B	B	B	B		B		B					R					
Boreal Chickadee	Parus hudsonicus							B			B				B				R					
Nuthatches:	Sittidae																							
White-breasted Nuthatch	Sitta carolinensis						B		B			B							R					
Red-breasted Nuthatch	Sitta canadensis							B	B										R					
Creepers:	Certhiidae																							
Brown Creeper	Certhia familiaris						B	B	B	B		B		B	B				R					
Wrens:	Troglodytidae																							
Marsh Wren	Cistothorus palustris			B										B										
House Wren	Troglodytes aedon					B	B		B			B							R					
Winter Wren	Troglodytes troglodytes							B	B			B					R	R	R					
Mockingbirds & Thrashers:	Mimidae																							
Gray Catbird	Dumetella carolinensis			B	B	B						B		B										
Brown Thrasher	Toxostoma rufum					B						B		B										

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Grosbeaks, Finches, Sparrows, Buntings:	Fringillidae																							
Rose-breasted Grosbeak	Pheucticus ludovicianus						B		B			B		B										
Evening Grosbeak	Hesperiphona vespertina							B																
Purple Finch	Carpodacus purpureus					B		B				B		B	B									
Pine Grosbeak	Pinicola enucleator							F	F															
Common Redpoll	Carduelis flammea					F	F																	
Pine Siskin	Carduelis pinus							B		B														
Red Crossbill	Loxia curvirostra							B	B															
White-winged Crossbill	Loxia leucoptera							B	B															
Northern Junco	Junco hyemalis							B	B	B		B						R	R					
Tree Sparrow	Spizella arborea					F						F												
Chipping Sparrow	Spizella passerina				B	B						B												
Field Sparrow	Spizella pusilla				F	B						B												
White Throated Sparrow	Zonotrichia albicollis					B		B	B			B		B	B									
Northern Cardinal	Cardinalis cardinalis					B						B		B										
Indigo Bunting	Passerina cyanea				F	B						B												
Hoary Redpoll	Carduelis hornemanni					F	F																	
American Goldfinch	Carduelis tristis				B	B						B												
Rufous-sided Towhee	Pipilo erythrophthalmus						B	B				B												
Savannah Sparrow	Passerculus sandwichenis			B	B	B																		
Grasshopper Sparrow	Ammodramus savannarum				B	B																		
Vesper Sparrow	Pooecetes gramineus				B	B																		
Clay-colored Sparrow	Spizella pallida				F	F		F				F												
Lapland Longspur	Calarius lapponicus				F																			
Snow Bunting	Plectrophenax nivalis				F																			
White-crowned Sparrow	Zonotrichia leucophrys				F	F						F												
Fox Sparrow	Passerella iliaca					F						F		F										
Lincoln's Sparrow	Melospiza lincolnii							B						B	B									
Swamp Sparrow	Passerella georgiana			B											B									
Song Sparrow	Melospiza melodia				B	B							B		B									

Season Occurrence

P - Permanent
S - Summer
W - Winter
M - Migrant

UMA Status

C - Confirmed
P - Possible
U - Unknown
N - Nonexistent
BC - Breeding confirmed

APPENDIX 13

PHARAOH LAKE WILDERNESS AREA - COMMENTS ON BIRD SPECIES HABITATS

1. COMMON LOON: Prefers bog and undisturbed lakes for breeding and open water for feeding. Nick Volkman of the 1978 DEC Loon Study Project believes the loon population is doing well. Private estates and remote state land away from human disturbance account for a stable population of approximately 100 breeding loon pairs within the Adirondack region. The DEC 1978 Loon Breeding Survey found no loons nesting in the Pharaoh Lake Wilderness Area but this species is often found on several of the lakes in the area. The common loon is a species of priority concern to NYS Endangered Species Program.

2. GREAT BLUE HERON: Usually breeds in the tops of the tallest deciduous trees close to water. This heron is an uncommon nester in the Pharaoh Lake Wilderness Area where it is known to nest at Desolate Swamp and Glidden March (Howard Lashway, personal communication).

3. AMERICAN BITTERN: Prefers marsh habitats, especially where cattails occur. In the Pharaoh Lake Wilderness Area the bittern is considered rare but can be observed in suitable habitat. Although there are no confirmed breeding records of American bitterns in the Pharaoh Lake Wilderness Area, they have been observed during the breeding season on Tub Mills Marsh and Crane Pond (Howard Lashway, personal communication).

4. RING-NECKED DUCK: Woodland ponds and marshes are its favorite breeding sites. In migration it is commonly observed on the larger bodies of water in the Adirondack Park. This species was first recorded as breeding in New York in 1946 at Jones Pond, Franklin County. The ring-necked duck is now known to breed in at least nineteen different localities in New York, chiefly in the Adirondack Park (Bull 1974) Although none of the above breeding locations are found in the Pharaoh Lake Wilderness Area, recent evidence indicates the ring-necked duck may now be nesting here. The 1981 NYS Bird Breeding Atlas Project has documented the nesting of these ducks in Block 5984C, which is partially in the Pharaoh Lake Wilderness Area.

5. COMMON GOLDENEYE: During migration it is found in small flocks on rivers, the larger lakes, and especially on the bays of Lake Champlain. The common goldeneye is listed as "rare" within the Adirondack Park by the Adirondak Park Agency (Platt 1981). There are no reports of the common goldeneye breeding in the Pharaoh Lake Wilderness area. This species has been observed infrequently on the lakes and ponds of the area (Howard Lashway, personal communication).

6. HOODED MERGANSER: Frequent wooded swamps, beaver pond, and quiet stretches of water in forested regions, especially where dead trees are plantiful. They have been observed on Pharaoh Lake but breeding has not been verified.

7. COMMON MERGANSER: This species is one of the characteristic breeding birds of the Adirondack forest lakes. It is undoubtedly the most common breeding duck in the Adirondack Park. In the Pharaoh Lake Wilderness Area this species is a confirmed breeder (NYS Bird Breeding Atlas Project).

8. SHARP-SHINNED HAWK: Prefers the younger second growth mixed hardwood conifer woodlands. This species is considered a very rare and local breeder in the Adirondack Park. It is not known if this spcies breeds in the Pharaoh Lake Wilderness Area.

9. RED-SHOULDERED HAWK: This species prefers swampy woodlands and forested areas near rivers. The red-shouldered hawk was never common in the Adirondacks and, in recent years its population has further declined. This hawk is probably not breeding in the Pharaoh Lake Wilderness Area but it can be considered as a migrant.

10. COOPERS HAWK: Found chiefly in low, alluvial forest and wooded swamps. The Coopers hawk was formerly a common nester throughout the Adirondacks but it is virtually absent now. Recently it was listed as "rare" within the Adirondack Park by the Adirondack Park Agency. Although it is very rare, this species may be observed infrequently in the Pharaoh Lake Wilderness Area and it may still be breeding there.

11. BROAD-WINGED HAWK: The most important habitat requirement for this species is extensive woodland. It is the most common breeding hawk in the Adirondacks.

12. BALD EAGLE: Restricted mostly to lake and river shores, although they are found along mountain ridges during migration. This species hasn't nested in the Adirondack Park since the early 1950's. It does summer in the Park and it is likely it will nest here again. The bald eagle is listed as "endangered" in the United States and New York State.

13. NORTHERN HARRIER: This hawk is most prevalent in the open country, hunting over fields in farming areas, as well as marshes. Unlike other raptors, northern harriers nest on the ground in tall grass or cattails. The northern harrier is listed as a species of priority concern to DEC's Endangered Species Program. There are no recent records of this species breeding in the Pharaoh Lake Wilderness Area (Barbara Loucks, personal communication).

14. PEREGRINE FALCON: Preferred habitat is lofty cliffs overlooking rivers and lakes. Its decline as a nesting bird through the 1950's and 1960's was due primarily to DDT residue accumulation causing eggshell thinning. At one time there were approximately 300 pairs nesting east of the Mississippi River, and by the late 1960's there were none. There are at least 42 historical peregrine falcons nesting locations in New York State (Bull 1974). None of these locations are in the Pharaoh Lake Wilderness Area, but the cliffs on Treadway and Pharaoh Mountain could possibly provide a future nesting site. Since 1974, 49 peregrine falcons have been hacked (released) in New York State. In 1981, ten peregrine falcons were released at two sites within the Adirondack Park. The peregrine falcon is considered an extirpated species in New York State and is on both New York State and the United States lists of endangered species.

15. OSPREY: There are two osprey nests located in the Pharaoh Lake Wilderness Area. One of these nests, located east of Crane Pond, was active recently. The other nest site, located serveral miiles west of Pharaoh

Mountain, is not presently active. The osprey is listed as "endangered" by New York State, and present and potential nesting sites are now receiving special attention by both the Department of Environmental Conservation and the Adirondack Park Agency.

16. WILD TURKEY: The preferred habitat for this species still defies precise definition, except that a certain amount of woodland is a preprequisite to turkey population maintenance (Anonymous 1971. Policy Statement on Turkey Reestablishment and Management in New York). The expansion of this newly returned species to its "historical" range was greatly accelerated by DEC's very successful Turkey Trap and Transfer Program. In the Adirondack Park the wild turkey is found mostly in the eastern foothills, particularly in the Champlain Valley. Wild turkeys have been seen on the southeastern fringe of the Pharaoh Lake Wilderness Area (William C. Houck, personal communication).

17. SPRUCE GROUSE: The spruce grouse is typically found along the openings in spruce forests and spruce tamarack bogs. The northern Adirondacks are at the southern edge of its breeding range and recent surveys indicate the population is probably diminishing. There is no evidence that the spruce grouse occurs in the Pharaoh Lake Wilderness Area (Robert Miller, personal communication). The spruce grouse is of priority concern to DEC's Endangered Species Program.

18. AMERICAN WOODCOCK: Feeds and breeds in bottomland, including alder thickets.

19. SPOTTED SANDPIPER: Preferred habitat is lake shores and river banks.

20. HERRING GULL: It feeds along lakes and ponds and also feeds in dumps. In the Pharaoh Lake Wilderness Area it has been observed on several of the lakes but it is not known whether it breeds here.

21. WHIPPOORWILL: Rare to absent at higher elevations in the Adirondacks, especially where heavily forested. Considered an uncommon breeder in the Pharaoh Lake Wilderness Area but is occasionally heard calling during the night (Howard Lashway, personal communication).

22. NORTHERN THREE-TOED WOODPECKER: Confined to conifer forests and swamps. There are nine breeding locations documented in New York State, all in the Adirondacks (Bull, 1974). To date, none have been reported in the Pharaoh Lake Wilderness Area. The northern three-toed woodpecker is listed as "rare" within the Adirondack Park by the Adirondack Park Agency.

23. BLACK-BACKED THREE-TOED WOODPECKER: Found in spruce, tamarack swamps and the forested slopes of spruce and fir. This permanent resident of the Adirondack Park has been hampered by lumbering and other human activities and they are declining in population. To date, none have been reported in the Pharaoh Lake Wilderness Area. The black-backed three-toed woodpecker is listed as "rare" within the Adirondack Park by the Adirondack Park Agency.

24. EASTERN KINGBIRD: The eastern kingbird has been observed in the Pharaoh Lake Wilderness Area during the summer and it probably breeds here. Usually found in open country conspicuously perched atop the highest limbs of dead trees. In wilderness areas they are occasionally found along streams or marshes if there is sufficient open territory to hunt.

25. YELLOW-BELLIED FLYCATCHER: Found in second growth woods of spruce, balsam and birch at elevations between 2,000 and 4,000 feet. It is not known whether this species inhabits the Pharaoh Lake Wilderness Area.

26. GRAY JAY: Confined to the Adirondack Park in New York where it is found in dense spruce and tamarack swamps and the balsam belt on mountain slopes. There is no evidence this species exists in the Pharaoh Lake Wilderness Area.

27. NORTHERN RAVEN: Today the northern raven is strictly confined to the more remote areas of the Adirondack Park. It is a mountain bird, favoring areas where there are cliffs and crags suitable for nesting. The population of ravens is increasing within the Park, and it is now known to nest at eleven locations. None of these nesting locations are in the Pharaoh Lake Wilderness Area but this species is often seen and heard here. The northern raven is of priority concern to DEC's Endangered Species Program.

28. BOREAL CHICKADEE: Found in spruce and balsam forests and at the edges of spruce tamarack swamps. In New York State it is found breeding only in the Adirondack Park. It is not known whether this species occurs in the Pharaoh Lake Wilderness Area but it is known to nest at nearby Schroon Lake village.

29. WINTER WREN: Frequently found in lumber clearings.

30. WOOD THRUSH: Besides the deciduous forest, they are also found in flood plains and stream valleys.

31. GRAY-CHEEKED THRUSH: Prefers dense spruce and balsam stands and mountain-top environments. In New York State the gray cheeked thrush is found nesting only in the higher elevations of the Adirondacks and Catskill Mountains. It is not known whether this thrush occurs in the Pharaoh Lake Wilderness Area.

32. RUBY-CROWNED KINGLET: This species is most often found in bogs and open woodlands. In New York State this species is known to nest only in the Adirondack Park. There are no reports of this species inhabiting the Pharaoh Lake Wilderness Area.

33. SOLITARY VIREO: Found in the mixed hardwood conifer forest at considerable elevations in New York State. Considered a common breeder in the Adirondacks.

34. NORTHERN PARULA: It is practically confined to the localities where usnea moss is fairly abundant (spruce sphagnum bogs).

35. BLACK-THROATED BLUE WARBLER: Prefers a mixed hardwood/conifer forest with a dense undergrowth.

36. BAY-BREASTED WARBLER: An inhabitant of spruce woodlands at the higher elevations in the Adirondack Park. There are at least eleven known localities in the Adirondack Park where the bay-breasted warbler breeds (Bull, 1974). All of these nesting locations are north of the Pharaoh Lake Wilderness Area.

37. BLACK-POLL WARBLER: The preference for stunted confiers leads the black-poll warbler higher on the mountain sides than other warblers. In the Adirondack Park it is considered a common breeder at altitudes above 3500 feet, but is rare or lacking in the forests at lower elevations.

38. NORTHERN WATERTHRUSH: Nests on banks along streams and lakes.

39. CANADA WARBLER: Found breeding along streams in thickets of willow, alder and elderberry.

40. AMERICAN REDSTART: Commonly breeds in deciduous second growth woodland and in stream-side willow thickets.

41. RUSTY BLACKBIRD: Preferred habitat is openings in wet woodlands, swamps and alder thickets. In the Adirondack Park, there are twenty breeding sites identified but none of these are located in the Pharaoh Lake Wilderness Area. The rusty blackbird is listed as "rare" within the Adirondack Park by the Adirondack Park Agency.

42. COMMON GRACKLE: Breeds near water (marshes, streams, lakes), often nests in a black spruce tree or a tree stump.

43. BROWN-HEADED COWBIRD: Parasitizes the nest of other birds, most frequently laying its eggs in the nest of the yellow warbler and red-eyed vireo.

44. EVENING GROSBEAK: Rare breeder in coniferous forests of the Central Adirondacks. The first probable breeding record in New York State was at Cranberry Lake in June, 1945. Since then it has been observed to breed in about 35 different localities in the Adirondack Park (Bull, 1974), of which one is in or very near the Pharaoh Lake Wilderness Area.

45. WHITE-WINGED CROSSBILL: Prefers the coniferous forest where it feeds on the seeds of hemlock, spruce, and larch cones. There are no breeding records for this species within the Adirondack Park. The white-winged crossbill is listed as "rare" within the Adirondack Park by the Adirondack Park Agency.

46. LINCOLN'S SPARROW: This shy and usually secretive species prefers open swamps and bogs with small spruces and tamaracks scattered about. In New York State the Lincoln's sparrow breeds only in the Adirondacks and considered to be rare.

MAMMALS

APPENDIX 14

Plant Community (Habitats)

R - Reproduction F - Feeding B - Both

		UMA Status and Seasonal Occurrence	References	Wet Meadow	Dry Meadow	Shrub Meadow	Northern Hardwoods	Mixed Conifers	Mixed Hardw./Conifer	Pine Plantation	Alpine	Edges	Open Water	Marsh, Swamps	Bogs	Rivers, Streams	Lakes, Ponds	Logs	Snags	Burrows	Cliffs	Caves	Talus	Comments
													Marsh Riparian						Unique					
Opossums:	Didelphiidae																							
Opossum	Didelphis marsupialis			F	F							F				F		R	R	R				
Shrews:	Soricidae																							
Masked Shrew	Sorex cinereus			B			B	B			F	B		B				R	R	R				
Longtail Shrew	Sorex dispar						B		B		B									R			R	
Northern Water Shrew	Sorex palustris						B							F										
Smoky Shrew	Sorex fumeus						B		B									R	R	R				
Pigmy Shrew	Microsorex hoyi				B	B	B	B	B			B						R		R				
Shorttail Shrew	Blarina brevicauda				B	B	B		B		F	B		B	B			R	R	R				
Moles:	Talpidae																							
Hairytail Mole	Parascalops breweri				B	B	B		B			B								R				
Starnose Mole	Condylura cristata						B					B		B	R					R				
Plainnose Bats:	Vespertilionidae																							
Indiana Myotis	Myotis sodalis				F		B		B			B		B					R			R		
Little Brown Myotis	Myotis lucifugus				F	F	B					B		B						R		R		
Keen Myotis	Myotis keeni						B		B			B							R	R		R		
Small-footed Myotis	Myotis subulatus					F	F					F										R		
Eastern Pipistrel	Pipistrellus subflavas						B					B	F	F	F	F			R			R		
Big Brown Bat	Eptesicus fuscus				F	F	F					F							R			R		
Silver-haired Bat	Lasionycteris noctivagans						F					F							R			R		
Hoary Bat	Lasiurus cinereus						B					B							R			R		
Red Bat	Lasiurus borealis						F												R			R		
Hares and Rabbits:	Leporidae																							
Snowshoe Hare	Lepus americanus				F	B	B	B	B	B	F	B		B	B										
Eastern Cottontail	Sylvilagus floridanus					B						B		B										
New England Cottontail	Sylvilagus transitionalis					B	B					B												
Squirrels:	Sciuridae																							
Eastern Chipmunk	Tamias striatus					B	B					B							R					

Season Occurrence

P - Permanent
S - Summer
W - Winter
M - Migrant

UMA Status

C - Confirmed
P - Possible
U - Unknown
N - Nonexistent

MAMMALS

Plant Community (Habitats)

R - Reproduction F - Feeding B - Both

		UMA Status and Seasonal Occurrence	References	Wet Meadow	Dry Meadow	Shrub Meadow	Northern Hardwoods	Mixed Conifers	Mixed Hardw./Conifer	Pine Plantation	Alpine	Edges	Open Water	Marsh, Swamps	Bogs	Rivers, Streams	Lakes, Ponds	Logs	Snags	Burrows	Cliffs	Caves	Talus	Comments
													Marsh Riparian						Unique					
Red Squirrel	Tamiasciurus hudsonicus							B	B	B				B					R					
Eastern Gray Squirrel	Sciurus carolinensis						B		B			F							R					
Southern Flying Squirrel	Glaucomys volans						B		B										R					
Northern Flying Squirrel	Glaucomys sabrinus						B		B										R					
Woodchuck	Marmota monax				B	B	B		B			B								R			R	
Beaver:	Castoridae																							
Beaver:	Castor canadensis					F	F		F			B	F	B		B	B			R				
Mice, Rats, Lemmings, & Voles:	Cricetidae																							
Deer Mouse	Peromyscus maniculatus				B	B	B	B	B	B	F	B						R	R	R				
White-footed Mouse	Peromyceus leucopus				B	B	B				B	B						R	R	R			R	
Boreal Redback Vole	Clethrionomys gapperi						B	B	B		B							R		R				
Meadow Vole	Microtus pennsylvanicus			B	B					B	B	B		B						R				
Yellownose Vole	Microtus chrotorrhinus						B				B									R				
Pine Vole	Microtus pinetorum						B		B											R			R	
Muskrat	Ondatra zibethica												F	B		B	B			R				
Southern Bog Lemming	Synaptomys cooperi			B											B					R				
Old World Rats & Mice:	Muridae																							
Norway Rat	Rattus norvegicus											B								R				
Black Rat	Rattus rattus											B								R				
House Mouse	Mus musculus				B	B						B								R				
Jumping Mice:	Zapodidae																							
Meadow Jumping Mouse	Zapus hudsonius				B	B						B						R	R					
Woodland Jumping Mouse	Napaeozapus insignis				B	B	B		B			B						R	R					
Porcupine:	Erethizontidae																							
Porcupine	Erethizon dorsatum						B	B	B	B								R	R	R		R		
Dogs, Wolves & Foxes:	Canidae																							
Coyote	Canis latrans			F	F	B	B	B	B			B		F		E				R				

Season Occurrence

P - Permanent
S - Summer
W - Winter
M - Migrant

UMA Status

C - Confirmed
P - Possible
U - Unknown
N - Nonexistent

APPENDIX 14

MAMMALS

Plant Community (Habitats)

R - Reproduction F - Feeding B - Both

		UMA Status and Seasonal Occurrence	References	Wet Meadow	Dry Meadow	Shrub Meadow	Northern Hardwoods	Mixed Conifers	Mixed Hardw./Conifer	Pine Plantation	Alpine	Edges	Open Water	Marsh, Swamps	Bogs	Rivers, Streams	Lakes, Ponds	Logs	Snags	Burrows	Cliffs	Caves	Talus	Comments
													Marsh Riparian							Unique				
Dogs, Wolves and Foxes (con't):																								
Red Fox	Vulpes fulva			F	B	B	B		B			B							R					
Gray Fox	Urocyon cinereoargenteus					B	B					B					R		R					
Bears:	Ursidae																							
Black Bear	Ursus americanus					F	B	B	B			F		B			R	R	R		R			
Raccoons & Coatis:	Procyonidae																							
Raccoon	Procyon lotor			F	F	F	B		B			F		B	F	F	F	R	R	R	B			
Weasels, Skunks, etc.:	Mustelidae																							
Marten	Martes americana						B	B	B									R	R					
Fisher	Martes pennanti						B	B	B			F							R	R				
Shorttail Weasel	Mustela erminea					B	B					B						R	R	R			R	
Longtail Weasel	Mustela frenata			F	F	B	B	B	B	B		B					R	R	R	R			R	
Mink	Mustela vison											B		F		F	F			R				
River Otter	Lutra canadensis											B				F	F			R				
Striped Skunk	Mephitis mephitis				F	F	B					B						R		R			R	
Cats:	Felidae																							
Bobcat	Lynx rufus					B	B	B	B			B		B		F		R	R	R	R	R	R	
Lynx	Lynx canadensis					F	F	F				F												
Deer	Cervidae																							
White-tailed Deer	Odocoileus virginianus			F	F	F	B	B.	B	B		B		F		F	F							
Moose	Alces alces			F	F	F	F	F	F			F	F	F	F	F	F							

Season Occurrence

P - Permanent
S - Summer
W - Winter
M - Migrant

UMA Status

C - Confirmed
P - Possible
U - Unknown
N - Nonexistent

APPENDIX 15

PHARAOH LAKE WILDERNESS AREA - COMMENTS ON MAMMAL SPECIES HABITATS

1. OPOSSUM: Prefers woodland and stream habitats in farming areas. In New York State this species has been extending its range northward and is now found in part of the Champlain Valley. There are no records of this species inhabiting the Pharaoh Lake Wilderness Area.

2. MASKED SHREW: Is found in forest, open country and brushland at any altitude. Populations are probably highest in the coniferous habitat.

3. LONGTAIL SHREW: Favor moist rocks and crevices between boulders in a fern covered habitat. There are no recent records of this species inhabiting the Pharaoh Lake Wilderness Area. The longtail shrew is considered uncommon in New York State and the distribution of this species is being investigated by the NYSDEC Endangered Species Program.

4. NORTHERN WATER SHREW: Frequents wet places, often occurring along the shoreline of rushing mountain streams or the sphagnous swamps bordering beaver meadows.

5. SMOKY SHREW: This shrew is a creature of the cooler mountains and heavy forests.

6. SHORT-TAILED SHREW: Shows a preference for hardwood-type forest.

7. STARNOSE MOLE: Prefers the moist, rich, loamy soil near lakes and streams.

8. INDIANA MYOTIS: During winter these bats hibernate in large groups in caves but during summer prefer to roost either singly or small groups in trees. There are now seven known colonies of the Indiana Bat in New York. The nearest site to the Adirondack Park is located near Watertown. The Indiana Myotis is listed as endangered by the United States Federal Government and New York State.

9. SMALL-FOOTED MYOTIS: This species has a remarkable tolerance for cold, dry places and hibernates in caves where the temperature goes below freezing. The small-footed myotis is one of the rarest of eastern bats with only eight hibernation sites found in New York State. There are no records of this species in the Pharaoh Lake Wilderness Area.

10. EASTERN PIPISTREL: This weak flying bat prefers to day-roost in trees but will migrate in order to find a suitable cave for winter hibernation. They favor warmer caves (52°-64°) with a high relative humidity. This species is common and widely distributed through all of New York State.

11. BIG BROWN BAT: It day-roosts mostly in buildings but hibernates in caves with a low temperature and a 100% relative humidity. This species usually migrates but not over long distances.

12. SILVER-HAIRED BAT: This slow flying bat is usually observed near streams. It is considered the most common bat of the Adirondacks. Most migrate south for winter.

13. RED BAT: This bat prefers wooded areas, where they usually fly in pairs, working the same route of about 100 yards over and over. Highly migratory, general southward movements.

14. SNOWSHOE HARE: It can be found in all habitats at any elevation.

15. SOUTHERN FLYING SQUIRREL: This very common squirrel prefers large deciduous trees with holes in them, usually near water.

16. NORTHERN FLYING SQUIRREL: There have been only a few recorded sightings of the Northern Flying Squirrel in the Adirondacks and very little is known about this species. It prefers coniferous forest over other forests. There are currently no reports of this species inhabiting the Pharaoh Lake Wilderness Area.

17. WOODCHUCK: Prefers to den in or on the edge of fields during the summer but usually move to a woodland den site in the winter.

18. WHITEFOOTED MOUSE: Found in several habitats but wooded areas are preferred. This species is one of the most common mammals found in the Adirondack Park.

19. BOREAL REDBACK VOLE: Found in greatest numbers in the moist spruce-fir forests especially where sphagnum or other mosses are plentiful.

20. PINE VOLE: Rarely found in the pines, as the name would imply, it is more characteristic of the eastern deciduous forest.

21. MUSKRAT: They are typically found in aquatic environments except in late February and early March when a large number migrate over land to find mates.

22. SOUTHERN BOG LEMMING: This species prefers low damp bogs and meadows with heavy growth of vegetation. It is listed as rare within the Adirondack Park by the Adirondack Park Agency.

23. WOODLAND JUMPING MOUSE: It is commonly found at the edge of a hardwood forest and water.

24. PORCUPINE: During most of the year it is found in numerous forest habitats where it feeds on buds, small twigs, and inner bark of most trees. In the winter, the porcupine prefers conifer forests where it feeds on evergreen tree foliage and bark.

25. MARTEN: The marten's preferred habitat is the mixed hardwood forest about 2,000 feet high. In New York State, this species' primary range is located in the High Peaks of the Adirondack Park. Recently there have been a few sightings of marten in the Pharaoh Lake Wilderness Area but none of these reports have been documented.

26. FISHER: This valuable furbearer was once thought to favor remote areas in large forests of mixed softwood and hardwoods but New York fishers have adapted well to modern times. They are found outside such habitats in the Adirondack Mountains, and are occasionally seen near villages.

27. SKUNK: The skunk prefers semi-open country, while normally found within two miles of water.

28. LYNX: This species is so rare and seldom encountered in New York that little is known about its preferred habitat. Undoubtedly there are a few lynx that have migrated down from Canada. These individuals probably feed on snowshoe hare and, therefore, are found in habitats normally associated with them. The lynx is now labelled a non-endangered but completely protected species in New York. The last species trapped in New York was in the Town of Altona, Clinton County, in 1974. There are no recent records of lynx being trapped in the Pharaoh Lake Wilderness Area.

29. MOOSE: Preferred moose habitat is characterized by flat to moderately hilly terrain with coniferous lowlands and swamps interspersed with ridges of mixed hardwood and conifers. For many years it has been listed as extirpated, but in recent years, the moose has been observed from time to time in New York, chiefly in the Adirondack region. In 1981 there were at least five moose living in the Adirondack Park but none were observed in the Pharaoh Lake Wilderness Area.

REPTILES AND AMPHIBIANS

Plant Community (Habitats)

R - Reproduction F - Feeding B - Both

		UMA Status and Seasonal Occurrence	References	Wet Meadow	Dry Meadow	Shrub Meadow	Northern Hardwoods	Mixed Conifers	Mixed Hardw./Conifer	Pine Plantation	Alpine	Edges	Open Water	Marsh, Swamps	Bogs	Rivers, Streams	Lakes, Ponds	Logs	Snags	Burrows	Cliffs	Caves	Talus	Comments
Newts:	Salamandridae																							
Red-spotted Newt	Diemictylus viridescens						F	F	F				B	B	B	B	B	F				F	F	
Mole Salamanders:	Ambystomatidae																							
Spotted Salamander	Ambystoma maculatum						F		F			F	B	B	B	B	B	F	F				F	
Jefferson Salamander	Ambystoma jeffersonianum						F							B	B	B	B	F						
Lungless Salamanders:	Plethodontidae																							
Dusky Salamander	Desmognathus fuscus			F										F	F	F	F	B	B				F	
Mountain Salamander	Desmognathus ochrophaes			F								F	F	B	B	F	F	B					F	
Red-backed Salamander	Plethodon cinereus						B											B	B				F	
Spring Salamander	Gyrinophilus porphyriticus			F									F	B	B	F	F	B	F					
Two-lined Salamander	Eurycea bislineata			F			F						F	F	F	B	F	F						
Four-toed Salamander	Hemidactylum scutatum			B									B	B	B	B	B	F	F					
Toads:	Bufonidae																							
American Toad	Bufo americanus			B	F	F	F	F	F	F		F	B	B	B	B	B	F	F	F				
Tree Frogs & Their Allies:	Hylidae																							
Spring Peeper	Hyla crucifer			B								F	B	B	B	B	B							
Gray Tree Frog	Hyla versicolor			B		F	F						B	B	B	B	B	F	F					
Western Chorus Frog	Pseudacris triseriata			B		B							B	B	B	B	B	B						
True Frogs:	Ranidae																							
Bullfrog	Rana catesbeiana			B									B	B	B	B	B							
Pickerel Frog	Rana palustris			B			F						B	B	B	B	B							
Mink Frog	Rana septentrianalis			B									B	B	B	B	B					B		
Leopard Frog	Rana pipiens			B									B	B	B	B	B							
Green Frog	Rana clamintans melanota			B									B	B	B	B	B							
Wood Frog	Rana sylvatica			B			F						B	B	B	B	B	F	F					

Marsh Riparian — Unique

Season Occurrence

P - Permanent
S - Summer
W - Winter
M - Migrant

UMA Status

C - Confirmed
P - Possible
U - Unknown
N - Nonexistent

REPTILES AND AMPHIBIANS		UMA Status and Seasonal Occurrence	References	Plant Community (Habitats) R - Reproduction F - Feeding B - Both: Wet Meadow	Dry Meadow	Shrub Meadow	Northern Hardwoods	Mixed Conifers	Mixed Hardw./Conifer	Pine Plantation	Alpine	Edges	Marsh Riparian: Open Water	Marsh, Swamps	Bogs	Rivers, Streams	Lakes, Ponds	Unique: Logs	Snags	Burrows	Cliffs	Caves	Talus	Comments-
Snapping Turtles:	Chelydriadae																							
Snapping Turtle	Chelydra serpentina												F	F		F	F			R				
Box and Water Turtles:	Emydidae																							
Wood Turtle	Clemmys insculpta						F					F	F	F	F	F	F			R				
Painted Turtle	Chrysemys picta			F								F	F	F	F	F	F	F		R				
Map Turtle	Graptemys geographica												F			F	F							
Softshell Turtles:	Trionychidae																							
Spiny Softshell	Trionyx spiniferus												F			F	F			R				
Snakes:	Columbridae																							
Red-bellied snake	Storeria occipitomaculata			F			B					F		B	B	B		R		R			R	
Brown (DeKay's) Snake	Storeria dekayi						B						F	B	B	F	F			R			R	
Northern Water Snake	Natrix sipedon			F										B	B	F	F	R						
Eastern Garter Snake	Thamnophis sirtalis			F	F	F	F	F	F	F		F	F	B	B	F	F	B	B	B	B	B	B	
N. Ringneck snake	Diadophis punctatus edwardsi						B		B			B						B	B		B	B	B	
Smooth Green Snake	Opheodrys vernalis			B	B						B													
Eastern Milk Snake	Lampropeltis doliata			B	B	B	B					B												
Eastern Ribbon Snake	Thomnophis sauritus			F								B	F	B	B	F	F							
Northern Black Racer	Coluber constrictor					B	B		B			B		B										
Black Rat Snake	Elaphe obsoleta				B	B	B					B		B							B			
Eastern Hog-nosed snake	Heterodon platyrhinos				B	B	B	B	B	B		B								R				
Pit Vipers:	Viperidae																							
Timber rattlesnake	Crotalus horridus						F		F											R		R		
Giant Salamanders:	Necturidae																							
Mudpuppy	Necturus maculosus												B			B	B							
Skinks:	Scincidae																							
Five-lined skink	Eumeces fasciatus						B		B			B		B				B	B	B				

Season Occurrence

P - Permanent
S - Summer
W - Winter
M - Migrant

UMA Status

C - Confirmed
P - Possible
U - Unknown
N - Nonexistent

PHARAOH LAKE WILDERNESS AREA-COMMENTS ON REPTILE AND AMPHIBIAN SPECIES HABITATS

1. WOOD TURTLE: This is New York State's most terrestrial turtle but often it utilizes streams and ponds for hibernating, mating, and aestivation. The wood turtle is listed as a completely protected non-endangered species.

2. MAP TURTLE: This turtle has never been reported from the Pharaoh Lake Wilderness Area but it can be found in nearby Lake George and Lake Champlain.

3. RED-BELLIED SNAKE: This snake prefers moist woodland where they can be found under rocks, logs, leaves and lumber piles.

4. EASTERN RIBBON SNAKE: It is seldom found far from water. This species is uncommon in the Pharoah Lake Wilderness Area where it is at the northernmost limit of its range.

5. FIVE LINED SKINK: Its range is southeastern New York except for a small population near Lake George, close to the Pharaoh Lake Wilderness Area. Some day it may be found in the wilderness area.

6. RED SPOTTED NEWT: It is found in nearly every pond and lake in New York State. During the eft stage, the red spotted newt leaves its aquatic environment and for up to three years lives in moist woodlands at various altitudes. When mature, the efts migrate back to the ponds and lakes to reproduce.

7. SPOTTED SALAMANDER: This salamander prefers habitats of deciduous and mixed forest where ponds, slow streams or temporary pools offer suitable breeding areas. This salamander was historically found at Pharaoh Lake and Paradox Lake. Because acid precipitation is adversely affecting the waters in which it breeds, this species was being considered for inclusion on either the threatened or endangered species list for New York State.

8. JEFFERSON SALAMANDER: This salamander utilizes temporary pools of water for reproduction. Acid precipitation is causing some ponds to have a pH so low that this species' eggs do not develop. The Jefferson salamander was proposed for inclusion on the New York State endangered species list but, after further investigation,. was not included.

9. RED-BACKED SALAMANDER: Most often found under logs and rocks in a damp deciduous forest, this amphibian can swim but never enters water voluntarily. It is one of the most common salamanders in the Adirondacks.

10. TWO-LINED SALAMANDER: This amphibian is found at almost any time of the year under stones at the margin of cold streams.

11. FOUR-TOED SALAMANDER: Pharaoh Lake Wilderness Area is along the northern fringe of this species' range. It has not been documented in the wilderness area but it has been collected near Lake George.

12. GRAY TREE FROG: It feeds in relatively small trees and shrubs that are near or actually standing in shallow bodies of water. Its breeding habits may have been adversely affected by acid precipitation.

13. MINK FROG: The mink frog prefers peaty or sphagnous lakes or ponds or in inlets or outlets of such lakes or ponds, particularly where water lilies are growing. The mink frog is found in the Tug Hill Plateau and Adirondacks in New York.

14. LEOPARD FROG: In spring, the leopard frog is found in swampy marshlands, upland backwaters, overflows and ponds. In summer, it is found in swamplands, grassy woodland or hay or grain fields. They spend the winter hibernating in ponds and marshes. The leopard frog is becoming rare in a lot of places and disappearing over much of its range, possibly because of toxins such as DDT or PCB.

15. WOOD FROG: Breeds in leaf-laden ponds and transient pools of woodlands; hibernates in logs, stumps, under stones or beneath boards near woods, never in water. It is suspected that acid precipitation in the Adirondack Mountains is adversely affecting the reproduction of this species.

APPENDIX 18

YEARLY BIG GAME AND FURBEARER HARVEST RECORDS FOR TOWNS IN WHICH THE PHARAOH LAKE WILDERNESS COMPLEX IS LOCATED

WHITE-TAILED DEER

TOWN	1986	1987	1988	1989	1990
Hague	70	60	28	44	63
Horicon	49	32	36	45	34
Schroon	86	75	91	97	98
Ticonderoga	60	39	64	59	54

BEAR

TOWN	1986		1987		1988		1989		1990	
	E	R	E	R	E	R	E	R	E	R
Hague	0	0	0	2	2	0	1	0	0	7
Horicon	0	0	1	0	0	0	0	4	0	1
Schroon	4	11	3	0	0	6	5	9	1	6
Ticonderoga	1	3	4	0	0	1	0	2	0	0

E=Early Season R=Regular Season

BEAVER

TOWN	1985	1986	1987	1988	1989
Hague	6	0	18	12	2
Horicon	32	34	70	71	46
Schroon	42	79	57	24	10
Ticonderoga	12	53	41	49	32

BOBCAT

TOWN	1985	1986	1987	1988	1989
Hague	0	1	0	0	0
Horicon	0	0	1	0	1
Schroon	0	1	2	0	0
Ticonderoga	0	1	1	0	0

COYOTE

TOWN	1985	1986	1987	1988	1989
Hague	0	0	1	0	0
Horicon	0	2	2	0	1
Schroon	1	1	5	8	3
Ticonderoga	1	7	16	0	7

FISHER

TOWN	1985	1986	1987	1988	1989
Hague	8	3	4	3	1
Horicon	28	10	19	14	11
Schroon	10	7	19	4	9
Ticonderoga	16	6	15	10	8

OTTER

TOWN	1985	1986	1987	1988	1989
Hague	0	0	1	0	0
Horicon	0	5	11	6	4
Schroon	4	8	4	2	1
Ticonderoga	0	1	4	2	2

APPENDIX 19

MEMORANDUM FROM
THOMAS C. JORLING, *Commissioner*

New York State
Department of Environmental Conservation

October 31, 1991

TO: Executive Staff, Division and Regional Directors

FROM: Thomas C. Jorling

RE: ORGANIZATIONAL AND DELEGATION MEMORANDUM # 91-31
POLICY: FISHERY MANAGEMENT IN WILDERNESS, PRIMITIVE AND CANOE AREAS

BACKGROUND

Fisheries management in wilderness, primitive and canoe areas of the Adirondack and Catskill Parks has a strong foundation in law, policy, tradition and resource planning. The New York State Legislature has directed DEC to efficiently manage, maintain and improve the fish resources of the State and make them accessible to the people of New York. This includes a mandate to develop and carry out programs and procedures which prompt both natural propagation and maintenance of desirable species in ecological balance and lead to the observance of sound management practices to achieve those goals (ECL Section 11-0303).

Similarly, the State Land Master Plans for the Adirondack and Catskill Parks adopt the principle of resource management and provide strong guidance for fish management (APA 1987, DEC 1985). The primary management guideline for wilderness, primitive and canoe areas is to "achieve and perpetuate a natural plant and animal community where man's influence is not apparent." While these plans recognize these areas as places "where the earth and its community of life are untrammeled by man, where man is a visitor who does not remain," they are also defined as areas which are protected and managed so as to "preserve, enhance and restore, where necessary, its natural conditions...". Thus, opportunities to manage ecosystems have been preserved in these Master Plans and are conducted in a manner to meet plan guidelines. Fish management practices, such as fish stocking, pond reclamation, pond liming, barrier dam construction and maintenance, and resource survey and inventory, are permitted when conducted within guidelines for wilderness, primitive and canoe area management and use.

For more than a decade, the Division of Fish and Wildlife has managed ecosystems consistent with legal mandates and professional concerns, with sensitivity for wilderness values and with the intent of providing unique recreational experiences. The Master Plans set no numerical standards on use intensity but indicate that fishing is "compatible with wilderness and should be encouraged as long as the degree and intensity of use does not endanger the wilderness resource itself."

Important precepts contained in a Division of Fish and Wildlife position paper on wilderness area management have guided the Department's fish management programs in such areas since 1977 (Doig 1977). The position paper recognizes fishing as: a legitimate activity in wilderness, primitive and canoe areas which should be considered as part of a larger experience not just a quest for fish; where quality includes the expectation of encounter with unique fish and wildilfe in natural setting, aesthetic surroundings, and limited contact with other persons. It directs management activities at species which are indigenous to or historically associated with the Adirondacks and Catskills. It provides that fish populations will be managed on a self-sustaining basis, but permits maintenance stocking to be used where unique, high quality recreational fishing experiences can be provided without impairing other objectives. It further directs that fish management activities should be compatible with area characteristics, conducted in an unobtrusive manner and restricted to the minimum means necessary to accomplish management objectives.

The formal traditions of fisheries management in New York State are rooted 120 years in the past, dating back to 1868 when the New York Commission of Fisheries was created (Shepherd et al. 1980). The elements of New York's fisheries program have evolved both in emphasis and priority with shifts being dictated by need, experience and availability of funding as well as the evolution of fishery science. Formal goals for the Fish and Wildlife program have been in existence for more than a decade and remain the foundation for DEC's modern fish and wildlife program activities. They are:

- perpetuate fish and wildlife as a part of various ecosystems of the state;
- provide maximum beneficial utilization and opportunity for enjoyment of fish and wildlife resources; and
- manage these resources so that their numbers and occurrences are compatible with the public interest.

Goals for each program of the Division of Fish and Wildlife have been described in DEC's 1977 Division of Fish and Wildlife Program Plan. Environmental impacts of the Division of Fish and Wildlife's fish species and habitat management activities are discussed in programmatic environmental impact statements prepared by Shepherd et al. (1980) and Odell et al. (1979), respectively.

The evolution of fisheries management in New York State and the Adirondack zone has been discussed in Shepherd et al. (1980) and Pfeiffer (1979). Program goals, objectives, policies and management strategies for lake trout including guidelines for stocking were developed by Plosila (1977). The strategic plan recognizes the importance of native Adirondack lake trout stocks and the considerable importance of these lake trout resources to the entire State. In 1979, a strategic plan for the management of wild and hybrid strains of brook trout was completed (Keller 1979). Preservation of native strains in the Adirondack and Catskill Mountains was a major component of that plan. Pfeiffer (1979) established goals, objectives and strategies for the

management of broad classes of Adirondack fishery resources and significantly enunciated the importance of angling in wilderness, primitive and canoe areas and guidelines for fisheries management within these areas. The latter were consistent with those formulated earlier by Doig (1977). The philosophical and scientific underpinnings for trout stream management in New York with application to management of wilderness, primitive and canoe area trout streams, was completed in 1979 (Engstrom-Heg 1979 a). A recent draft plan for intensification of management of brook trout in 47 Adirondack ponds has been developed by DEC Regions 5 and 6 (Miller, 1986).

Salmonid stocking by the Division of Fish and Wildlife is guided by policies and criteria presented in Engstrom-Heg (1979 b). The evolution of DEC's criteria for establishing salmonid stocking policies in New York has been reviewed by Pfeiffer (1979), while the general objectives of fish stocking are discussed in Shepherd et al (1980) and Engstrom-Heg (1979).

Liming of acidified waters by the Division of Fish and Wildlife is presently guided by the draft policy and criteria established by Wich (1987). A final generic environmental impact statement for DEC's liming program is being prepared following extensive public review of the draft statement. It will include a revision of the Division of Fish and Wildlife's liming policy and criteria (Simonin 1990). Findings and the Commissioner's decision for the liming program are being completed.

The history of pond reclamation in New York has been discussed by Pfeiffer (1979). Reclamation goals are discussed in Shepherd et al (1980), while general policy guidance and rules and regulations covering the use of piscicides including rotenone, are provided in Part 328 of 6NYCRR. Fish barrier dams, which are frequently associated with pond reclamation, are permitted when constructed or maintained in accordance with SLMP guidelines.

PURPOSE

The purpose of this memorandum is to state the Department's policies on fisheries management in wilderness, primitive and canoe areas within the Adirondack and Catskill Parks.

POLICY GUIDELINES

Legally established goals for the Forest Preserve recognize that fish and wildlife are integral to the values society places on the Preserve. Charges include management to "foster the wild Adirondack environment and all the flora and fauna historically associated there with" and, "encouragement of indigenous species presently restricted in numbers." Fisheries management activities are essential to achieve these goals and to perpetuate unique opportunities for high quality wilderness, primitive and canoe area fishing experience provided within the Adirondack and Catskill Parks. Specific guidelines for fisheries management activities are as follows:

1. The primary purpose of aquatic resource management in wilderness primitive and canoe areas is to perpetuate natural aquatic ecosystems, including perpetuation of indigenous fish species on a self-sustaining basis.

2. Angling is recognized as a compatible recreational pursuit in wilderness, primitive and canoe areas. Aquatic resource management will emphasize the quality of the angling experience over quantity of use.

3. Aquatic resources in wilderness, primitive and canoe areas will be protected and managed so as to preserve, enhance and restore, where necessary, their natural conditions. Aquatic resource management, including stocking of game and nongame fishes and pond reclamation, may be necessary to achieve and perpetuate natural aquatic ecosystems.

4. Brown trout, rainbow trout, splake and landlocked Atlantic salmon are coldwater fish species historically associated with the Adirondack Park. Smallmouth bass, largemouth bass, northern pike and walleye are warmwater species historically associated with the entire Adirondack and Catskill Parks and indigenous to some lowland areas. These species may be included in the management and stocking regime of specific waters in wilderness, primitive, and canoe areas in instances when indigenous fish communities cannot be protected, maintained, or restored in those waters. Fish species, other than indigenous species and species historically associated with the Adirondack and Catskill Parks, will not be stocked in the waters of wilderness, primitive and canoe areas.

5. Waters found to be naturally barren of fish species will not be stocked. Waters which are self-sustaining or which otherwise would be self-sustaining except that they have been compromised by human-caused disturbances may be stocked consistent with these guidelines.

6. Pond reclamation will be practiced as appropriate to prepare or maintain waters in wilderness, primitive and canoe areas but only for the restoration or perpetuation of indigenous fish communities.

7. The Unit Management Plan for each wilderness, primitive, or canoe area shall identify aquatic resource management actions on a water-body-specific basis through analysis of unit inventory data adequate to support the actions.

8. In those instances where a Unit Management Plan has not yet been approved for a given wilderness, primitive, or canoe area, aquatic resource management actions to stock waters may be continued in waters so managed before December 31, 1989, consistent with these guidelines, pending approval of the Plan. Waters reclaimed prior to December 31, 1989 may be reclaimed subject to case-by-case review by the Adirondack Park Agency for consistency with these guidelines, pending approval of the Plan. New waters may be stocked or reclaimed only to prevent significant resource degradation subject to case-by-case review by the Adirondack Park Agency for consistency with these guidelines, pending approval of the Plan.

9. Maintenance liming to protect and maintain indigenous fish species may be continued as mitigation measure for acid rain in Horn Lake (PO4854), Tamarack Pond (PO6171), Livingston Pond (PO5705) and Kitfox Pond (PO3142) so treated before December 31, 1989. Upon acceptance of the Final Generic Environmental Impact Statement on liming and the issuance of findings and a decision by the Department of Environmental Conservation, the appropriateness of liming in the waters of wilderness, primitive and canoe areas will be established and appropriate policy guidelines incorporated herein.

10. All aquatic resource management activities in wilderness, primitive, and canoe areas will be consistent with guidelines for use of motor vehicles motorized equipment, and aircraft as stated in the State Land Master Plan.

Attachment

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Pharaoh Lake Wilderness Complex

Bald Ledge Primitive Area, Hague Brook Primitive Area,

First Brother Primitive Area

Gooseneck Primitive Area

and

Pharaoh Lake Wilderness

Unit Management Plan

Final

Environmental Impact Statement

New York State Department of Environmental Conservation

Ray Brook, New York

September 1992

FORWARD

This document is a final environmental impact statement prepared in conjunction with a unit management plan for state lands administered by the Department of Environmental Conservation within the Towns of Schroon and Ticonderoga of Essex County and Hague and Horicon in Warren County. The plan, upon adoption by the Commissioner, will provide guidelines for protection and management of the lands involved.

The Department of Environmental Conservation obtains its authority to manage forest preserve lands from Article 9, Section 9-0105 of the Environmental Conservation Law which provides that the Department shall have the power, duty and authority to "exercise care, custody and control of the several preserves, parks and other State lands described in this article".

The recreational management policy of the Department of Environmental Conservation has been developed within the constraints of Article XIV of the Constitution of the State of New York which provides that "the lands of the State, now owned or hereafter acquired, constituting the forest preserve as now fixed by law, shall be 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".

It has been the function of the Department of Environmental Conservation in managing over 2 3/4 million acres of forest preserve, located in the Adirondack Park to develop an

administrative policy which complies with the provisions of the Constitution and simultaneously provides the greatest possible benefit to the people of the State of New York who are the owners of the preserve.

In the performance of its obligation to provide for recreational pursuits within the Constitutional limitation relating to the Forest Preserve, the Department, with the advice of the Attorney General, has evolved a recreational management policy based on the following premises:

1. No one shall have exclusive use of any portion of the forest preserve.
2. No one shall be allowed to claim any particular campsite from year to year.
3. State property shall not be used for commercial purposes.
4. Public property shall not be used for private profit.
5. Forest lands and water shall be enjoyed by all the people as far as possible and compatible with the public policy expressed in the constitution.

Based on these premises, the Department, in the administration of its recreational management policy within the forest preserve, has developed the following objectives:

1. To foster the widest possible temporary use of the forest preserve for the benefit of all the people in the state.
2. To reduce the abuses caused by unrestricted use and to protect the forest preserve by the enforcement of reasonable rules and regulations.
3. To provide and maintain recreational facilities in the forest preserve for the public to enjoy and to provide the facilities authorized with the least possible

disturbance of natural forest conditions.

4. To protect the forests from fire by providing the camping public with suitable protected campsites.

5. To create a favorable attitude on the part of the user of recreational facilities towards conservation of the environment in general.

The classification of this unit was made by the Adirondack Park Agency as authorized by Section 816 of the Adirondack Park Agency Act, Article 27 of the Executive Law.

The Adirondack Park Agency also authorizes the development of unit management plans by the Department of Environmental Conservation within the guidelines and criteria set forth in the Adirondack Park State Land Master Plan, approved by Governor Mario Cuomo in November 1987.

TABLE OF CONTENTS

I. INTRODUCTION AND SUMMARY

A. Introduction

This document is a final environmental impact statement (FEIS) prepared in conjunction with a unit management plan for the Pharaoh Lake Wilderness Complex (PLWC). The activities proposed in the plan are henceforth addressed.

B. FEIS Summary

The activities contained in this unit management plan are proposed to allow for continued public use on these forest preserve lands. These activities include continued patrol and surveillance of the area, collection of data for future planning purposes, construction of facilities, continued maintenance of facilities and the stocking of fish.

Proposed environmentally significant activities mandated by the Adirondack State Land Master Plan are controversial in nature and include removal of the Pharaoh Mt. Fire Tower, and the closure of the Crane Pond and Pharaoh Roads.

Other proposed activities of the plan include new parking facility construction, new trail construction, and trail relocations which may cause significant environmental impact.

II. PROPOSED ACTION

The following objectives have been included in the plan:

A. Land Resources

1. Mitigate or prevent further soil compaction and/or vegetative loss at each of the following locations within the next three years.
   a. Crane Pond
   b. Goose Pond
   c. Pharaoh Lake
   d. Lost Pond
   e. Rock Pond
2. Mitigate further soil compaction and/or vegetative loss at all other ponded waters during the next five years.
3. Reduce soil erosion and/or stream siltation occurring from lack of proper trail maintenance by preparing and analyzing a trail inventory and developing a plan for trail maintenance and/or rehabilitation for each of the years covered by this plan. The Division of Operations and Lands and Forests will jointly prepare such a plan.
4. Remove all non-conforming uses within the next five years.
5. Develop new and improved access to Springhill Pond via State land.

6. Relocate and rehabilitate all pit privies to comply with the "150 foot setback rule" within the next five years.
7. Schedule for the replacement and/or construction of facilities on a priority basis using a policy of resource protection rather than for user convenience for each of the five years covered by
8. Develop a location and inventory record of rare and endangered plant species as these are encountered.

B. Wildlife

1. Maintain annual hunting and trapping seasons as legitimate uses of the wildlife resources in the unit.
2. Encourage an increase of non-consumptive recreational uses of wildlife.
3. Identify and implement actions by 1997 to increase deer and black bear harvest in Deer Management Unit 12.
4. Record critical habitats for endangered, threatened, species of special concern, or boreal species, and develop recommendations to discourage public disturbance of these species or their habitats.

C. Fisheries

1. Provide recreational angling as part of a larger wilderness experience.
2. Reduce the distribution of nonnative and native-but-widely-introduced fish species and increase the abundance of the depressed, native brook trout by conducting eight reclamations. The reclamations include Burge Pond, Crab Pond (P140), Crab Pond (P430), Oxshoe and Unnamed (P428) Ponds, Wortleberry Pond, Gull Lake, Horseshoe Pond, and either Rock and Little Rock Ponds, or Clear and Mud Ponds.
3. Pending prereclamation surveys, fish barrier dams may be constructed on outlets of ponds to be reclaimed. Fish barriers, either natural or manmade are necessary to prevent reintroduction of nonnative fishes. Barrier dams which must be constructed in conjunction with reclamations will be sited in unobtrusive locations and will be constructed of natural materials to minimize visual impacts.
4. Conduct surveys in two or more ponds to identify fish species present and document water quality.
5. Continue to manage 21 ponds as Adirondack brook trout waters, five ponds as coldwater fisheries, four ponds as warmwater fisheries and two ponds as

two-story waters.

D. Public Use Management

1. Obtain better wilderness use data by installing additional trail registers within the next five years.
2. Develop improved means to educate wilderness uses by assigning at least one additional assistant ranger to the Pharaoh Lake Wilderness region.
3. Use a system of "campsite designation" where necessary to manage public use and to reduce resource degradation.
4. Develop new parking facilities at Berrymill Trailhead (New Hague Road), Pharaoh Road and Lost Pond.

III. ENVIRONMENTAL SETTINGS

A. Area Descriptions

The Pharaoh Lake Wilderness Complex consists of five units; the Bald Ledge Primitive Area, the Hague Brook Primitive Area, the Gooseneck Primitive Area, First Brother Primitive Area and the Pharaoh Lake Wilderness as described below:

1. Bald Ledge Primitive Area

The Bald Ledge Primitive Area is located in the Town of Ticonderoga, Essex County. It consists of an appendage of the Pharaoh Lake Wilderness to the west and is further bounded by private land, north, east and south. It is severed from the wilderness area by a road (0.5 mile in length) used periodically to transport forest products from adjacent land.

2. Hague Brook Primitive Area

This area is located in the Town of Hague, Warren County. It is bounded on three sides by private land and on the northeast by Pharaoh Lake Wilderness. It contains a private access road to a parcel of private land lying between this area and the Pharaoh Lake Wilderness to the northwest. The owner of this inholding is reputed to have deeded rights to use unspecified roads within the area. However, deeds to the State do not appear

to reserve this right. A review of the matter is ongoing.

3. Gooseneck Primitive Area

The Gooseneck Primitive Area is located in Lot Nos. 25 and 38 of the Paradox Tract, Town of Ticonderoga, Essex County. Once part of the Pharaoh Lake Wilderness, this area was reclassified to primitive areas status in 1982 to provide for the continued operation of Gooseneck Pond as a water supply facility for the Village of Ticonderoga. The primitive area includes the dam and control valves at the pond and 100' wide corridor from the State land boundary to the dam site containing restricted access service road. Gooseneck Pond, under Section 15, Article 1509 of the Environmental Conservation Law, is a legally defined public water supply for the Village of Ticonderoga.

4. First Brother Primitive Area

The First Brother Primitive Area lies east of Brant Lake in the Town of Horicon, Warren County. It is bounded by private lands north, east and south and on the west by Palisades Road, a Town highway. It shares a common corner with the Pharaoh Lake Wilderness.

5. Pharaoh Lake Wilderness Area

The Pharaoh Lake Wilderness Area is located in the Towns of Schroon and Ticonderoga in Essex County and in the Towns of Horicon and Hague in Warren County. The wilderness is located east of Route 9 and Interstate 87, south of Route 74, north of Route 8 and west of Route 9N. The area is bounded on the west by the East Shore Road and private land; north by Route 74, the Great Lot line between Eagle and Pyramid Lakes and private land; east by Bald Ledge Primitive Area, Putnam Pond Public Campground and private land; and south by Route 8, private land, and the Hague Primitive Area.

B. Acreage

1. Bald Ledge Primitive Area

Comprises 5 lots and totals 500 acres.

2. Hague Brook Primitive Area

Occupies 210 acres

3. Gooseneck Primitive Area

Occupies approximately 1 acre

4. First Brother Primitive Area

Occupies 90.5 acres

5. Pharaoh Lake Wilderness Area

The total acreage of the wilderness is 46,283 acres. There are no inholdings.

C. Wildlife

The units are located in the Eastern Adirondacks Ecological Zone, Deer Management Unit 12 and Furbearer Management Unit 2. Because of their small size, wildlife data for the Bald Ledge, Crane Pond and Gooseneck units is unavailable. Harvest data for the Pharaoh Lake Wilderness is contained in the plan and a listing of the mammals, birds, reptiles and amphibians occurring in the area is found in Appendices 12, 14 and 16.

A general location map of wetlands within the region and nearby deer wintering areas are shown in the appendices of the plan.

D. Fisheries

The Pharaoh Lake region contains 41 ponded waters, representing approximately 1,277 acres. Pharaoh Lake is the largest individual water, with a surface area of 441 acres. In addition, the area also contains approximately 70 miles of small coldwater streams.

E. Inventory (Refer to Facilities Map in the Final Plan)

1. Pharaoh Lake

A. Non-Conforming Structures

1. Fire Tower - Pharaoh Mountain (1)

2. Observer's Cabin - Pharaoh Mountain (1)

B. Conforming Structures

1. Leantos

Grizzle Ocean	(1)
Clear Pond	(1)
Rock Pond	(1)
Little Rock Pond	(1)
Tubmill Marsh	(1)
Lilypad Pond	(1)
Pharaoh Lake	(8)
Oxshoe Pond	(1)
Berrymill Pond	(1)
TOTAL LEANTOS	16

2. Pit Privies

Grizzle Ocean	(1)
Crane Pond	(3)
Oxshoe Pond	(1)
Pharaoh Lake	(7)
Rock Pond	(1)
Lost Pond	(1)
Clear Pond	(1)
Berrymill Pond	(2)
Little Rock Pond	(1)
Tubmill Marsh	(1)
TOTAL PRIVIES	19

3. Remote Tent Sites (Non-designated)

Pharaoh Lake	(50)
Putnam Pond	(5)
Spectacle Pond	(2)
Gull Pond	(1)
Goose Pond	(5)
Crane Pond	(26)
Burge Pond	(1)
Oxshoe Pond	(3)
Crab Pond	(6)
Horsehose Pond	(1)
Whortleberry Pond	(7)
Little Rock Pond	(1)
Rock Pond	(6)
Clear Pond	(2)
Grizzle Ocean	(5)
Springhill Pond	(5)
Adirondack Trailhead	(3)
Millbrook Trailhead	(6)
Pharaoh Lake Brook	(1)
Lost Pond	(5)
Berrymill Pond	(3)
Heart Pond	(1)
Lilypad Pond	(1)
Bear Pond	(1)

Desolate Brook	(3)
Coffee Pond	(1)
Crab Pond	(1)
Spuytenduivel Brook	(1)
Pharaoh Mt. Trail	(1)
Pharaoh Mt. Summit	(1)
Crane Pond Road	(6)
TOTAL SITES	(162)

4. Trailheads

Goose Pond

Gull Pond

Adirondack

Mill Brook

Putnam Pond Campground

Lost Pond

Crane Pond

Tubmill Pond

Otter Pond

Spectacle Pond

Blue Hill Trail

Putnam Pond (West Shore)

Berrymill Pond (from New Hague Road)

5. Sign-In Registers

Crane Pond	(1)
Pharoah Lake	(1)
TOTAL REGISTERS	(2)

6. Foot Trails

Adirondack Trailhead to Pharaoh Lake Outlet	7.2 mi.
Mill Brook Trailhead to Pharaoh Lake Outlet	3.3 mi.
Pharoah Lake Outlet to Springhill Ponds	4.6 mi.
Springhill Ponds Trail to Long Swing Trail (East Shore)	1.3 mi.
Pharaoh Lake Outlet to Pharaoh Mt. Trail	1.6 mi.
Spur Trail to Leantos (Watchrock Pt)	0.2 mi.
Pharaoh Lake to Pharaoh Mt. Summit	1.5 mi.
Crane Pond to Grizzle Ocean	6.9 mi.
Long Swing Trail to Pharaoh Mountain Summit	2.1 mi.
Route 74 to Crane Pond via Blue Hill Trail	2.7 mi.
East Shore Road to Spectacle Pond	1.6 mi.
East Shore Road to Gull Pond	0.6 mi.
Crane Pond Trail to Goose Pond	0.6 mi.
Trail around Grizzle Ocean	1.0 mi.
Pharaoh Lake Trail to Lilypad Pond (Oxshoe Pond, Crab Pond, Horseshoe Pond)	2.7 mi.
Lilypad Pond to Rock Pond	1.3 mi.
Shortcut from Crab Pond to Pharaoh Lake Trail	0.4 mi.
Tubmill Marsh Trailhead to Lilypad Pond Junction (0.2 mile on private land)	2.7 mi.
Route 74 to Otter Pond (0.1 mile on private land	0.5 mi.

Putnam Pond Campground to Grizzle Ocean	1.9 mi.
Putnam Pond Campground to New Hague Road (Berrymill Pond - 0.2 mile on private land)	4.4 mi.
Putnam Pond Campground to Bear Pond (Heart Pond)	1.5 mi.
Bear Pond to Rock Pond	1.7 mi.
Heart Pond Trail to Rock Pond Trail	0.8 mi.
Putnam Pond to Rock Pond	0.6 mi.
Spur to Clear Pond Trail	0.3 mi.
Trail around Rock Pond	1.9 mi.
Rock Pond to Clear Pond	0.6 mi.
Trail around Clear Pond	0.8 mi.
Clear Pond to Grizzle Ocean Trail	0.8 mi.
Putnam Pond to Clear Pond	0.6 mi.
Putnam Pond Road to Treadway Mountain Summit	2.4 mi.
Putnam Pond Road to Lost Pond	1.5 mi.
Trail around Lost Pond	1.2 mi.
Crane Pond Trailhead to Crane Pond	1.9 mi.
TOTAL	62.8 MI.

7. Horse Trails (also listed as Foot Trails)

Adirondack Trailhead to Pharaoh Lake	8.0 mi.
Mill Brook to Pharaoh Lake Outlet	2.3 mi

8. Dams

Pharaoh Lake Outlet

Crane Point Outlet

Berrymill

9. Signs

41 (approximate)

10. Major Bridges

Mill Creek

Pharaoh Lake Outlet

East Shore of Pharaoh (2)

Rock Pond to Bear Pond

Lilypad Pond to Rock Pond

Putnam Pond to Clear Pond

Mud Pond Outlet

Putnam Pond to Treadway Junction (2)

Lost Pond Trail

Putnam Pond Campground to Heart Pond (2)

Crane Pond

Inlet to Putnam Pond

Trail along southeast shore (3)

Alder Pond Outlet

Inlet to Glidden Marsh

Blue Hill Trail (3)

Pharaoh Brook

Pharaoh Lake (south shore) (4)

Spectacle Pond Trail (4)

Crane Pond to Pharaoh Lake (2)

Split Rock Bay vicinity of spring (2)

Wolf Pond Outlet

Trail from Pharaoh to Grizzle Ocean	(4)
Pharaoh Mountain Trail	(4)
Outlet to Grizzle Ocean	
Grizzle Ocean to first trail intersection	(2)
Outlet of Little Rock Pond	
TOTAL BRIDGES	49

2. Hague Brook Primitive Area

   a. Non-conforming uses:

      Private access roads — mileage undetermined

3. Gooseneck Pond

   a. Restrictive Access Road — 0.1 mi

4. Bald Ledge Primitive Area

   a. Non-conforming uses:

      Private Road — 0.5 mi.

5. First Brother Primitive

   No non-conforming

   No facilities

F. Constraints

In addition to the criteria and guidelines set forth in the Adirondack State Land Master Plan, management constraints include the following:

--Article 14 of the New York State Constitution

--Article 9, 11 and 43 of the Environmental Conservation Law

--Various rules and regulations and policies of the Department of Environmental Conservation

G. Critical Habitats

The presence of threatened and endangered species and their habitats has not been documented in this area. However, critical habitats found in this area include potential peregrine falcon nesting sites and deer wintering areas. Expansion of facilities will not be permitted in these areas and public use will be discouraged during the respective periods of sensitivity for each species. (Peregrine Falcon 4/1-8/1; Deer 12/1 - 3/31).

H. Unique Areas and/or Historical

1. Red Pine, Scotch pine, Norway Spruce, White Pine plantings at Culver Fields, Adirondack trailhead and Wilcox Pond; unique representatives of man-made forests in the wilderness, slowly reverting to natural stands.
2. Graphite workings at Rock Pond and Bear Pond; historical site
3. Mill sites at the outlet of Crane Pond, Gregoryville, and many other locations; historical, denotes former manufacturing sites within the wilderness.
4. Foundations in the vicinity of Crane Pond, Gregoryville and many other locations; historical, denotes former settlements in the wilderness.

5. Remains of old "bark roads" in the vicinity of Desolate Valley Brook; historical, used to transport hemlock bark to Horicon tanneries.

In addition, waters with Adirondack brook trout classifications in the PLWC and the adjoining Hammond Pond Wild Forest are important in that they contain approximately 10% of the managed brook trout Ponds in public ownership in the Adirondack Park. The PLWC contains 21 brook trout ponds and the adjacent Hammond Pond Wild Forest contains 12. Together, these areas are also important on a national basis, since the majority of the brook trout ponded waters are located in northern New York, Maine, and Canada.

I. Primary Public Use

1. Hiking

Hiking is a significant use of the Pharaoh Lake region. The summit of Pharaoh Mountain and the shores of Bear, Clear, Crane, Lost, Oxshoe and Rock Ponds receive the heaviest use.

2. Hunting

Hunting and trapping are traditional and significant uses of the area.

3. Fishing

Fishing is a traditional and popular activity in the Pharaoh Lake region. Particularly popular are those lakes and ponds supporting brook trout. Fishing pressure on trout waters typically peaks in intensity during May and tapers off for the remainder of the season.

IV. SIGNIFICANT ENVIRONMENTAL IMPACTS

There are three actions proposed in the plan that are mandated by the Adirondack State Land Master Plan.

1. Crane Pond Road Closure

This town maintained road penetrates approximately two miles into the wilderness. This road has been closed under Section 212 of the N.Y.S. Highway Law causing considerable controversery.

2. Pharaoh Road Closure

This road was abandoned under Section 212 of the Highway Law in the early 1970's causing considerable controversy. Vehicular use beyond the Wilderness boundary is non-conforming.

3. Pharaoh Mt. Fire Tower Removal

The firetower and related observers cabin are non-conforming structures in the wilderness whose removal must be scheduled by the Department. The value of the tower for fire detection and related

activities has been significantly reduced through aerial detection flights and its removal will not significantly impact on Department's activities. However, the tower is currently under study by the Office of Parks, Recreation and Historical Preservation for its historical significance. Its' eventual disposition will reflect the conclusions of this study.

There are two actions in the plan that are not mandated State Land Master Plan that may have significant environmental impacts.

1. Parking Area Construction or Improvement

New parking facilities are proposed for the Berrymill Pond, Lost Pond and Pharaoh Road Trailheads. New facilities will require tree cutting, removal of vegetation, exposure of mineral soil and the addition of fill materials. These activities singularly or in total, could cause a significant environmental impact.

2. New Trail Construction or Relocation of Existing Trails

New trail construction proposed includes 1.5 miles of trail connecting Springhill Pond with the Berrymill Pond trail. Trail relocation as proposed includes 6 miles of trail and includes portions of the Pharaoh Mt. Trail, the trail around Pharaoh Lake and the Blue Hill Trail. This

work may involve tree cutting, brush and ground cover removal, dry tread and bridge construction, signing and marking. Soil erosion may take place until trail stabilization measures become effective.

Prior to any activity in these areas, the Division of Historic Preservation (NYSOPRHP) and the New York Natural Heritage program will be contacted for precise up-to-date information on sensitive sites. To date, no information has been recorded for the aforementioned areas.

V. ADVERSE IMPACTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

There are no adverse impacts that cannot be avoided that result from the activities discussed in this EIS. However, the possibility exists that such impacts might be identified as the plan develops. The known endangered and threatened plants or vertebrates in the area and streams or wetlands will not be impacted by the implementation of this proposed plan.

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

There are no irreversible and irretrievable commitments of resources resulting form the activities discussed in this EIS.

VII. MITIGATION MEASURES TO MINIMIZE ENVIRONMENTAL IMPACT

Should any significant negative impacts arise in the implementation of this plan, it might be appropriate to address the following constraints which already exist to

affect the management of this area.

1. Foot Trail Establishment and Maintenance

The present policy governing foot trail establishment and maintenance is contained in Organization and Delegation Memorandum #84-06 which states:

Policy

Section 9-0105 of the Environmental Conservation Law provides that the Division of Lands and Forests has responsibility for the "care, custody and control" of the Adirondack and the Catskill Forest Preserve. In accordance or modification of existing facilities and maintenance of facilities, that will result in the cutting, removal or destruction of vegetation on any of the lands constituting the Forest Preserve shall require approval of the Director of the Division of Lands and Forests in accordance with the following Procedure. However, under no circumstances will approval be granted for the cutting of trees for firewood, timber or other forest products purposes.

Procedure

A. Construction of New Facilities and the Expansion of Modification of Existing Facilities

All projects that involve the cutting, removal or destruction of trees or other vegetation in the Forest Preserve must have approval from the Director of the

Division of Lands and Forests. Requests for approval to cut, remove or destroy trees for the purpose of new construction, expansion or modification projects must be submitted in writing and include the following information:

-- The location of the project including a map delineating the project.
-- A description of the project and its purpose.
-- A count by species, of all trees to be cut, removed or destroyed.
-- A delineation of areas where vegetation, in addition to trees three inches or more in diameter, is to be disturbed.
-- A listing of any protected species of vegetation located within three hundred feet of the area to be disturbed during the project.
-- A description of measures to be taken to mitigate the impact on and restoration of vegetation, if appropriate, to the area impacted.

All decisions to approve any cutting, removal or destruction of trees will be subject to individual SEQR determinations.

B. Routine Maintenance

Responsibility for approval of all routine maintenance projects involving the cutting, removal or destruction of trees or other

vegetation is delegated to the Regional Forester for the region in which the project is to occur.

2. Fire Control

It should be noted that land, after becoming a part of the Forest Preserve, still enjoys the same protection afforded private lands through municipal and volunteer fire companies and DEC's forest fire control system. Large uncontrolled forest fires can cause severe adverse environmental and economic impacts, and an efficient control system is essential to contain fires and prevent widespread damage.

VIII. ALTERNATIVES

The Adirondack State Land Master Plan mandates that all Unit Management Plans include a schedule for the removal of all non-conforming uses or facilities. The Pharaoh Lake Wilderness Complex Unit Management Plan, therefore, in scheduling the removal of the nonconformances in the area does not consider alternatives to these actions.

All other activities proposed in the plan were reviewed and alternative actions considered. Those actions that may have an impact on the environment and the alternatives considered are as follows:

1. Parking Areas

New parking areas are proposed for the Pharaoh Road, Lost Pond and Berrymill Pond Trailheads.

Alternative #1 -The no action or status quo approach of not providing any facilities was considered. The indiscriminate parking resulting from this action would result in soil compaction, loss of vegetation and erosion, along with potential safety problems caused by interruptions to the normal flow of traffic caused the rejection of this alternative.

Alternative #2 - The option of developing larger facilities to accommodate more cars was also considered. This action would encourage greater public use of the area than the resource could withstand and was therefore rejected.

2. New and Relocated Trails

One and one-half miles of new trail connecting the Springhill Ponds area with the Berrymill Pond trail and relocation of 6.1 miles of trail including portions of the Pharaoh Mt., Pharaoh Lake, and Blue Hill Trails was proposed in the plan.

Alternative #1 - The option of no new facilities was considered. The public presently crosses private lands to gain access to Springhill Ponds. There is not opportunity to control public use under this situation and also no guarantee of continued public use of the access

route to the ponds. The trail sections proposed for relocation are presently suffering from resource degradation and erosion. These factors caused the rejection of this option.

Alternative #2 - Additional foot trails beyond those proposed in the plan, connecting various ponds in the area not presently connected, and climbing additional hills and mountains were considered. This option would encourage greater public use of the area resulting in resource degradation and loss of the wilderness character and was therefore rejected.

3. Pond Reclamations

Eight pond reclamations are proposed to reduce the distribution of nonnative and native-but-widely-introduced fishes and to increase the abundance of the depressed native brook trout.

Alternative #1

The option of no pond reclamation was considered. Representatives of DEC, APA, Conservation Council, Trout Unlimited, Adirondack Mountain Club, Adirondack Council and Association to protect the Adirondacks met on several occasions specifically to discuss pond reclamations in wilderness areas, including Pharaoh. Those organizations developed the

"Guidelines for Fisheries Management in Wilderness, Primitive and Canoe Areas". Fisheries proposals in this revision of the UMP were based on those guidelines and those proposals were reviewed and supported by the above organizations.

Among several aspects considered, the short-term impacts of conducting reclamations were weighed against the continuing, long-term impacts of nonnative and native-but-widely-introduced fishes. The various introduced fishes complete with native fishes, diminish the natural character of the aquatic community, and reduce the quality of recreational opportunities. Based on the status of fish communities in Pharaoh, the temporary, short-term impacts of the proposed reclamations were considered appropriate.

Alternative #2

The option of conducting more than eight reclamations was considered. Nonnative fishes are present in a majority of Pharaoh's ponds and even with the proposed reclamations at least 16 ponds in the Pharaoh Lakes Wilderness will continue to support nonnatives. However, based on logistics and an assessment of the current status of the Unit's fish community, eight reclamations were considered a reasonable number for this five-year

plan. Additional reclamations or retreatments are likely to be considered in future revisions of the UMP and will be based on the status of the Unit's fish community at that time.

IX. GROWTH INDUCING ASPECTS

It is anticipated that the implementation of the proposals presented in this unit management plan will not significantly affect the growth of any of the towns in the unit or adjoining areas.

X. EFFECTS OF THE USE AND CONSERVATION OF ENERGY RESOURCES

It is also anticipated that the implementation of the proposals presented in this unit management plan will not significantly affect the use and conservation of energy resources.

XI. RESPONSE TO PUBLIC COMMENTS

The draft unit management plan and draft environmental impact statement were released for public review and comment in May of 1987. About 200 copies of the documents were distributed. A formal public meeting to receive public comment was held on July 15, 1987, in Schroon Lake, New York. Twenty-five persons submitted oral and written presentations. In addition, the DEC's Region 5 office in Ray Brook received 96 written communications during a 90-day comment period following the public meeting. All correspondence was read and reviewed by staff and the substantive comments identified.

Upon completion of the comment period, the draft plan and draft environmental impact statement were revised. The Department based its management decisions upon five basic factors: (1) the law, (2) technical information, (3) resource capability, (4) professional judgement, and (5) public opinion. Professional judgement and public opinion enter into decision making where there is room for interpretation in any of the first three factors. Public opinion, for example, would not be a factor in citing violations of State law.

Using public comment in decision making is not a matter of just counting votes. The decision maker must weigh each comment on its own merits, measuring them against legal requirements, technical information, and the resource capabilities of the land unit.

Those comments offering technical corrections or pointing out inconsistencies were used to revise the draft plan and draft environmental impact statement. Some comments resulted from misunderstanding and indicated areas needing clarification.

Below is a summary of public concerns paraphrasing several comments that shared similar concerns. Department responses follow each comment.

Issue 1 - Wilderness Designation and Classification

PUBLIC COMMENTS: Those who commented on this issue felt that Wilderness designation was inappropriate for the area

and favored reclassification to Wild Forest.

DEC RESPONSE: Wilderness designation for the PLWC was based upon the recommendations of the Pomeroy Senate Commission, the Temporary Study Commission for the Adirondacks, and the Adirondack Park Agency. Because significant portions of the PLWC are in a wilderness or near wilderness condition, Wilderness designation was necessary to safeguard the unit's natural resources and to provide a facsimile of the Adirondack wilderness that existed pre-settlement of the region.

Any change in classification of the area is beyond the Department's jurisdiction. Such changes require a revision to the Adirondack State Land Master Plan pursuant to the statutory procedures of the Adirondack Park Agency Act (consultation with the Department and submission to the Governor for approval). The current Master Plan was revised in February 1986 and approved by Governor Cuomo in November 1987.

Issue 2 - Planned Removal of Nonconforming Uses

PUBLIC COMMENTS: Many commenters favored the retention of the Pharaoh Mountain Fire Tower and observer's cabin and opposed the closure of the Crane Pond and Pharaoh Roads to motor vehicle use. Specific needs were cited for forest fire detection, search and rescue, and general access for sportsmen, senior citizens, and handicapped persons. Other commenters questioned the Department's authority to close

the aforementioned roads to motorized use.

DEC RESPONSE: The provisions of the Adirondack State Land Master Plan mandate the Department to schedule and implement the removal of all nonconforming uses.

The Pharaoh Mountain Fire Tower and observer's cabin were closed in 1984. The decision to close the tower complex was based on the area's history of fire occurrence, drought periods, weather conditions, and high operating costs. The current detection system employing aerial detection flights is providing adequate fire detection coverage at a lesser cost.

In terms of a recreation opportunity spectrum, the Adirondack State Land Master plan sensibly apportions the Forest Preserve into units ranging from Wilderness to Intensive Use. The system provides varying degrees of access and serves a wide range of user groups. For example, the Master Plan accommodates motor vehicles in Wild Forest areas and provides areas where man's impact is substantially unnoticed in Wilderness. Presently these alternatives exist in one million acres of Wilderness and 1.5 million acres of Wild Forest areas.

In 1961 a Legislative Study Commission recommended that Crane pond be incorporated in the Pharaoh Lake Wilderness. This recommendation was reaffirmed by the Temporary Study Commission for the Adirondacks in 1970. In 1971, the Adirondack Park Agency Act provided for the Adirondack State

Land Master Plan as a means of implementing these proposals.

After extensive public debate in 1986, the Adirondack Park Agency forwarded its five year revisions of the Adirondack State Land Master Plan to Governor Cuomo for his review and approval in accordance with Section 816 of the Adirondack Park Agency Act, Article 27, Executive Law. The revised plan reclassified the Crane Pond Road from Primitive Corridor to Wilderness and included it as part of the Pharaoh Wilderness. According to the Master Plan, nonconforming uses such as the Crane Pond Road will be removed as rapidly as possible and in any case, by the end of the third year following classification. This reclassification would then complete the original Wilderness system initiated in 1972.

Official abandonment procedures instituted through use of Section 212 of the Highway Law wherein the New York State Department of Environmental Conservation may declare a town road abandoned where it entirely passes through and terminates on State land, were implemented for the Crane Pond Road in November 1989, officially closing this road to motor vehicle use.

In 1974, the Pharaoh Road was declared "abandoned" by the Department of Transportation following Section 212 proceedings.

New and/or improved parking facilities are planned to complement the road closures. These facilities will be

located within 500 feet of the Wilderness boundary and take into consideration use of maximum allowable distances and landscaping to discourage public intrusion onto private property.

In event of emergencies or life-threatening situations, the Department retains its authority to reopen said roads for administrative purposes directly related to such situations as cases may warrant.

Issue 3 - Regulations, Policies, and Guidelines

PUBLIC COMMENTS: Comments concerned overnight group sizes, adequacy of current regulations, and the enforcement of those regulations.

Some commenters wondered whether a single group size limit was suitable for all users (fishing and hunting parties, youth groups, family groups, commercial outfitters, etc.).

Many respondents advocated continued protection of the area under existing Department rules and regulations and the Wilderness guidelines of the Adirondack State Land Master Plan.

Others wanted to see more emphasis on user education rather than greater law enforcement.

DEC RESPONSE: Prior to development of the final plan, 10 or more persons in a group camping in the PLWC were required to obtain a group camping permit. Maximum group size was 20. Based upon capacity studies and limits of acceptable change,

it was determined most primitive tent sites could not provide adequate sanitary facilities nor accommodate large groups without causing pollution, site degradation, and adverse expansion of the site. Lacking appropriate policy to control group use the plan recommends a phased elimination of the issuance of group camping permits effectively reducing group size to nine or fewer persons.

The Department will continue to ensure that the wilderness provisions of the Adirondack State land Master Plan are adhered to and the Environmental Conservation Law is adequately enforced. In addition to regulation enforcement, the Department intends to emphasize user education to prevent resource damage rather than relying on law enforcement measures alone.

Issue 4 - Facilities Maintenance

PUBLIC COMMENTS: All commenters asked that all recreation facilities be adequately maintained. Many suggested a variety of improvements to the unit's trail system. Suggestions included relocating baldly eroded sections of the Pharaoh Mountain Trail and building a new trail to Springhill Pond.

Several commenters favored a "designated site" camping system to control overuse on the shores of heavily used lakes and ponds.

DEC RESPONSE: The plan recognizes the need for increased maintenance and identifies necessary budget requirements.

An additional trail crew is also requested to meet increased maintenance demands.

Building trails and associated facilities is done to improve access and to enhance the quality of the recreation experience. The need for each trail or facility is evaluated prior to construction. It is not Department policy to eliminate access for users but to determine the appropriate kinds of access and facilities to be provided in various parts of the PLWC.

Relocation of the Pharaoh Mountain Trail was considered and is addressed as a priority item in the plan.

A new trail to Springhill Pond is scheduled for construction in year 3 of the plan.

A campsite designation plan will be developed as prescribed in the unit management plan. Generally, sites in the more heavily used areas will be designated, spaced more widely apart, and moved back from shoreline locations. Closed sites will be rehabilitated to native grasses and seedlings. In addition, the Department will continue to educate users on minimum impact camping. The best long-term solution is voluntary cooperation by users to reduce impacts on these areas.

XII REVISIONS TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

This section documents revisions to the draft EIS which corrects typographical errors or change the meaning or content of the text. In general the changes are the result of the addition through acquisition and APA classification of a new Primitive Area to the unit complex, agreement between the Department of Environmental Conservation and the Adirondack Park Agency concerning "Fisheries Management in Wilderness, Primitive and Canoe Areas" and the removal of facilities as the result of legal mandates or illegal activities.

Page	Line	Text
1	20	a statement "A fourth mandated activity, removal of the Pharaoh Lake Horse Barn, is not controversial and will have only minor environmental impact." was deleted as this facility has been removed from the unit.
3	17	1990 was corrected to 1997
4	1	The entire section "C. Fisheries" was deleted and a new section was inserted to properly reflect changes in the plan and Department policy established as a result of the agreement between the Department, the Adirondack Park Agency and interested citizens groups regarding fisheries management in Wilderness, Primitive and Canoe

Areas.

5	15	Item number "5. Institute abandonment procedures for the Crane Pond Road" was deleted. This road has been legally closed by DEC.
6	4	"Four" was changed to five to reflect the additions of the First Brother Primitive Area to the Unit. This area is a recent acquisition, classified as Primitive by the Adirondack Park Agency and added to the Pharaoh Lake Wilderness Area Complex by the Department of Environmental Conservation.
6	6	First Brother Primitive Area was added to the area complex. (See above)
7	19	A new section "4" was added to describe the First Brother Primitive Area
8	22	A new item 4 was added to describe the First Brother Primitive Area and old number 4 was renumbered 5
9	9	Appendices 1, 2 and 3 were renumbered 12, 14 and 16 respectively to correspond with the Management Plan.
9	15	"38 Ponded waters, representing approximately 1162 acres" changed to "41 ponded waters and 1277" acres due to inclusion of 3 unnamed

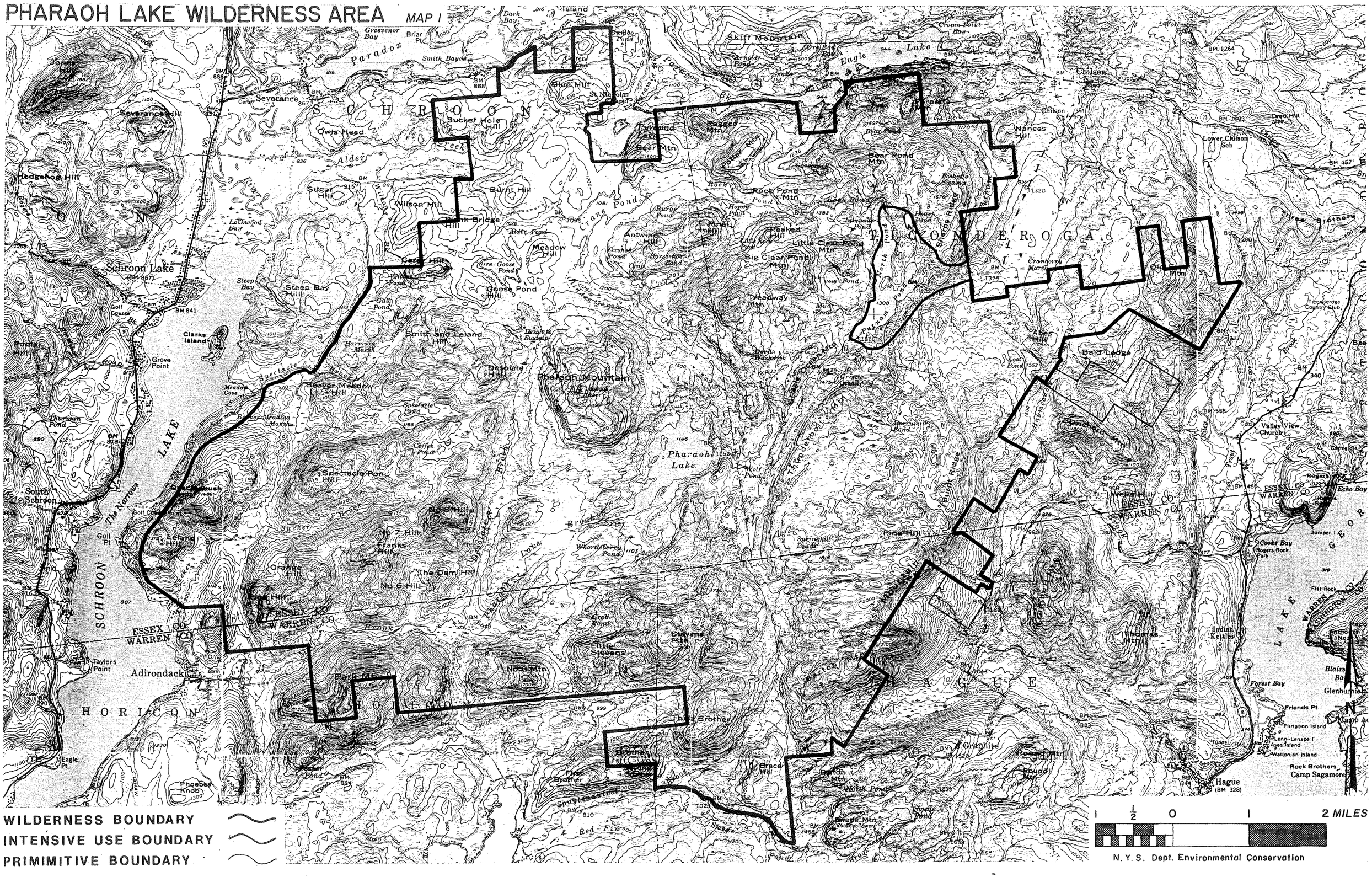
		ponds in plan.
9	18	"Seventeen Adirondack Brook trout waters are the most abundant of all management classifications comprising 715 acres." was deleted due to fisheries revisions in the plan.
9	20	The entire Inventory Section was renumbered to correct for typographical errors.
9	24	Items 1A c & d the horse barn and Pharaoh and Crane Pond roads were deleted as non-conforming uses. The barn was removed and the roads closed.
10	2	Leantos - Lost Pond leanto was removed and therefore deleted from the list. The total number of leantos is now corrected to 16.
14	24	Horse Trails - The "Adirondack Trailhead to Springhill Pond 11.8 mi" now reads "Adirondack Trailhead to Pharaoh Lake 8.0 mi" due to closure of the Springhill section of the trail for safety reasons.
16	16	Item 5 First Brother Primitive Area was added
18	7	"New York State's ponded water brook trout resource" was changed to read "The managed brook trout ponds in public ownership in the Adirondack Park" for clarification.
19	1	Item "3 Fishing" this section was revised to

		correspond with Fisheries Management in Wilderness, Primitive and Canoe Areas agreement.
19	8	Sect IV Significant Environmental Impacts was revised to delete reference to the removal of the horse barn. This non controversial barn has been removed since it had deteriorated to the point of being a safety hazard. The section also included revisions resulting from the legal closure of the Crane Pond and Pharaoh Roads. These roads were closed under Section 212 of the N.Y.S. Highway Law as mandated by the Adirondack Park State Land Master Plan.
26	13	Item 3 Pond Reclamations was added to correctly describe changes in the plan resulting from the Fisheries Management in Wilderness, Primitive and Canoe Area agreement.
30	22	Issue 2 "The continuation of current levels of motor vehicle use on the Crane Pond and Pharaoh Roads all of which are non conforming uses" was rewritten to read "opposed the closure of the Crane Pond and Pharaoh Roads to motor vehicle use." for clarification.

32	14	Lines 14 through 23 were rewritten to portray Section 212 of the Highway Law as revised by the Legislature and the action that took place as a result of this revision. This change reflects a change in the plan resulting from consultation with the Adirondack Park Agency.

PHARAOH LAKE WILDERNESS AREA

MAP I



WILDERNESS BOUNDARY

INTENSIVE USE BOUNDARY

PRIMIMITIVE BOUNDARY

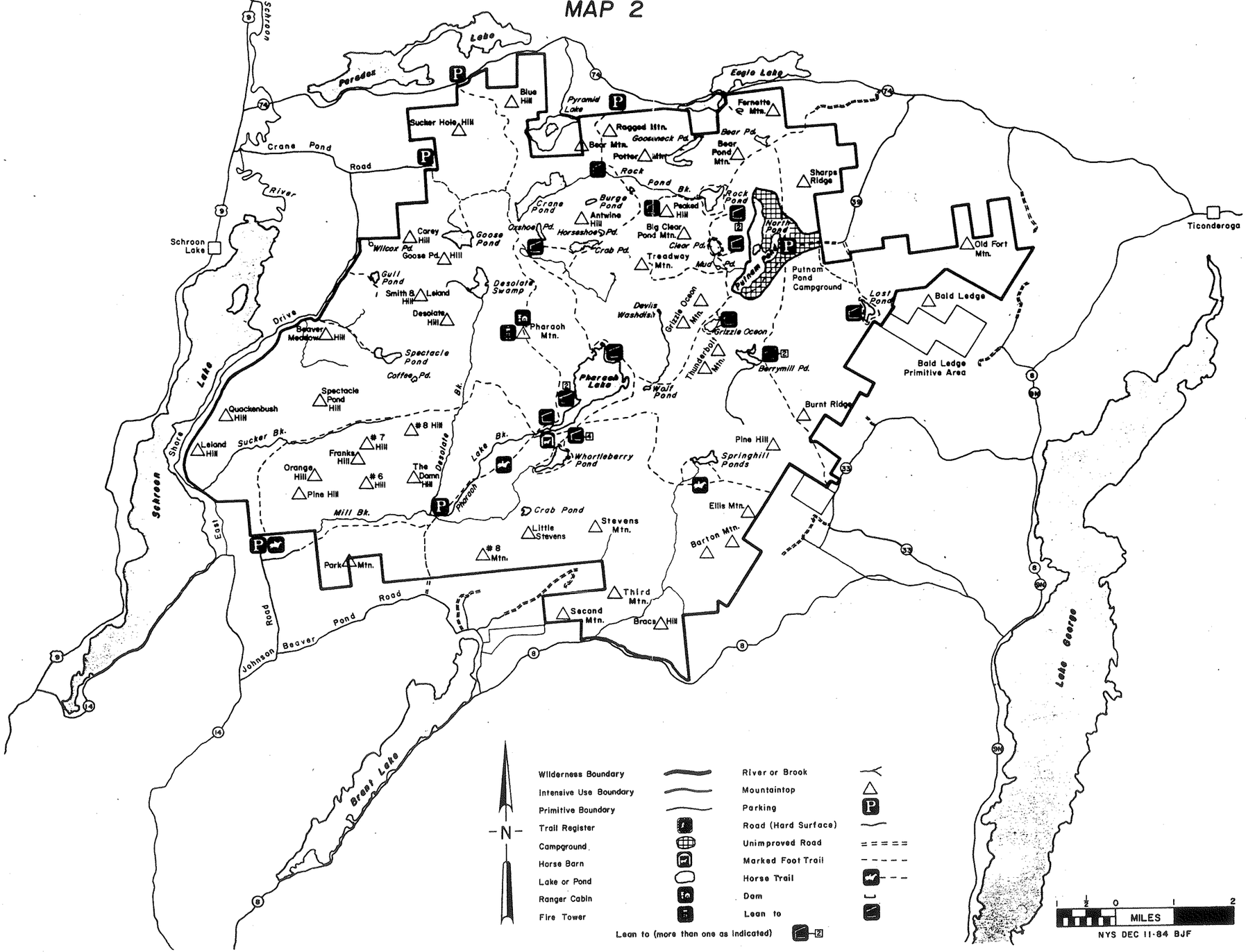
1 ½ 0 1 2 MILES

N.Y.S. Dept. Environmental Conservation

PHARAOH LAKE WILDERNESS AREA

EXISTING FACILITIES

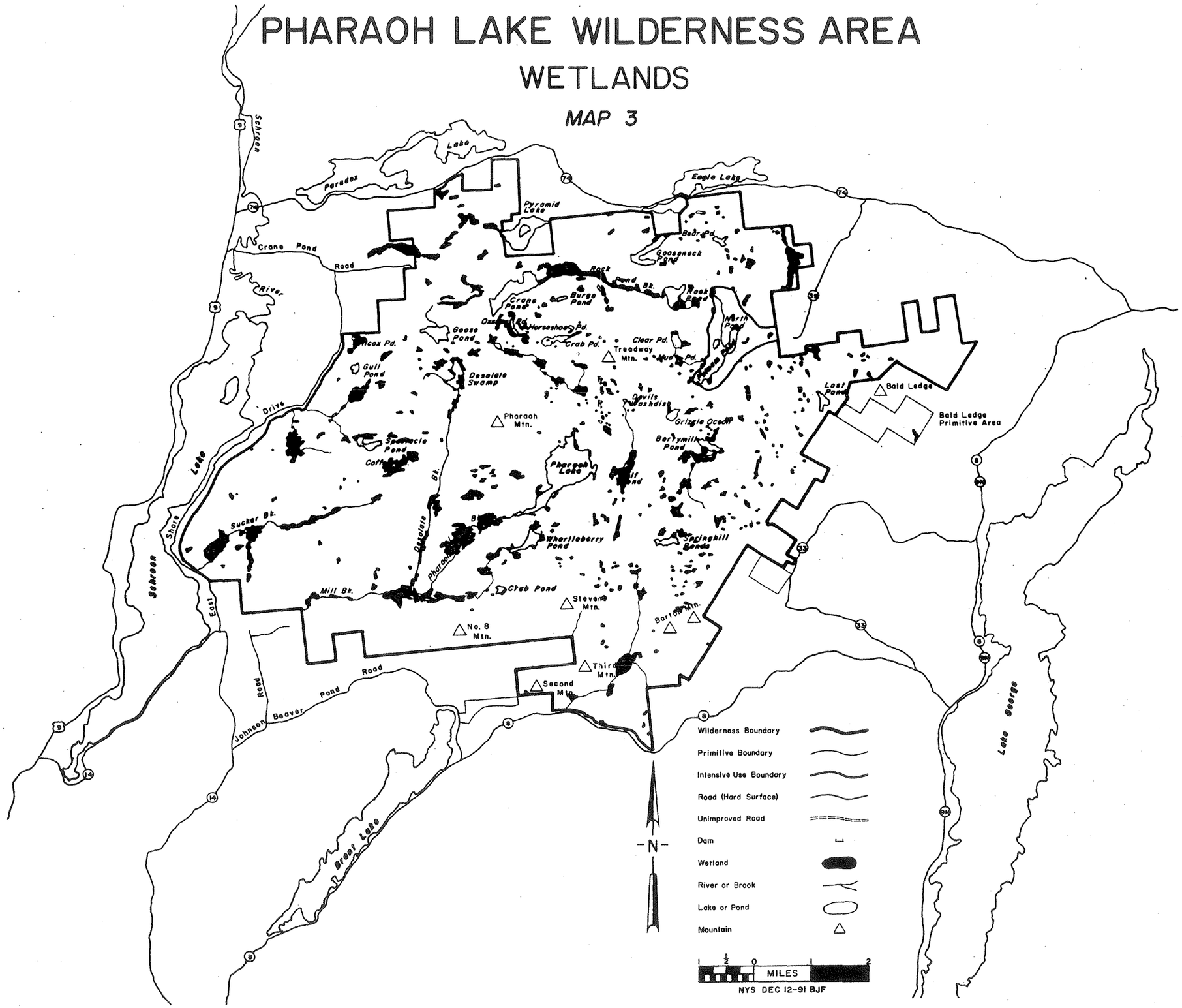
MAP 2



PHARAOH LAKE WILDERNESS AREA

WETLANDS

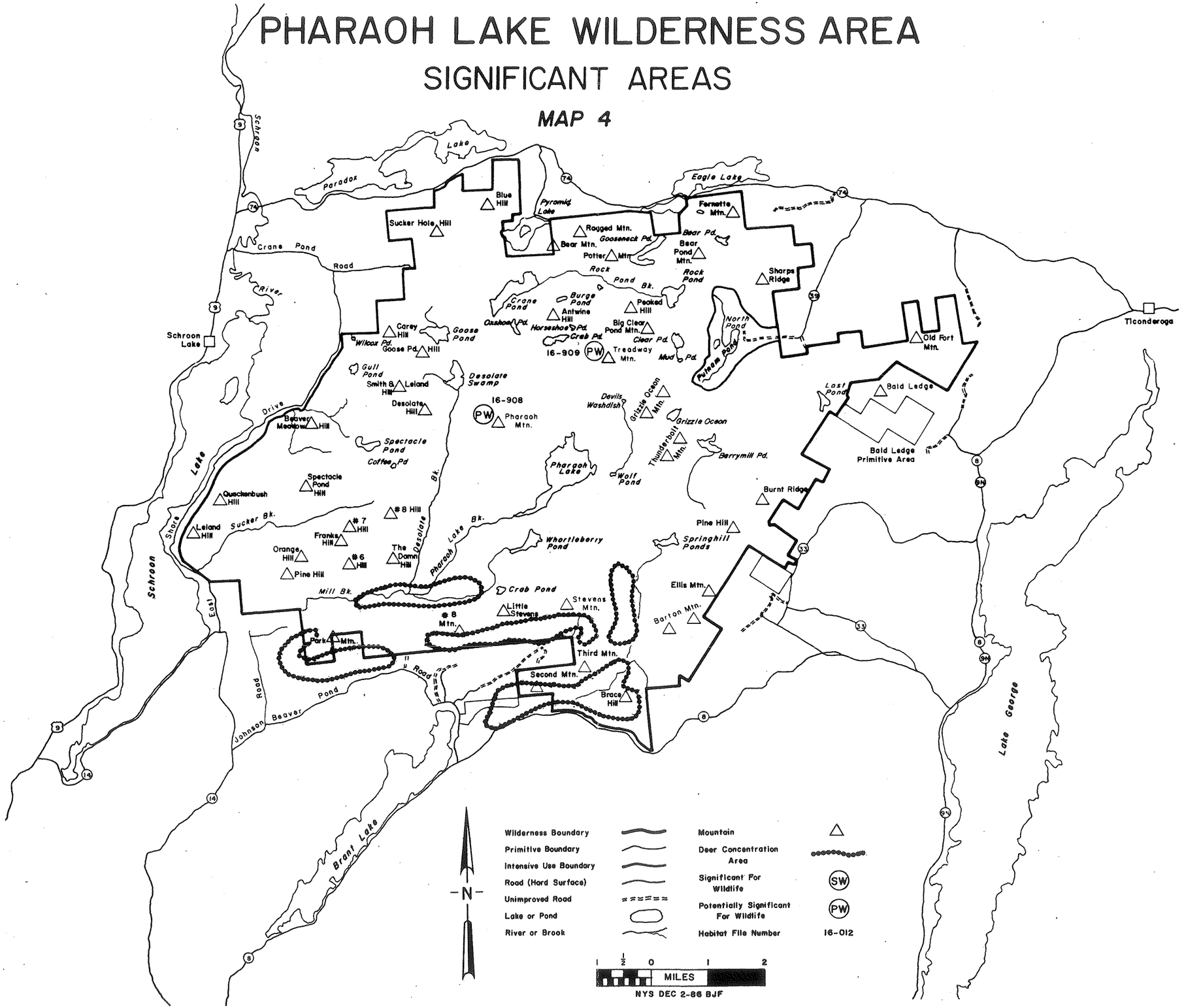
MAP 3



PHARAOH LAKE WILDERNESS AREA

SIGNIFICANT AREAS

MAP 4



PHARAOH LAKE WILDERNESS AREA

PROPOSED FACILITIES

MAP 5