



New York State
Department of Environmental Conservation

Division of Lands & Forests
Region 5

Unit Management Plan

Giant Mountain Wilderness Area

Towns of Elizabethtown and Keene

Boquet River Primitive Area

Town of Elizabethtown

Essex County, New York

January 2004

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Erin M. Crotty
Commissioner

MEMORANDUM

To: The Record
From: Erin M. Crotty
Re: Unit Management Plan
Giant Mountain Wilderness Complex

The Unit Management Plan for the Giant Mountain 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 and a five year budget and is hereby approved and adopted

Erin M. Crotty, Commissioner

PREFACE

The Giant Mountain Wilderness and Boquet River Primitive Areas Unit Management Plan has been developed pursuant to, and is consistent with, relevant provisions of the New York State Constitution, the Environmental Conservation Law (ECL), the Executive Law, the Adirondack Park State Land Master Plan, Department of Environmental Conservation (“Department”) rules and regulations, Department policies and procedures and the State Environmental Quality and Review Act.

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

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

ECL §§3-0301(1)(d) and 9-0105(1) provide the Department with jurisdiction to manage Forest Preserve lands, including the Giant Mountain Wilderness and Boquet River Primitive Areas .

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

The Master Plan places State land within the Adirondack Park into the following classifications: Wilderness; Primitive; Canoe; Wild Forest; Intensive Use; Historic; State Administrative; Wild, Scenic and Recreational Rivers; and Travel Corridors. The lands which are the subject of this UMP are classified by the Master Plan and described herein as the Giant Mountain Wilderness and Boquet River Primitive Areas .

For all State lands falling within each major classification, the Master Plan sets forth management guidelines and criteria. These guidelines and criteria address such matters as: structures and improvements; ranger stations; the use of motor vehicles, motorized equipment and aircraft; roads, jeep trails and State truck trails; flora and fauna; recreation use and overuse; boundary structures and improvements and boundary markings.

It is important to understand that the State Land Master Plan has structured the responsibilities of the Department and the Agency in the management of State lands within the Adirondack Park. Specifically, the APSLMP states that:

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

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

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

Executive Law §816(1) provides in part that “(u)ntil amended, the master plan for management of state lands and the individual management plans shall guide the development and management of state lands in the Adirondack Park.”

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Section 1 – Introduction

Planning Area Overview

The Giant Mountain Wilderness Complex¹ (GMWC) forms part of a complex of Wilderness Areas that collectively comprise one of the best known recreation areas in the Adirondack Park, the high peaks region². While its topography varies considerably, the area is predominantly mountain country, containing numerous mountains, two in excess of 4,000 feet in elevation. The primary attraction is Giant Mountain, the highest peak in the Unit with a summit elevation of 4,627 feet. The numerous cliff areas, mostly along Route 73 attract rock and ice climbers. The large open slides on Giant Mountain are popular destinations for slide climbers. Roaring Brook Falls is a popular scenic attraction viewable directly from the highway.

The proximity of the Unit to, and the similarity of terrain and attractions with, the adjacent High Peaks Wilderness Area (HPWA) creates in a number of similar management concerns between the units. The ability of users to utilize either area to experience a similar natural environment results in similar management issues in both areas. Indeed, many recreational users identify the GMWA and HPWA as the same resource. The potential for user shift from one unit to the other raises the continued possibility of future overuse problems in the GMWA. It is a goal of this plan to incorporate management practices established in the HPWA UMP, and proposed in the Dix Mountain Wilderness Area (DMWA) to the degree that they are necessary to protect the resource, natural processes and visitor experience in the GMWA.

The Boquet River Primitive Area (BRPA) is a 88.5 acre parcel of land lying north of the US Route 9 in the vicinity of Split Rock Falls. The parcel is immediately adjacent to the GMWA, however was classified as a Primitive Area by the Adirondack Park Agency due to a right-of-way across state land to a 127 acre private inholding which is surrounded on all sides by Forest Preserve. This parcel would be reclassified as part of the GMWA should the State acquire title to the inholding.

Easements

The State holds partial interest in one parcel adjacent to the Unit. This easement, located in Lot 62, Township 1, Old Military Tract, was acquired from Grant Reese by the State in 1969 for the purpose of providing parking and public access to the GMWA from the North. This easement provides for:

- A 33 ft wide by approximately 194 foot long road easement from the Rte 9N highway right-of-way to the parking lot (approximately 0.15 ac.).
- A 75 by 100 foot parking area (0.17 ac.).

¹ Throughout this text the terms *Giant Mountain Wilderness Complex, GMWC, or “the unit”* refer to the *Giant Mountain Wilderness Area and Boquet River Primitive Area complex*. The term *Giant Mountain Wilderness Area or GMWA* will refer to the *classified Wilderness Area only*.

² Throughout this text the phrase *“high peaks”* will be used to describe the *greater high peaks region – that area encompassing the Dix Mountain, Giant Mountain, and High Peaks Wilderness Areas*, while the phrase *“High Peaks” or “HPWA”* refers to the *High Peaks Wilderness Area, as defined in the Adirondack Park State Land Master Plan*.

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- A 16.5 foot wide foot trail easement corridor leading 2,230 feet from the parking area to state land (approximately 0.84 ac.).

Two other trails, accessing the GMWA from Route 73 via private lands, are presently open to public access by informal, unwritten consent of the landowners. There is no easement for these access trails.

Unit Geographic Information

The Unit boundary follows public roads and individual property lines. Property lines, where surveyed, are blazed, painted yellow, and marked with Forest Preserve signs.

There are two private parcel inholdings in the GMWA:

- A 0.18 acre family cemetery plot, lying in Lot 3, Tract 4, Platt Rogers Patent and adjacent to the New Russia trailhead, was reserved by the Daniels family when the surrounding land was sold to the State in 1965.
- A 127 acre parcel, located in Lots 126 and 140, North River Head Tract and north of Route 9. The Forest Preserve lands lying between this parcel and Route 9 form part of the BRPA.

The GMWA comprises a single contiguous block of Forest Preserve made up of the following parcels:

Old Military Tract, Twp.1, Thorn's Survey

Lots 91, 101, and 111

Portions of Lots 84, 85, 89, and 90

North River Head Tract

Lot 124

Portions of Lots 97, 114, 115, 123, 124, and 125

Plat Rogers Patent, Tract 4

Portions of Lot 3

Roaring Brook Tract

Lots 6, 7, 8, 13, 14, 15, 29, 30, 31, 32, 37, 38, 39, 40, 41, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 66, 67, and 68

Portions of Lots 5, 11, 12, 16, 28, 33, 36, 42, 48, 61, 65, 79, 80, and 81

The Boquet River Primitive Area comprises a single contiguous block of Forest Preserve made up of the following parcels:

Tract: North River Head Tract

Portions of Lots 127, 128 and 140

General Location

The GMWA consists of 23,116 acres of Forest Preserve in the towns of Elizabethtown and Keene, Essex County. The Unit is roughly bounded on the north by State Route 9N, on the south and east by US Route 9, and on the west by State Route 73. There are two private inholdings within the Unit, and there are numerous private parcels adjacent to the Unit, but lying within the general boundary described above.

The BRPA consists of 88.5 acres in the Town of Elizabethtown, Essex County. This management unit is bounded on the north by lands owned presently by Michael Pratt and the right-of-way to the Pratt parcel from Route 9, on the west by the GMWA, and on the south by Route 9.

General Access

Access to the periphery of the Unit is easily gained via Interstate Route 87, US Route 9, State Route 73, and State Route 9N. The interior is served by 24.2 miles of marked and maintained foot trails, with an additional 4.0 miles of access trails lying on adjacent private land. Nearby hamlets include Keene, Keene Valley and the County seat in Elizabethtown. The entire Unit lies within one day's drive of over 70 million people in the northeast states and Canada. Nearby population centers include Albany, New York (140 miles), New York City (300 miles), and Montreal, Quebec (120 miles).

General History

By 1860, prior to the Civil War, New York had become a leading industrial state, yet the high peaks region of the north central Adirondacks was virtually unknown to outsiders. Few Europeans had explored its environs, and native Americans, most notably the Algonquins had been only occasional visitors. The high mountainous terrain and inhospitable climate discouraged most early visitors.

Both the Colonial government and the State, after the American Revolution, made large grants or patents of its so called “wild forest lands” to promote development. The present day bounds of the Unit lie in four of these patents: North River Head Tract, Old Military Tract, Platt Rogers Patent, and Roaring Brook Tract. Speculators purchased these tracts and marketed them for agriculture, mining, and timbering.

Closely associated with this “wild” region were the exploits of early guides such as Harvey Holt and Orson Phelps (Keene Valley) and a host of others who introduced the public to the region.

The first recorded ascent of Giant Mt. is attributed to the surveyor Charles Broadhead who, in 1797, ran a survey line over Giant while locating the southerly boundary of the Old Military Tract and Macomb’s Great Purchase. This was the first record of an ascent of any major Adirondack peak. The first trail cut to the summit was attributed to Ed and “Old Mountain” Phelps, who cut a trail from Keene Valley over Hopkins Mtn. in 1866. A second trail was cut from Elizabethtown in 1874 as part of Verplanck Colvin’s topographic survey. An early trail from New Russia was cut in the 1880’s, however that trail was abandoned and the present trail follows a new route. The trails from Roaring Brook Falls were first cut by Orlando Beede and Alfred Reed around 1873.

As timber supplies dwindled in the more accessible portion of the northern Adirondacks, timber men soon looked to the vast forests of the high peaks region. From the lowland swamps up to the highest slopes, any tree that was commercially valuable and accessible was harvested. James Goodwin notes

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the extensive role timbering on the western slopes played in the communities of Keene and Keene Valley by companies including J.J. Rogers of AuSable Forks (Plunz, 1999).

State acquisition of much of the Unit occurred prior to the 1920's as logging companies or larger land owners either liquidated or abandoned their lands for taxes after harvesting the merchantable timber off of the lots.

The high peaks region is often referred to as “Colvin Country” in tribute to Verplanck Colvin, Superintendent of the Adirondack Survey (1872-79), who initiated the first detailed survey of the region. Colvin's notes, records, maps, and annual reports of his surveys, defined the region and instilled a public awareness that, in part, eventually led to the creation of the Adirondack Forest Preserve in 1885. Many of his original survey monuments can still be found today on high peaks summits.

Tourism became a major Adirondack commercial enterprise by the 1890's and local hotels and mountain resorts were popular throughout the country. Resorts such as the St. Huberts Inn and similar accommodations were found in Keene, Keene Valley and St. Huberts. Wallace's (1875) *Descriptive Guide to the Adirondacks* listed nine boarding houses and three hotels amounting to close to 1000 rooms in Keene Valley. Much of the present day trail system is an outgrowth of the early “hotel trails” which followed logging roads and/or footpaths to favored destinations, usually a lake or a mountain summit.

Adirondack guides and their sports (clients) were impressed with the quality and abundance of brook trout available in high peaks lakes. Big game hunters were drawn to the area in hopes of taking a white-tail deer or bear in a pristine setting.

During the summer and fall of 1903, six hundred thousand acres of forest land burned throughout the Adirondacks (Suter, 1904). Piles of tinder dry logging slash (limbs and tree tops that are left after the merchantable stems of trees are removed), a 72 day drought, and unseasonably high winds contributed to the fire storms. Fires raged over Cascade, Dix, Giant, Porter, Mt. Van Hoevenberg, Big Slide, and onto the north slopes of Mt. Marcy. Keene, Keene Valley, and St. Huberts were threatened by similar engulfing fires. Fall rains and moderating temperatures finally helped to extinguish the fires. The scenario repeated itself in 1908 and 1909 when an additional 300,000 acres burned Park-wide. A 1916 Conservation Department map of the Adirondacks shows 33 percent of the GMWC was burned in these fires. While roughly 50% of the Unit had been logged by that time, the map indicates that only 1% of the logged area had escaped the fires. The fires burned so intensely in the GMWA that much of the soils on Giant and Rocky Peak Ridge burned to bedrock. Prompted by these events, the State's forest fire detection and fire fighting force was enlarged and updated. Fire towers were erected beginning in the early 1910's atop mountains surrounding the high peaks, including Boreas Mountain (removed), Hurricane Mountain, and on Mount Adams. Reform of lumbering practices, such as enactment of the “top lopping law” to reduce logging slash, also played a significant role in reducing the spread of fires.

Hurricanes and damaging storms have also had a pronounced effect on the high peaks region. On November 25, 1950, the most destructive storm to ever hit New York State whipped across the Adirondacks with devastating force. Many trails were clogged with fallen trees, and interior travel in many areas was impeded until a final clean up was completed in 1955. While this storm left little damage to the GMWC, a 1963 storm dropped 4.5 inches of rain in the GMWC in 2.5 hours creating many of the picturesque slides in the Unit.

Following World War II, as Americans became more affluent and had more leisure time for outdoor activities, recreational use of the Adirondack Forest Preserve – and in particular, the high peaks – intensified and became the focus of public attention and concern. This concern led to several legislative studies and commissions. The high peaks were often mentioned due to their valuable scenic and natural

resources which attracted heavy use. One such commission, the Temporary Study Commission on the Future of the Adirondacks, recommended a classification system which incorporated wilderness designation and protection.

Affirmed later by the Adirondack Park Agency Act and its subsequent APSLMP, three areas comprising most of the high peaks region were legally designated Wilderness Areas in 1972. These high peaks wilderness units included: Dix Mountain , High Peaks, and Giant Mountain Wilderness Areas. The Adirondack Park Agency, in consultation with the Department, and with public support, concluded that significant portions of the high peaks region were in a wilderness or near wilderness condition despite past human influences. Both agencies agreed that a new management emphasis and direction was needed.

Since the 1960's the high peaks region has drawn the attention of environmentalists and scientists as the effects of acid precipitation have taken their toll on the aquatic and terrestrial resources of high elevation ecosystems. The complex formed by these three Wilderness Areas is a valuable natural setting for research by many disciplines on this national and worldwide problem.

Section 2 – Inventory, Use And Capacity to Withstand Use

Natural Resources

PHYSICAL

Geology

The high peaks region appears as part of a mountainous dome covering an area approximately 60 miles in diameter. The region, referred to as the “Central Highlands”, is part of the Grenville Province, a large area of bedrock extending into Canada. The high peaks are a remnant of a mountain region existing 1 – 1.3 billion years ago. Once flat, the Adirondacks were covered by sedimentary rock, the same sedimentary rock that surrounds the region today. During more recent geologic time, the region was uplifted, creating a central dome with its sedimentary covering removed by erosion. The dome is characterized by three prominent geologic features: (1) long straight valleys running north-northeast, (2) gently curved ridges and valleys, and (3) radial drainage patterns flowing outward from the dome. Elevations rapidly fall off to the north and east in the central highlands, and decline more gradually south and west.

Much of the bedrock is metanorthosite, a metamorphic rock that has been subject to extremely high temperatures and pressures. Metanorthosite is very hard, extremely dense, and resists weathering and erosion. It was left towering over the countryside as sedimentary rock wore away. Rock color ranges from white to bluish gray. Plagioclase feldspar is its major component. The largest area of such rock is the Marcy massif which underlies most of the high peaks. The massif contains numerous “dikes” or intrusions of igneous rock that penetrate the anorthosite. Chemically less stable and less resistant to erosion than the base rock, many of these dikes eroded to form stream channels. Where the dike rock in stream beds is fractured and broken, waterfalls and stream rapids occur.

High peaks rocks are also altered by folding and faulting of the crust, which serves to relieve internal pressures. Valleys form along and within the fault zones. These valleys tend to be long and straight, and generally follow a north-northeast direction; they divide the High Peaks into its characteristic mountain ranges. Even resistant rocks eventually succumb to the pull of gravity and slabs are torn from craggy peaks, leaving cliffs with piles of broken rock at their bases (Kendall, 1987). Referred to as “mass wasting,” this down slope movement of weathered, disintegrated rock, is evident along all cliffs and steep slopes. Rock falls and slides are encountered on Giant Mtn. and Rocky Peak Ridge and along the cliffs bordering Route 73.

Despite the cumulative effects of running water, weathering, mass wasting, and other agents of change, glacial erosion and deposition have had dramatic effects on high peaks landscapes. During the Pleistocene Epoch, 1.6 million years ago, huge ice sheets advanced and retreated several times across the Adirondacks. The last major ice sheet, the Wisconsinian, reached its maximum advance across the high peaks over 21,000 years ago. It was thick enough to bury the summit of mile high Mt. Marcy, the highest point in New York, located 10 miles west of the GMWC in the adjacent High Peaks Wilderness Area. Ten thousand years later in retreat, this glacier accomplished spectacular erosion; plucked rock

fragments in its path, scoured mountaintops, scraped away soil and loose sediments, wore away bedrock, and gouged river valleys into deep troughs. Melting ice sheets released huge volumes of melt water.

As the main continental glacier retreated, smaller mountain glaciers remained in the high peaks region. These smaller glaciers concentrated erosion within stream valleys and sharpened the landscape. Glacial retreat accentuated steep valley walls into “U” shaped valleys and naturally tended to form cliffs on mountaintops and on the sides of steep slopes. Ice movement and running melt water often followed, and straightened fault zones. Where valley glaciers originated on high mountainsides, bowl-shaped cirques formed at the point of origin. Well-defined cirques can easily be seen on Giant Mtn. Retreating glaciers deposited accumulations of glacial till, a mixture of clay, silt, sand, and stone, in their wake which dammed stream channels to form numerous lakes, kettle ponds, and wetlands. Kettle ponds were created by huge melting blocks of ice, covered or partially covered by glacial drift (debris). Giant’s Washbowl and Lake Marie Louise are typical examples of remnant kettle ponds.

Soils

All soils are formed by the chemical and physical breakdown of parent material. The soils in the GMWC are mostly derived from glacial deposits. Soil characteristics are quite variable and fluctuate widely from location to location. They are basically grouped into four broad soil types; glacial tills, glacial outwash, organically derived, and hardpan (Jaffe and Jaffe, 1986). No one general characteristic describes them all.

Glacial tills are a mixture of clay, silt, sand, and stone. Their occurrence in the DMWA is widespread. They dominate the lower and middle slopes but thin out and disappear on the high slopes where the spruce/fir forest gives way to the subalpine zone of balsam fir. The deeper and richer soils occur around the base of the mountains, especially on terraces and those slightly elevated locations that escaped the fluvial phase in late glacial retreat, meaning places a hundred feet or so higher than the nearby river system. Hardwoods today dominate these richer soils with mixed conifer/hardwood stands found at the lower slopes with partially water-washed soils.

Glacial outwash soils are stratified soils deposited as eskers and moraines in areas subject to periods of flash-flooding during the glacial retreat and from which the nutrient-bearing silts and clays have been washed away. Because the soils are so stony and thus draughty, fast growing and deep rooted pines out-compete the other more demanding tree species.

Organically derived soils are rich in vegetative matter in various states of decay, and occur in two physiographic situations: (a) on the highest mountain sides, typically above 4,000 feet elevation where the glacial tills washed down slope in early post-glacial time and left exposed bedrock, and (b) in the low wetlands where impeded drainage created saturated soils on top of glacial outwash or bedrock and where upland forest plants could not survive. In both situations sphagnum moss dominates the early stages of plant succession and in the low wetlands may convert ponds into peat bogs and meandering streams into mucky swamps. On the sloping land surfaces near the high summits, the accumulated layers of black humus created by sphagnum and other mosses on top of the bedrock are invaded by various herbaceous plants and in time are replaced by mountain paper birch, the sole pioneering tree species, and by balsam fir, the sole climax species in this drastic timberline ecosystem. The subalpine and alpine organic soils are the most fragile and easily damaged types in the high peaks region.

Many GMWC sites have a cement-like, very dense hardpan texture, lying one to two feet below ground surface. This causes shallow rooting of vegetation; especially tree species, and limits their

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ability to absorb soil nutrients and water. This limits height and diameter growth and makes them susceptible to wind-throw. During period of heavy and prolonged rains, these soils are easily saturated and water may sit upon the surface reflecting poor internal drainage (Ketchledge, 1994).

Terrain/Topography

The topography ranges from the low-lying river valley of the Boquet River to the 12th highest point in New York State atop Giant Mountain. Although there is considerable variation in terrain, the GMWC is predominantly mountain country.

The Unit is oriented around a high ridge line formed by Hopkins Mtn., Giant Mtn., Rocky Peak Ridge and Bald Mtn. With few exceptions topography generally slopes down to the valleys forming the geographical boundaries of the Unit. Giant Mountain is the highest point in the Unit with an elevation of 4,627 feet. The Unit has two peaks with elevations above 4,000 feet.

Maximum relief (change in elevation) across the Unit is 4,102 feet from atop Giant Mtn.(4,627 ft.) down to Route 9 in east of Iron Mtn. (525 ft. elev). The six mile distance between these two points represents the greatest differential in elevation found in any Wilderness Area in the State.

Water

The Giant Mountain Wilderness Unit lies within the Lake Champlain watershed. The Unit is drained by small, high gradient, headwater streams. Those streams flow south and east to the Boquet River, or west to the East Branch Ausable River.

Ponded waters in the Giant Mountain Wilderness range in size from small beaver flows to 4.2 acre Giant Washbowl. The NYS Biological Survey lists only one pond, Giant Washbowl, within the Unit. However, two additional small ponds (less than one acre each) are shown on topographic maps. Thus the Unit includes about three ponded waters with an estimated combined area of about 6 acres.

Appendix X lists the ponded water in the Unit with a brief narrative pertaining to their important features, including past and current management, accessibility, size, water chemistry, and fish species composition. Appendix XI gives additional information about the ponded waters including physical, chemical and biological data.

Wetlands

The wetlands possess great ecological, aesthetic, recreational, and educational value. In their capacity to receive, store, and slowly release rainwater and meltwater, wetlands protect water resources by stabilizing water flow and minimizing erosion and sedimentation. Many natural and man-made pollutants are removed from water entering wetland areas. Also, because they constitute one of the most productive habitats for fish and wildlife, wetlands afford abundant opportunities for fishing, hunting, trapping, and wildlife observation and photography. The wetlands of the Unit serve as important habitats for a number of wildlife species listed as threatened or species of special concern which may be present in the Unit, including the osprey, northern harrier, red-shouldered hawk, the least bittern, Jefferson salamander, and spotted salamander (species of special concern). For the visitor, expanses of open space wetlands provide a visual contrast to heavily forested wilderness settings.

While most of the Unit's wetlands occur in low-lying areas, they can also be found on mountain summits and anywhere soil is seasonally or perennially saturated with water. Summit wetlands are characterized by cool, moist, shallow soil environments and resemble the tundra of northern latitudes. Some of New York's rarest flora are encountered in these elevated wetland communities.

APA Regulated Wetlands GIS data identifies 93 wetland polygons in the GMWC with a total area of 288.9 ac. Wetlands in the Unit are limited to beaver ponds and small wetland areas found on small benches scattered throughout the Unit. These wetlands are mostly coniferous, characterized by dense stands of red spruce, black spruce and balsam fir.

Climate

The region's climate, in general terms, is best described as cool and moist. Climatic conditions vary considerably throughout the Unit and are influenced by such factors as slope aspect, elevation, distance and direction from large bodies of water, seasonal temperatures, precipitation, prevailing winds, and the location of natural barriers.

Summers tend to be warm with cool nights. Maximum day-time temperatures seldom exceed 90 degrees Fahrenheit. Frost can occur any month of the year and occasional freezing temperatures are recorded in July and August. Winters are long and extremely cold. Temperatures of -40 degrees F are common, often accompanied by high winds. Arctic-like conditions may be encountered at high elevations. Daily temperature variations of 20-30 degrees F are common between peripheral entry points and interior locations. Annual precipitation, in rainfall, is between 40 and 60 inches per year; snowfall ranges from 100-150 inches per year.

Due to the availability of direct sunlight, southern slopes are drier than northern slopes. The latter tend to retain more moisture. Prevailing winds are generally westerly, but may be modified by topography. Eastern slopes, leeward of prevailing winds, tend to be drier than western slopes. Extensive damaging winds (hurricane force) are rare, but do occur when coastal storms move inland. The resulting influence of climate on local flora and fauna, in particular, is profound.

Air Resources and Atmospheric Deposition

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

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

Effects of Acidic Deposition on Forest Systems

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

The interaction of acid deposition with natural stress factors has adverse effects on certain forest ecosystems. These effects include:

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

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

Sensitive receptors

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

Sugar maple decline has been studied in the eastern United States since the 1950s. Recently, studies suggest that the loss of crown vigor and incidence of tree death is related to the low supply of calcium and magnesium to soil and foliage (Driscoll 2002).

Exposure to acidic clouds and acid deposition has reduced the cold tolerance of red spruce in the Northeast, resulting in frequent winter injury of current-year foliage during the period 1960-1985. Repeated loss of foliage due to winter injury has caused crown deterioration and contributed to high levels of red spruce mortality in the Adirondack Mountains of New York, the Green Mountains of Vermont, and the White Mountains of New Hampshire.

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

Effects of Acidic Deposition on Hydrologic Systems

New York's Adirondack Park is one of the most sensitive areas in the United States affected by acidic deposition. The Park consists of over 6 million acres of forest, lakes, streams and mountains interspersed with dozens of small communities, and a large seasonal population fluctuation. However, due to its geography and geology, it is one of the most sensitive regions in the United States to acidic deposition and has been impacted to such an extent that significant native fish populations have been lost and signature high elevation forests have been damaged.

There are two types of acidification which affect lakes and streams. One is a year-round condition when a lake is acidic all year long, referred to as chronically or critically acidic. The other is seasonal or

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

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

Monitoring

In 1986, the ALSC surveyed a total of seven waters in this unit (see Appendix XI). Summaries of those data can be found on the ALSC website – <http://www.adirondacklakessurvey.org> (see ALS Pond Information). Since that time the Adirondack Long-Term Monitoring (LTM) program managed by the ALSC has been sampling chemistry in 52 lakes across the Park on a monthly basis. While none of these waters are located directly within the boundaries of the GMWC unit, six LTM waters are located in relatively close (within 10 miles) proximity to the west and south of GMWC.. These include Avalanche Lake, Lake Colden, Marcy Dam Pond, Heart Lake, Owen Pond and Clear Pond. Annual summaries of 22 chemical parameters are downloadable from the ALSC website.

BIOLOGICAL

Vegetation

The GMWC occupies a transition zone between the boreal forests to the north and the mixed forests of the south. Its forests represent a mosaic of plant communities that correspond to local variations in soil, temperature, moisture and elevation. Past events such as fire, wind, land clearing, and logging have exerted a strong influence on present day conditions.

Not much is known about the original forests of the GMWC, but they are believed to have been a mixture of mature, old growth northern hardwoods, spruce-fir, and eastern white pine forest types. These forests were characterized by dense shade, many cavity trees, significant ground debris, and few natural openings. Insect outbreaks, disease, wind and wildfire were vital parts of the natural environment and

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the major agents of change. Few GMWC forests have survived to make the transition from the pioneer stage to the theoretical climax forest stage.

Extensive softwood cutting prior to Forest Preserve acquisition, severe wildfires in 1903 and 1908, and the landslides of 1963 have altered the composition of this forest dramatically. In most cases, the softwood component has been eliminated or significantly reduced and replaced by northern hardwoods. It is estimated that less than five percent of the high peaks region remains in its original forest condition (Ketchledge, 1967). Historically and ecologically, these factors have contributed to a great diversity of forest cover types which support a vast variety of animal and plant species.

In general, GMWC vegetation can be categorized into five vegetation zones based on elevation and topographical position on the landscape. Each land zone has plant communities, associations of plant species that scientists recognize as belonging together under certain circumstances and site requirements. The five vegetation zones are:

- Lowland Conifers Zone (to 1,500 feet):

Red spruce - balsam fir associations are especially common to the low lying areas of the eastern valleys, including the Boquet River valley, where high soil moisture and poor drainage dominate soil conditions. Tree species common to this association include black and red spruce, balsam fir, red maple and white and yellow birch. Infrequent associates are northern white cedar, alder and tamarack. The forest tends to be quite dense and little sunlight reaches the forest floor. Extreme shade and acidic soils preclude many ground plants. The forest floor is relatively open.

- Mixed Conifers and Hardwoods Zone (to 2,500 feet):

A mixed forest of conifers and hardwoods is encountered as the elevation rises above the spruce swamps and drainage improves. Red spruce and balsam fir noticeably fade. Increased elevation and improved drainage favor the growth of maples, birches, eastern hemlock and eastern white pine. The dominant ground cover is viburnum, commonly called hobble-bush. Various ferns, grasses and wild flowers are evident.

- Northern Hardwoods Zone (to 2,500 feet):

Northern hardwoods are the most widespread forest association in the GMWC. It is found on the better drained, more fertile uplands. Deep glacial soils with elevation up to 2,500 feet, favor a forest association of sugar maple, American beech and yellow birch. Black cherry and white ash are minor associates.

- Upper Spruce-Fir Zone (2,500 feet to 3,100 feet):

Above 2,500 feet red spruce and balsam fir forests reappear reminiscent of northern boreal forests. Red spruce and balsam fir prevail in nearly pure stands. They reflect cooler temperatures and increased moisture as elevations rise. Ground cover is almost non-existent due to lack of sunlight on the forest floor.

- Sub-alpine Zone (3,100 feet and above):

In this zone red spruce generally fades giving way to balsam fir. Approaching 4,000 feet the balsam fir is often stunted and misshapen, barely able to survive the onslaught of cold, drying winds and infertile soils. Here the trees grow almost prostrate as the “krumholz” (meaning crooked wood) forest is encountered. Slightly above the krumholz, timberline is soon reached. Timberline is the point of elevation beyond which climatic conditions become so harsh that tree life cannot survive.

Exemplary Vegetative Communities

The GMWC has three exemplary vegetative community that serves as an outstanding examples of the biological diversity of the Adirondack Park (Adirondack Council, 1988, The Nature Conservancy Exemplary Natural Communities):

Chapel Pond Valley

AREA: 100 acres

TOWN: Keene; **COUNTY:** Essex

Natural Heritage Program Community: acidic talus slope woodland

Chapel Pond Valley is large and in a very good landscape context (surrounded by wilderness area).

Rocky Peak Ridge

AREA: 40 acres

TOWN: Elizabethtown and Keene; **COUNTY:** Essex

Natural Heritage Program Community: rocky summit grassland

Rocky Peak Ridge, a large and essentially undisturbed occurrence, was chosen as the best example of this community in the Adirondack region and is expected to be among the few largest and least disturbed occurrences in the Park.

Roaring Brook Falls Old Growth Hemlock

COVER TYPE: Northern Hardwoods (hemlock)

AREA: 170 ac.

TOWN: Keene; **COUNTY:** Essex

NATURAL HERITAGE PROGRAM COMMUNITY: Northern Hardwoods Forest

An old-growth stand of hemlock approximately one half mile from Roaring Brook Falls has been identified as one of the oldest stands of eastern hemlock in the Adirondacks, with trees dating back to 1599 (Cook, 1987)

Extirpated Vegetation

To date researchers have documented extirpation of the following species from the High Peaks Alpine Zone (Regan, 2001 and Young, 2001): *Deschampsia atropurpurea* – mountain hairgrass and *Harrimanella hyponoides* – moss plant. Historical records exist for *Poa interior* – inland bluegrass.

Invasive Plant Species

Originally, the wilderness of the North American continent held a great diversity of plants and animals. Today, the natural areas that have survived are small islands in a sea of developed land. As a result, natural areas are vital to the preservation of the native plants and animals that make up the biological heritage and diversity of the United States.

In new ecosystems, invasive plants outcompete native species because the new ecosystem lacks the natural enemies that kept these plants in biological balance in their native habitats. Invasive plants that produce large numbers of seeds and have mechanisms for rapid seed dispersal have more pronounced impacts on an ecosystem and require more complicated management strategies than native plants.

Invasive plants modify natural habitats by replacing a diverse system with single species stands, altering the water or fire regime, changing the nutrient status of the soil and humus, removing a food source (for wildlife), introducing a food source where none existed before, or altering sedimentation processes. Such alterations may have profound effects on the composition of both the flora and fauna of the region and on the landscape as a whole.

Invasive plant species pose one of the greatest threats to the conservation of biological diversity, and are a significant problem for land managers across New York State. Invasive plants are second only to habitat destruction as a threat to biological diversity (Invasive Plant Council of New York, <http://www.ipcnys.org>). The large expanses of intact forested communities in the interior of the Park are largely devoid of impacts from invasive plant species. This includes State land units such as the Giant Mtn. Wilderness Area. Invasive plant species have been identified throughout the Adirondack Park and have the potential pose a serious threat to the natural communities of this Unit.

The Adirondack Park Invasive Plant Partnership (APIPP), a partnership between NYSDEC, APA, NYSDOT, and the Adirondack Nature Conservancy, was established as a pilot project in 2001 to pool resources in an effort to monitor and control the spread of invasive plant species in the Park. The program utilizes a network of organization staff and volunteers to survey, monitor, and where needed

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undertake eradication activities. A comprehensive survey for the presence of invasive species in the DMWA does not exist, however some locations in the unit have been surveyed.

A principle of APIPP is to promote early detection and management of exotic invasive plant species. This effort has also developed best management practices for use once infestations are identified. Garlic mustard, purple loosestrife, Japanese knotweed and Phragmites have been identified as the primary threats to the Adirondack ecosystem by APIPP.

A comprehensive survey for the presence of invasive plant species has not been completed within the Adirondack Park. The present inventory focus has been a Park-wide roadside survey since researchers believe roadsides are the primary avenue for spread of new infestations into the area. As a result of these surveys several sites nearby or in the Unit have been identified.

The principles of early detection and management are critical to successful management of this threat in the Unit. Once identified, actions aimed at eliminating these plants while the stands are small in size should be adopted. Infestations on nearby private lands and in other areas of forest preserve can pose a threat to the natural communities of this Unit.

Populations and locations of Japanese knotweed in the Unit have been identified.

Wildlife

Field inventories of wildlife species have not focused specifically on the Forest Preserve Management Unit level. However, various inventory projects undertaken by the Department and others have included the Unit in their scope. The species included in Appendices IV through VII and IX were compiled by combining the results of various surveys, publications, and the reports of observers.

Birds

As a result of the Unit's transitional character in terms of climate and vegetation, there is an overlapping of typically northern, eastern and southern bird species.

According to New York State Breeding Bird Atlas data, 115 species of birds are believed to breed within the GMWC (Appendix IX). Some species thought to occur occasionally within the Unit are not shown in the Bird Atlas data.

Birds associated with upland habitat types are most prevalent in the Unit and include the American robin, black-capped chickadee, black-throated blue warbler, blue jay, downy woodpecker, hermit thrush, ovenbird, red-breasted nuthatch, red-eyed vireo, rose-breasted grosbeak, white-throated sparrow, and wood thrush. Birds of prey common to the Unit include the barred owl, great horned owl, red-tailed hawk, sharp-shinned hawk, and broad-winged hawk. Songbirds, such as woodpeckers, flycatchers, wrens, thrushes, vireos, warblers, blackbirds, finches, grosbeaks, and sparrows occupy one or more of the ten habitat types found in the Unit (NYS Breeding Bird Atlas).

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Bird Conservation Areas

In September of 1997, §11-2001 of the Environmental Conservation Law of New York was established creating the New York State Bird Conservation Area Program. The program is designed to safeguard and enhance bird populations and their habitats on selected state lands and waters.

In November of 2001, New York State designated the Adirondack mountain summits above 2,800 feet in Essex, Franklin, and Hamilton counties as the Adirondack Subalpine Forest Bird Conservation Area (BCA). Included in the designation were lands over 2,800 feet elevation in the GMWC. The site was nominated because of its diverse species concentration, individual species concentration and its importance to species at risk, in particular the Bicknell's Thrush (special concern).

The vision for the Adirondack Subalpine Forest BCA is to “continue to maintain the wilderness quality of the area, while facilitating recreational opportunities in a manner consistent with conservation of the unique bird species present” (NYSDEC, 2001). The Department has developed Management Guidance Summary to identify education and research needs, and to outline operational management considerations. Considerations specific to the Unit include:

Operation and Management Considerations:

- The BCA is comprised of lands that are within the HPWA and other lands within the broader Adirondack Forest Preserve. The HPWA portion is subject to relatively stringent regulations and use limitations. Portions of the BCA that are not within the HPWA may have less stringent use limitations.
- To ensure disturbances are kept to a minimum, trail maintenance and construction activities should be accomplished outside of the breeding season, when possible. If, in accordance with Department policy, motorized equipment use is necessary, such use shall be minimized during the breeding or nesting periods.

Education, Outreach and Research Considerations:

- There is a need to identify to the public the distinctive bird community present in subalpine forests over 2,800 feet. The potential impacts of human intrusion need to be portrayed to the public, and a “please stay on the trails” approach may be beneficial. Continue partnerships with the National Audubon Society, High Peaks Audubon Society, Adirondack Mountain Club and other groups involved in education and conservation of birds of the Adirondack High Peaks.
- Acid rain deposition may be having an impact on nesting success of songbirds at high elevations by causing die-offs of high altitude conifer forests, and killing snails and other sources of calcium needed for egg production. More research is needed on this. The curtailment of sulphur dioxide emissions and the reduction of acid rain is currently a significant New York State initiative.
- A detailed inventory and standardized monitoring of special concern species is needed for the area. In particular, all peaks above 2,800 feet should be surveyed for Bicknell’s Thrush.
- The impact of the current levels of human use on nesting success needs to be assessed.

Mammals

While no comprehensive inventory of species is available, Appendix IV lists mammals whose habitat indicates that they may be present in the GMWC. Larger mammals known to inhabit the GMWC include white-tailed deer, moose, black bear, coyote, bobcat, raccoon, red fox, gray fox, fisher, marten, mink, muskrat, striped skunk, porcupine, and varying hare.

A variety of smaller mammals reside in the Unit. They include bats, shrews, moles, and mice, along with the short-tailed weasel, long-tailed weasel, eastern chipmunk, and red squirrel.

Most species are distributed relatively evenly throughout the Unit, although the populations of weasel, mink, muskrat, otter, and beaver are concentrated near water, and the varying hare and red squirrel are mostly confined to stands of spruce and fir.

Although suitable habitats exist for the continued survival of all species presently occurring in the GMWC, the process of forest succession set in motion by wind, insects and disease, past logging and forest fires, continues to alter the composition of forest communities. Large areas are presently occupied by young forest stands which became established after disturbance. The current decline in upper-elevation stands of spruce and fir, and the widespread die back of beech, caused by the spread of the beech bark disease, continually creates openings in the forest canopy of the unit.

The populations of the varying hare at higher elevations may increase as young stands of spruce and fir grow beneath older stands of white birch and northern hardwoods. Marten thrive under habitat conditions brought about by natural forest disturbances. However, in the absence of any future disturbances, the maturation of climax forest communities may lead to reductions in hare and marten populations. On the other hand, the populations of various species of birds and mammals that require tree cavities for reproduction should increase as forest stands mature.

White-tailed deer are found throughout the GMWC. However, the habitat conditions of the Unit make it one of the least productive areas for deer in New York. The size of the deer population is limited by severe winter, insufficient deer browse and few suitable deer wintering areas.

Deer wintering areas usually are lowland areas covered by forests of spruce and fir which serve as shelter when snow accumulates to depths of 20 inches or more. These same areas are used by deer nearly every winter. Severe winter weather virtually confines deer to wintering areas for long periods during which the depletion of available browse can lead to high deer mortality. Severe decline in the deer population can be traced directly to adverse winters. The carrying capacity of deer wintering areas limits the carrying capacity of the entire annual range of the deer population.

Although relatively numerous, black bears are seldom encountered in the Unit by hikers on the trail or at camping sites.

The once extirpated moose population has naturally regained a foothold in the periphery of the GMWC. Moose occasionally have migrated from the north and east into the Adirondack region for decades. Since 1980, they have arrived in sufficient numbers to have established a scattered resident population, recently estimated to contain 200 or more individuals. A few sightings have been reported in the GMWC. Although moose prefer to feed on species of woody vegetation generally found in forests of earlier successional stages than those occurring in the GMWC, moose in general find later-stage forest habitats more suitable than do white-tailed deer and may come to occupy the unit in greater numbers in the future. Experience from Vermont and New Hampshire indicates that the moose population is expected to increase in the future.

Amphibians and Reptiles

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Relatively short summers and the long, cold winters of the GMWC limit the number of species of reptiles and amphibians. Three species of turtles, eight species of snakes, eight species of salamanders, one species of toad, and six species of frogs are believed to be residents of the GMWC (Appendices V and VI). Species found in marshes or ponds and along wooded streams include the following: turtles – snapping, painted; snakes – northern water, redbelly, common garter, eastern ribbon, brown, ringneck; toad – American; salamanders – red-spotted newt, spotted, blue-spotted, spring, two-lined, mountain dusky; frogs – bullfrog, pickerel, green, wood, mink, gray treefrog.

A few species can be found under logs and leaf litter on the forest floor or in forest openings. These species do not require moist surroundings to survive: snakes – ringneck, smooth green, milk, common garter; salamanders – redback; and turtle – wood.

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

While no nests have been found since 1998, the peregrine falcon, a State listed Endangered Species, has historically nested in the Unit. Past sites where peregrines have nested include cliffs adjacent to Routes 9N and 73.

Species of special concern, as listed in Title 6 New York Code of Rules and Regulations (NYCRR) Part 182, which may be present in the GMWC, include the small-footed bat, American bittern, Bicknell's thrush, northern goshawk, red-shouldered hawk, sharp-shinned hawk, vesper sparrow, whip-poor-will, wood turtle, Jefferson salamander, and spotted salamander.

The northern raven, which has not been common in the Adirondacks since the last century, is beginning to make a comeback. Ravens have been found actively nesting on cliffs near Chapel Pond. Ravens were confirmed breeders in two of the Unit's five Atlas blocks, probable breeders in one, and possible breeders in one.

The presence of the small-footed bat, wood turtle, Jefferson salamander, or spotted salamander has not been confirmed in the Unit.

Typical Adirondack Species

There are a number of wildlife species found in New York State whose habitat requirements include extensive areas of forest cover relatively undisturbed by permanent human development. Often, like the yellow-nosed vole and the northern three-toed woodpecker, these are northern species who find the habitat conditions of the central Adirondacks similar to the boreal spruce-fir forests of Canada. A list of species whose range in New York is generally associated with the Adirondacks and which may be found within the GMWC include:

Birds:

peregrine falcon	yellow-bellied flycatcher
northern raven	Tennessee warbler
ring-necked duck	northern Parula warbler
common goldeneye	Cape May warbler
common merganser	bay-breasted warbler
northern three-toed woodpecker	blackpoll warbler
gray jay	Bicknell's thrush
boreal chickadee	Swainson's thrush
ruby-crowned kinglet	Lincoln's sparrow
Philadelphia vireo	rusty blackbird
olive-sided flycatcher	evening grosbeak

Mammals:

black bear	marten
bobcat	moose
fisher	yellow-nosed vole

Extirpated Species

The elk, timber wolf, cougar and wolverine once inhabited the Unit. All have disappeared from the Adirondacks. The mammals disappearance was mostly a result of unregulated harvest and habitat destruction in the nineteenth century. Projects to reestablish the peregrine falcon, bald eagle, and Canada lynx have been conducted.

Between 1989 and 1992, the New York State College of Environmental Science and Forestry at Syracuse University (CESF) conducted an experimental program of lynx releases in Northern New York. Over 80 lynx were caught in northwestern Canada and released in the Adirondacks. All of the lynx were radio collared at the time of release, and the radios provided information of survival and dispersal of these animals. Wide dispersal from the release area has been observed and mortality has been high, especially mortality caused by vehicle collision. Some of the released lynx dispersed farther than anyone expected. Lynx from the CESF release showed up in Pennsylvania, New Jersey, Massachusetts, New Hampshire, Quebec, Ontario, New Brunswick, and other parts of New York. One lynx was found a straight line distance of 485 miles from the release site, 8 months later and 2 pounds heavier than at the time of release. Home ranges of the released lynx were large, and there is still no firm evidence of lynx reproduction. The researchers did receive reports of lynx with litters but were unable to confirm them.

The Wildlife Conservation Society of the Bronx Zoo conducted surveys in the high peaks area of New York in 1998 attempting to document the presence of lynx. No evidence of lynx was found. The lynx is considered extirpated in New York because there is no evidence of any remnant population of resident animals.

Fisheries

Fish communities in the Adirondacks are a result of geological and human influences. Prior to human influences relatively simple fish communities were common. Human-caused changes in habitat and introduction of fishes have altered those natural communities.

Geological History

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

By about 12,300 years 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.

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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 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.

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

Many Adirondack waters were originally inhabited by brook trout or brook trout in combination with only one or two other species as indicated by the following passage, also from the 1932 Biological Survey: "In the survey of the Upper Hudson drainage, 51 trout ponds were studied where the trout is found in company with only a few other species" (page 36). Ponds located upstream of natural fish barriers are likely to have historically contained a very simple fish communities. In these circumstances brook trout would have been capable of maintaining themselves by natural spawning. Waters located downstream of natural barriers are likely to have had additional species of fish present. Many fishes that are "native" to the Adirondacks historically had relatively restricted ranges, limited to lower elevations below natural fish barriers. Those fishes have been widely introduced to portions of the Adirondacks where they were not native. Such species are referred to as native but widely introduced (NBWI) fishes.

Watershed morphometry probably severely limited the diversity of fishes in the GMWC. The Unit includes extreme headwater portions of the Lake Champlain Watershed and fish diversity is normally low in such headwater portions of watersheds (Hynes 1972). Topography would have made that lack of diversity particularly prominent. The ponds in the Unit are at elevations of about 2300 ft or higher, and natural barriers to upstream fish migration (e.g. waterfalls) exist between the Unit's ponds and waters peripheral to the park. Barriers to upstream fish movement include Rainbow and Alice Falls on the Ausable River, and Split Rock and Wadhams Falls on the Boquet River. Other falls and extremely high gradient stream sections restrict fish movement up to the Unit from both rivers.

Its headwater nature and the extreme gradients of streams draining the area would have caused low fish diversities in the GMWC relative to much of the Adirondacks. Furthermore, the Adirondacks in general had low fish diversities relative to surrounding lowland regions. Consequently, the Unit historically supported particularly low diversities on a region-wide basis. Brook trout are very adept at colonizing such head water areas and would probably have been in the Unit historically. Also historic brook trout monocultures were most likely to have occurred in such headwater areas.

Approximately 300 years ago the influence of human cultures from the Old World initiated a period of rapid manipulation of the natural environment. Slightly more than 150 years ago, canal construction opened new migration routes for fishes into peripheral Adirondack areas. Commercial lumbering precipitated substantial impacts to natural ecosystems. Railroads and eventually roads were developed to support the tanning, lumbering and mining industries (George 1980). By the late 1880's exploitation

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

Fish Community Changes

A variety of nonnative species were distributed into the Adirondack uplands via stocking efforts described by George (1980) as "nearly maniacal". He notes that many species were "... almost endlessly dumped upon the Adirondack upland." Nonnative species were introduced and the ranges of native species, which previously had limited distributions, were extended. The result has been a homogenization of fish communities. Certain native species, notably brook trout and round whitefish, have declined due to the introduction of other fishes. Other natives, brown bullhead and creek chubs, for example, are presently much more abundant than historically, having been spread to many waters where previously absent. Native species often were introduced concurrently with the nonnatives. NBWI fishes were stocked right along with the native fishes. NBWI introductions are just as unnatural as nonnative introductions, and due to the lack of early surveys, it is often unknown which NBWI fishes were actually native to a pond or if they have been introduced.

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 the 1,123 Adirondack ecological zone waters surveyed by the ALSC, 65% contained known nonnative species.

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. Appendix XII presents information on species known to be native, NBWI, and nonnative. It should be noted that the native classification does not mean those species were found in every water nor even in a majority of waters. For example, of 1,123 waters surveyed by the Adirondack Lakes Survey Corporation in the 1980's which contained fish, white suckers and northern redbelly dace were found respectively in 51 and 19 percent of the lakes. Such distributions, after a century of introductions, demonstrates that "native" does not necessarily imply a historically ubiquitous distribution. Barriers, high stream gradients, low stream fertilities, and rigorous climatic conditions following retreat of the glacier resulted in low species diversity for fishes in most Adirondack waters. Low diversity allowed the brook trout to occur in large areas of the Adirondack upland.

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. 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 of the eggs contribute to the brook trout's susceptibility to sedimentation. Most other Adirondack fishes are spring spawners, yielding short incubation periods, and do not bury their eggs. Various strategies further minimize vulnerability to sediments, such as eggs suspended from vegetation (e.g.. yellow perch, northern pike, and certain minnow species) and fanning the nest during incubation (e.g.. bullhead, pumpkinseed, smallmouth bass and largemouth bass). In general, the species less susceptible to sedimentation have thrived during the recent history of the Adirondacks.

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Acid Precipitation

Recently acidic deposition has impacted the aquatic resources of the Adirondacks. The Adirondack Lakes Survey Corporation (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).

Acid deposition has apparently not impacted the fisheries resources in the GMWC. Giant Washbowl has a pH of 7.3, well within the range considered desirable for fish.

Streams

Small, high gradient, headwater streams dominate the flowing waters of the GMWC. Those streams flow south and east to the Boquet River, or west to the East Branch Ausable River. Both rivers are tributary to Lake Champlain. These streams support coldwater communities of fishes which are likely to include: brown trout, brook trout, cutlips minnows, common shiners, blacknose dace, longnose dace, northern redbelly dace, creek chub, white sucker and slimy sculpin. The streams in the Unit are not stocked, except that landlocked Atlantic salmon fry are stocked in portions of the Boquet River. After about two years in the stream, the salmon emigrate to Lake Champlain where they spend their adult lives. Water falls prevent salmon from returning from Lake Champlain to the streams in the Unit.

Present status of fish communities in the GMWC

Survey data is available for one pond in the GMWC, Giant Washbowl. The two other ponds are smaller than one acre each and probably support minimal, or no, fishery resources. Two known nonnative fishes, golden shiners and fathead minnows, are present in Giant Washbowl. Thus, even this relatively high elevation pond, isolated from roads and other waterbodies, did not escape the massive fish introductions by humans described above for the Adirondacks in general.

Early fisheries surveys are generally not available to document the progression of fish introductions in Giant Washbowl. Giant Washbowl was first netted in 1960. At that time brook trout were netted, and golden shiners and creek chubs were observed. The observation of golden shiners indicates a known nonnative was present at the time of the first survey. By the time of the next survey, 1984, white suckers, northern redbelly dace, and fathead minnows were collected in addition to the previously reported species (brook trout, golden shiners, and creek chubs). White suckers are very vulnerable to gill netting, so the failure to collect them in the 1960 netting indicates they were introduced after that date. The fathead minnows and northern redbelly dace are not as reliably collected in gill nets, so their status over time is less clear.

Conclusion

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

Throughout the Adirondack Park, native species sensitive to competition and habitat changes have declined. Distribution of other natives, and nonnatives, have increased due to stocking. Within the GMWC, brook trout are maintained in Giant Washbowl by stocking. Two species of known nonnative fishes are also present in the pond.

VISUAL/SCENIC RESOURCES/LAND PROTECTION

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The natural landscape of the Unit is an important wilderness element. The GMWC affords a variety of open space and scenic views; each dramatic and diverse. Author Lincoln Barnett summed it up best in his 1974 classic book *The Ancient Adirondacks*, “...there are deep, silent forests, plunging ravines and gorges, tumbling waterfalls, still lakes, soaring mountains, and bird haunted wetlands.”

One does not necessarily need to hike great distances to enjoy the beauty of this open space. From afar, the GMWC can best be viewed from State Route 73, US Route 9, and from Interstate Route 87.

Favored interior viewpoints are many. A partial list includes the summits of the Bald, Giant and Hopkins Mountains, Rocky Peak Ridge, and Roaring Brook Falls.

CRITICAL HABITAT

Several areas within the GMWC which have been identified as important wildlife habitats include:

Deer Wintering Areas – There are three small deer wintering areas, all near the mouths of brooks along the eastern border of the wilderness area. These brooks are Stevens Brook, Slide Brook, and a small unnamed brook that comes down from Iron Mountain.

Historic Peregrine Falcon Nesting Sites – Cobble Hill, Knob Lock Mtn., Lower Washbowl Cliffs

Communities and rare plant species that have been identified by the Natural Heritage Program are identified in Appendix VII.

Man-Made Facilities

In contrast with the high mileage of trails, Ranger cabins, and lean-tos in the adjacent HPWA, man-made facilities in the GMWC are extremely rare. An exhaustive inventory of campsites, trails and other maintained facilities or improvements is listed in Appendix II.

Past Influences

CULTURAL

The high peaks region has been an important part of the cultural heritage of the State. The area has a pristine beauty due to its deep forests, abundant lakes, streams and waterfalls, majestic mountains and the assortment of fish, wildlife and plant communities that abound within its borders. Although use in some portions of the HPWC has been a problem, the area in general, and especially specific areas of the high peaks today, continue to reflect a wilderness quality. This quality provides the unique opportunity for visitors to better appreciate the delicate ecological balance of life. Preservation of this wilderness was a major contribution to the conservation movement of our country. The high peaks have also provided a spiritual uplift for many generations of New Yorkers and countless others by allowing its visitors to experience tranquility and solitude in such a magnificent natural setting.

Writers, philosophers, painters and government officials have been inspired by the Adirondacks and the High Peaks. Presidents Theodore Roosevelt and Grover Cleveland took solace in the natural beauty of the area. Many writers have expounded on the importance of our natural environment to meet some of our basic human needs. Important Adirondack painters included Charles Cromwell Ingham, Thomas Cole, Asher B. Durand, Arthur Fitzwilliam Tait, Samuel Colman, Alexander Helwig Wyant, and Winslow Homer, most of whom were considered part of the Hudson River School of painters. This school was the first truly American school of painting which lasted from approximately the mid to late 1800's. Paintings of this school characteristically contained beautiful landscapes and showed a great reverence for nature.

Seneca Ray Stoddard was a popular figure from this era for the hundreds of landscape photographs he took to document the majestic beauty of the Adirondacks and the high peaks. Although paintings, lithographs and etchings were the most popular art forms in the 1800's, advanced technology has given more prominence to photography and other forms of media in more recent times as used by Elliot Porter, Albert Gates, Nathan Farb, Carl Heilman II and many others. Prominent artists, photographers and painters continue to be stimulated by the uniqueness of the area. The lack of physical development on the landscape of the GMWC is one of its most important attributes and continues to make it the unique place it is today. This very lack of development is a magnetic force which attracts so many to the area's beauty (O'Neil, 1990).

HISTORICAL

Archaeological-historic research in the GMWC has neither been extensive nor well defined. Native peoples were believed to have traveled through the Unit, but no evidence of their presence has been revealed. Remnants of the days when the forests of the area were logged may still be found. The alert visitor may occasionally see evidence of past use including remnants of old logging roads and clearings where lumber camps once stood.

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Table 1: Known Archaeological Sites in the Giant Mountain Wilderness Complex

Quad	Site Name	Description
Elizabethtown	Bishop's Forge (Split Rock Falls) (Early Forge)	Owned and built by Basil Bishop 1825. Manufacture of iron articles. Site of early Essex Co. iron forge, using the Catalan system whereby falling water was made to force air into bellows by means of a "trompe". Bishops forge pre-dated most iron establishments in region.
Elizabethtown	Valley Forge, (Mining Complex)	Occupation period: 1845-1873.
Elizabethtown	Brown's Forge	Built in 1830's by Levi Brown, a veteran of the War of 1812 who died in 1840. Not run long. Brown also had an axe factory on Barton Brook.
Elizabethtown	Steel's Forge	Little is known of this operation, which is supposed to have been located on the Little Boquet River in the neighborhood of Elizabethtown. Reportedly built c. 1817 and destroyed by flood of 1830. There was a "Steel's Sawmill" south of Southwell's Forge on the Black River in 1826. Also James W. Steel of Lewis was the son-in law of Gen. W. L. Merriam, involved in the iron business.
Elizabethtown	Miller Forge, "Miller Settlement"	Located 2 miles west of Elizabethtown on the Little Boquet River (or "the Branch") in what was known as the "Miller Settlement." Forge built after the flood of 1830 with money loaned by the Nobel family. Not run long. Charcoal kilns stood 2 miles south of the forge.
Elizabethtown	Gates or Putnam Iron Mine	Discovered in 1840 Willis Gates Farm. Bought in 1880 by H.A. Putnam. Mine idle after 1882.
Elizabethtown	Negro Hill Iron (Noble or Haasz) Mine	Discovered in 1825-26 by F. Haasz and operated by him. Sold to H. R-Noble, date unknown. In 1864 sold by heirs of Noble to Essex & Lake Champlain Ore & Iron Co. Mine idle after 1873. Acquired in 1890 by Witherbee, Sherman & Co.
Elizabethtown	Steel Iron Mine	Discovered by J. Steel in 1810. Essex & Champlain Ore & Iron Co. (1864). Kingdom Iron C. (1866). In 1889 bought by the Lake Champlain Ore Co. and later Witherbee, Sherman & Co. But they never worked the mine.
Elizabethtown	Wakefield Iron Mine	Discovered c. 1845 and opened by Col. E. F. Williams. Owned in 1868 by heirs of W. D. & H.H. Ross, title in the name of Stephen B. Pitkin. Still the S. B. Pitkin Farm in 1905.
Elizabethtown	Buck and Noble Iron Mine	Discovered in 1865. In 1885 Buck was on Lot 109, heirs of Hiram Buck Noble were on Lot 110.
Elizabethtown	Castaline & Ross Iron Mine	Discovered and worked c. 1800. Developed after 1803 by W. D. Ross & H. H. Ross. It is located 1 mile northeast or west of Castaline in a mountainside. Between 1868-1905 located on the "Post Farm." In 1885 A. Post and the Ross's heirs ran the mine. Used sporadically after 1890.
Elizabethtown	Finney or Vulcan (Bay State) Iron Mine	Discovered in 1854 on Anson Finney farm. Sold in 1865 to Vulcan Furnace Co. Gray's Atlas of 1876 shows Vulcan Fum. Co. on lot 175 to the north, but probably a woodlot for charcoal making. Building shown on lot. In 1880, mine full of water. Still owned by Vulcan in 1884.
Elizabethtown	Miller Forge Kiln Sheds	No information.
Elizabethtown	Split Rock Falls Iron Mine	1854-?
Elizabethtown	Early, Handhose Foundation	No further information.
Elizabethtown	New Russia (Later Putman's Forge)	First built c. 1802 by Mr. Rich. Repeatedly rebuilt. In 1854 sold to Hiram Putnam & Sons. Rebuilt 1860. Taken over in 1862 by H.R. Putnam. In 1866 run by Elbert H. and Herbert A. Putnam: had 4 fires and an 1800 number hammer. Used ores from the New Russia and Fisher Hill mines to make slabs for boilerplate and blooms for wire and steel. Made 675 tons of iron in 1866, timing on both steam and waterpower. Forge was idle in 1874 and business abandoned. W. J. Brown, former manager of "New Russia Forge" wrote that he was building for H. A. Putnam, a new forge with 3 fires and putting in ae. Had a water hammer and steam-blowing engine: intended to employ 100 men. This project apparently was never completed.
Elizabethtown	A-Valley House	Residence. HE (1800's).

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Quad	Site Name	Description
Elizabethtown	ACP ESSEX 3	Camp
Mount Marcy	No site name	Middle Archaic: Late Archaic. Artifacts recovered include 1 Sm. Stanley[Neville, 1 sm. Neville, 1 Otter Creek/ Brewerton and 2 untyped projectile points.

Public Use

LAND RESOURCES

While the terrain of the GMWC is quite similar to the nearby DMWA and the Eastern Management Zone of the HPWA, recreational use of this area is much less than either adjacent unit. Physically fit individuals routinely traverse GMWC from the trailhead in New Russia over to Roaring Brook Falls or Chapel Pond in a single day, crossing over the summit of Bald Mtn, Rocky Peak Ridge and Giant Mountain, a total vertical ascent of 5300 ft. The smaller geographic area of the GMWC lends itself predominantly to day use. Overnight use is generally concentrated in the vicinity of Roaring Brook Falls, the Giant's Washbowl and the lean-to in the col between Giant and Green Mountain.

Access to the GMWC from the north and east is light. The approach to Giant from the North is the longest approach with little other attraction along the way. The approach from New Russia is more popular with many hikers climbing to one or more of the smaller intermediary mountains on the range. The western approaches to the Unit from Route 73 are the most popular, and shortest approaches to the mountain. Access from this area has been more problematic due to the ease of access, and limits on parking area development caused by the severe terrain.

Recreational use is difficult to measure. There are only three developed trailheads, however the wilderness boundary coincides with Highway 73 for 6.1 mi. providing a multitude of potential access points of which the Department has no registration or documented use data. Additionally there are three access points south of Keene Valley which cross private lands before reaching the GMWC. These trails were established during a different era, one where a handshake often sufficed in place of a deeded easement agreement. Currently, the public has no deeded access to the Ranney, Mossy Cascade and Spread Eagle trails. There are no Department signs marking these access points.

Trailhead registration data is incomplete for many years, however data has been collected in a systematic manner beginning in 2001. The visitation data for 2001 and several prior years that data was available for most trailheads is depicted in the Table 1.

Table 1: Trailhead Registrations, GMWC

Trailhead	2001	2000	1988	1984
Ridge Trail to Giant (NY-73)	7,293	6,501	3,471	3,081
Roaring Brook Falls (NY-73)	6,391	6,650	5,255	4,150
North Trail (NY-9N)	1,713	n/a	723	907
East Trail (US-9)	2,669	n/a	929	875
TOTAL Registrants	18,066	n/a	10,378	9,013

Rock and ice climbing activities are quite popular in the Unit. Mellor (1995) identifies eight distinct climbing areas along Route 73 in the GMWC. The majority of these routes are multi-pitched climbs which do not lend themselves to instructional groups and as a result climbing areas in the GMWC lack much of the environmental impacts associated with the higher use areas in the nearby DMWA.

Most climbing routes are accessed from DOT highway pull-off areas. Parking can be a problem during summer and fall weekends and on holidays. The terrain limits the ability to provide off-highway parking and results in a dangerous condition as climbers end up parking on the highway shoulder, often on blind curves. There are presently no official trails to any climbing areas in the GMWC. This situation has caused the development of multiple herd paths to access some climbing areas, causing erosion problems and development of extraneous trails.

Regardless of the inherent deficiencies in relying on unmonitored trailhead registrations as an index of recreational use, it is evident that the use of this area is much less than even the lighter used trailheads in the HPWA. This is not to say that the GMWC is not threatened by over use. The increase in use, as indicated by trailhead registration data, is similar in magnitude to that at other high peak trailheads, roughly a doubling of visitors over the past 20 years. Several of the use restrictions imposed in the nearby HPWA have the potential to significantly increase the use of adjacent wilderness areas, including the GMWC in the near future. Campfire restrictions and group size limits appear to be effective in limiting associated impacts in the HPWA, however the response by the public to those restrictions is either compliance with the regulations or displacement to other areas with similar characteristics, such as the GMWC and Dix Mountain Wilderness Area. This displacement is evident in recent increases in trailhead registrations at GMWC trailheads while nearby trailheads serving the HPWA have recorded a decline in registrations over the same period. Johnson (2001) observed user displacement from the HPWA to other Adirondack Forest Preserve Wilderness Areas due to social, resource and other factors.

Projecting future demand and use of the GMWC is difficult, to say the least. Economic changes have the potential to affect annual use of the area as much as weather patterns. When the national or regional economy takes a down turn people tend to take less expensive vacations and take them closer to home. The proximity of the Adirondack region to major eastern metropolitan centers makes primitive camping an attractive alternative. A strong Canadian dollar may increase the number of Canadian visitors to the region. Concern over airline security and potential terrorism attacks to metropolitan areas increases the likelihood that shorter trips, reachable by automobile, may be more likely. Conversely, the aging of the baby-boomer generation may reduce the overall population interested in primitive backcountry recreation activities. Uncertainty in the future underscores the importance of monitoring use and health of the Forest Preserve so that adverse impacts can be identified and addressed early.

WILDLIFE

Past studies by the Department indicate that few sportsmen stop at trailhead registers. However, it can be assumed that the GMWC, in general, is attractive to those hunters and trappers desiring solitude because of its generally rough terrain, and lack of easy access to interior locations, in spite of relatively low densities of wildlife populations. Hunting is a popular activity in the GMWC. The most popular areas tend to be the trail-less portions of the Unit adjacent to Route 9 in New Russia and South of Route 9N between Keene and Elizabethtown. This phenomenon naturally segregates two often conflicting uses: hiking and hunting. Reports of hunter – hiker conflicts in the Unit are virtually non-existent.

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Hunting pressure for big game originates principally from points around the perimeter of the Unit, such as Elizabethtown, Keene and New Russia. In recent years few Group Camping Permits have been issued in this area for the temporary establishment of hunting camps.

The popularity of the special hunting season for muzzle-loading firearms, first opened in the 1977-78 season, has been on the increase throughout the Adirondacks. A legislative change in 1991 allowed successful muzzle-loader hunters to purchase a second tag valid for an antlered buck during the regular season only. In 2002, a legislative package restructured hunting licenses to provide a muzzleloading tag with the purchase of muzzleloading privileges. Regulatory changes in that year also allowed the use of optical sights on muzzle-loaders during special seasons as well as regular seasons. These changes have significantly increased interest in muzzle-loader hunting, although use of portions of the GMWC remains relatively light.

The Bureau of Wildlife monitors the populations of game species partly by compiling and analyzing harvest statistics, thereby quantifying the effects of consumptive wildlife use. In addition to deer and bear harvest statistics, information on the harvest of small game and furbearers is compiled by town, county, and Wildlife Management Unit (WMU). The GMWC is totally within Wildlife Management Unit 5F. The following analysis is based solely on data for the towns of Keene and Elizabethtown.

Since the two towns contain a total of 242 square miles of deer range, the densities of deer harvest for each of the past three years can be calculated and are found to range from 0.26 to 0.67 deer per square mile. Although it is not known how the deer harvest is distributed within the towns, it can be assumed that, because of the Unit's heavily forested condition and relative inaccessibility to hunters, fewer deer per square mile are harvested within the GMWC than in surrounding areas. The narrow range of variation in annual harvest densities, along with the recognition that regulations allowing the taking of bucks only have little impact on the reproduction capacity of a deer population, lead to the conclusion that the populations of the two towns, and within them the GMWC, are capable of withstanding current and anticipated levels of consumptive use.

An analysis of black bear harvest figures for the two GMWC towns (Appendix VII), coupled with a study of the age composition of harvested bears, has indicated that hunting within the towns has had little impact on the reproductive capacity of the bear population. Although it is not known how the bear harvest is distributed within the towns, it can be assumed that, because of the relative inaccessibility of the interior of the GMWC, fewer bear per square mile are harvested within the Unit than in surrounding areas. Under existing regulations, the Unit's bear population is capable of withstanding current and anticipated levels of consumptive use.

The Bureau of Wildlife monitors furbearer harvests by requiring trappers to tag the pelts of beaver, bobcat, coyote, fisher, marten, and otter. Harvest figures by town are shown in Appendix VII. Beaver, fisher, and marten can be susceptible to over-harvest to a degree directly related to market demand and ease of access. Harvest regulations are changed when necessary to protect furbearer populations.

The coyote, varying hare, and ruffed grouse are widely distributed and fairly abundant throughout the Adirondack environment. Hunting and/or trapping pressure on these species in the GMWC is relatively light. Under current regulations, these species undoubtedly are capable of withstanding any amount of hunting and/or trapping pressure likely to be brought to bear within the Unit.

Despite the lack of wildlife information specific to the GMWC, no need has been identified to obtain such information for widely distributed species. It is more practical to study and manage populations over broader areas defined by ecological characteristics that extend beyond Forest Preserve unit boundaries.

FISHERIES

Quantitative angler use estimates and their economic impact for the GMWC are not available. Fishing pressure on the Unit's streams is probably very light. Giant Washbowl is the most likely location for people to fish, with brook trout being the primary target species. Trout fishing on lakes and ponds typically peaks in April, May, and June when trout can still be found in the cool water near the surface. Surface fishing activity declines in the summer due to formation of a thermocline which causes fish to move to deeper water.

DEC angling regulations are designed to conserve fish populations in individual waters by preventing over-exploitation. When necessary, populations of coldwater gamefishes are maintained or augmented by DEC's annual stocking program. Most warmwater species (smallmouth bass, largemouth bass, northern pike and panfishes) are maintained by natural reproduction; however, stocking is sometimes used to introduce those fishes to waters where they do not exist.

Under existing angling regulations, the fish populations are capable of withstanding current and anticipated levels of angler use.

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. Statewide angling and special angling regulations provide the protection necessary to sustain or enhance natural reproduction where it occurs.

WATER RESOURCES

The predominant recreational use of the water resources in the GMWC is for aesthetic purposes and a source of water for camping. There is a lack of large ponds, lakes and navigable waterways in the GMWC. The three ponds in the interior of the Unit are visited occasionally by hikers and fishermen. Most camping sites in the Unit are found adjacent to streams or other water sources. Angling in the Unit is extremely light and generally limited to the Giant's Washbowl.

Relationship Between Public and Private Land

The GMWC occupies most of the land mass within the boundaries of Routes 9, 9N, and 73. The remaining land parcels are generally isolated private residences where the unit boundary lies close to the highways or large land tracts classified as Resource Management areas by the APA. These areas are often managed for long-term production of timber and/or held for aesthetic or recreational values of the owner.

By and large, the largest potential impact to the GMWC resource is from nearby management units. High use pressure and associated negative impacts to the HPWA have been addressed in a Management Plan for that Unit (NYS-DEC, 1999). One significant management strategy employed in that UMP involved promulgation of additional regulations that directly affect visitor use. These regulations have, as a side effect, increased use pressures on adjacent areas that are perceived to offer a similar type of visitor experience. Furthermore, implementation of the HPWA UMP could include more restrictive measures in the near future, including direct regulation of use through a permit system. Should that

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provision of the UMP be implemented it can be expected that a significant portion of the excess use may be displaced into surrounding management units, including the GMWC.

Capacity to Withstand Use

In general, the level of human use of the GMWC does not appear to significantly impact the natural resources of the unit beyond its capacity to withstand recreational use. The GMWC exhibits few of the overuse parameters experienced in the nearby and highly overused, Eastern Management Zone of the HPWA. This is likely due, in large part, to the smaller geographic area of the unit and the lesser number of primary attraction points (summits, lakes ponds, interior structures). Much of the visitor use appears to be either day trips or short-term overnights. High levels of soil erosion and compaction are evident mainly on the most popular trails, those approaching Giant Mt. from Route 73.

Physical inspections of the trails and campsites in the GMWC coupled with user feedback provide the following observations with respect to the capacity of the natural resources of the unit to withstand recreational use:

- Summer weekends and holidays see the greatest number of users. The summer holiday weekends see use levels in some portions of the unit that may reduce the level of solitude below that which might be acceptable in a wilderness setting. However, on the majority of non-holiday periods the level of use in the GMWC remains such that wilderness solitude can easily be experienced.
- Recent changes in management of adjacent Forest Preserve management units affects use in the GMWC. Recent implementation of increased use restrictions in the HPWA have resulted in an increase in use of the GMWC while use levels in the HPWA have stabilized. It is increasingly important for ongoing monitoring of GMWC use to ensure that displacement of use from the adjacent HPWA does not create unacceptable impacts in the GMWC. At this point in time, it is not possible to determine the extent that this change in use will impact the resource.
- The majority of primitive tent sites in the unit appear to be long established and generally located at the periphery of the Unit. Most appear to be fairly well self contained.
- Hunting pressure in the unit appears stable. Hunting is not expected to impact overall numbers of any species population. Management action has been taken to protect known raptor nesting sites, with the result that populations remain stable. Should protected species exhibit a significant decline in numbers appropriate action will be taken consistent with Department policies and APSLMP guidelines.

CARRYING CAPACITY

The term “carrying capacity” has its roots in range and wildlife sciences. As defined in the range sciences, carrying capacity means “the maximum number of animals that can be grazed on a land unit for a specific period of time without inducing damage to vegetation or related resources (Arthur Carhart National Wilderness Training Center, 1994). The concept has been modified to address recreational uses as well; however, its basic assumptions proved to be false.

After many years of study, basic research showed that there was no linear relationship between the amount of use and the resultant amount of impact (Krumpe and Stokes, 1993). For many types of impacts, most of the impact occurs with only low levels of use. In some cases, such as trail erosion, once the soil starts to wash away, additional foot travel on the trail does not cause the amount of impact to

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increase proportionately. This research revealed that visitor behavior, site resistance/resiliency, and type of use may be more important in determining the amount of impact than the amount of use, although the total amount of use is still a factor (Hammit and Cole, 1987).

The shortcomings of the carrying capacity approach, as applied to wilderness management, soon became apparent. It became clear that searching for one single carrying capacity was probably next to impossible, since it is dependent on many variables as noted above. By focusing on determining how many visitors an area could accommodate, it was found that managers often lost sight of basic wilderness goals and objectives – the very things they were trying to achieve. This changed the question “How many is too many?” to “How much change is acceptable?”

Viewed in this context, carrying capacity can be used to prescribe what kind of resource and social conditions are acceptable, compare them to on-the-ground conditions, and identify the management policies and actions needed to maintain or restore the desired wilderness condition.

Establishing appropriate conditions is dependent on clearly stated management objectives. They are based on value judgements derived from experience, research, inventory data, public input (dialogue with users), careful analysis, and common sense. The objectives dictate how much change will be allowed to occur, where it occurs, and what management actions are needed to control it. Once in place and functioning, limits of acceptable change (LAC) are used as measuring tools to alert the Department to unacceptable changes before it is too late to react.

Carrying capacity does not always require use limitations; rather use limitations are viewed as one of many management actions that can be taken in response to a specific problem. When past efforts have proved ineffective, a use limit may be the only option available when standards are exceeded. Monitoring provides the feedback necessary to periodically modify management actions, standards or objectives.

Defining carrying capacity in terms of limits of acceptable change, requires a decision on what kinds of wilderness conditions are acceptable, then prescribing actions to protect or achieve those desired conditions. They are applied through a planning framework that expresses management objectives based on careful considerations of resource conditions, inherent constraints, and the needs and wants of its users. An important objective of this management plan is to carefully document the limits of acceptable change and improve our current inventory of existing resource and social conditions. This is a critical step to knowing where and what future management actions will be needed beyond the five year life of this plan.

The existing capacity of the GMWC has been identified in terms of access points (parking) and interior facilities (campsites). The present inventory of parking areas indicates existing parking capacity for trailheads serving the Unit is 105 cars, distributed among 6 parking areas. Based on a rule-of-thumb average of 2.5 individuals per vehicle the Department estimates an overall parking capacity for approximately 260 users.

A total of 16 primitive tent sites have been identified along with one lean-to. The seventeen established camping sites could presently accommodate a maximum of 204 overnight users, based on a maximum group size of 12 persons per group. Implementation of APSLMP-mandated overnight group sizes of 8 persons will lower this figure to 136.

Overnight capacity, based on an average of four individuals per camping group, would be amount to an estimated of overnight user capacity at primitive tent sites of around 60-70. This does not include camping at large, which is presently allowed throughout the GMWC pursuant to regulation.

STRATEGY

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

Goal-Achievement Process

The goal-achievement process provides a framework for proposed management by means of the careful, stepwise development of key objectives and actions that serve to prescribe the Wilderness conditions (goals) outlined by APSLMP guidelines. The Department is mandated by law to devise and employ practices that will attain these goals. For each management activity category included in Section IV of this plan, there has been worked up a written assessment of the current management situation and a set of assumptions about future trends, in which the specific management proposals which follow are rooted.

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

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

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

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

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

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

- The identification of acceptable resource and social conditions as defined by measurable indicators;

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- An analysis of the relationship between existing conditions and those desired;
- Determinations of the necessary management actions needed to achieve desired conditions; and,
- A monitoring program to see if objectives are being met.

A prioritized list of indicators which may be used by the Department for measuring and evaluating acceptable change on the GMWC are:

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

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

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Past Management

LAND MANAGEMENT

Historically the Department has taken a minimalist management approach to the GMWC. This is likely due in large part to the concentration in use and facilities in the HPWA. Had the Department invested significant resources in developing the GMWC it is likely that many of the overuse situations that exist in the nearby HPWA would be mirrored in this Unit. The lack of facilities in the Unit is strongly influenced by past ownership and the ease of access to most interior locations in a single day's walk. While much of the HPWA was in state ownership early in the 20th century, most of the access to the predominant attractions of the unit (the "high peaks") remained in private ownership throughout the 1920's and 30's, when the Department was investing heavily in back country infrastructure. As a result the GMWC, notwithstanding it's small size, retains more of a backcountry feel than much of the eastern zone of the HPWA.

The principal management activity has been trail maintenance. This work has been undertaken through a combination of Department trail crews, Adirondack Trail Improvement Society (ATIS) trail crews and the 46er club trail crews. The ATIS involvement in trail work dates back to the turn of the 20th century when the trails emanating from the Roaring Brook Falls area were in private ownership. While these trails are now part of the Forest Preserve, ATIS remains a principal force in their maintenance, both through private funding and under contract by the Department.

WILDLIFE MANAGEMENT

Past wildlife management activity in the GMWC has generally focused around management and/or reintroduction of endangered species. To date wildlife management efforts have concentrated on reintroduction of the peregrine falcon, bald eagle and Canada lynx.

Efforts to reintroduce the peregrine falcon and the bald eagle through "hacking" programs began in 1981 and 1983, respectively. In a continuing program of yearly releases, 103 falcons were "hacked" in the Adirondacks through 1988. In 1985, two falcon nests were found, one along Route 73 and one to the north of the High Peaks Wilderness Area, the first Adirondack nests since 1956. In 1989 seven nests were active in the Adirondacks, producing 12 young. At present no nest are known to be active within the GMWC. Other historic nesting sites within the Unit may come to be occupied as the population expands.

Between 1983 and 1985, 55 bald eagles were hacked within the Adirondack region. The first sexually mature eagles produced by the hacking program returned to nest in an area north of the HPWA in 1988. These nests fledged a total of five young to the wild in 1989. To date 20 young have fledged from these nests. Although most of the Unit does not constitute suitable bald eagle habitat, locations along Route 73 have been used for nesting in the past and may come to be used again.

The SUNY College of Environmental Science and Forestry, through the Adirondack Wildlife Program, completed an experimental project to reintroduce the Canada lynx to the Adirondack high peaks region. Under permit from DEC, scientists based at the college's Huntington Forest campus in Newcomb planned to release up to 100 cats within the high peaks, the upper elevations of which support ideal lynx habitat. The first release of five lynx took place in January 1989; and, by the winter of 1990-1991, this number increased to 83 released animals. Several of the animals released so far have strayed into the Unit. Vehicle collisions have claimed a high percentage of the released animals. It remains to be seen whether the reintroduction experiment will lead to the establishment of a permanent lynx population in the area. No breeding has been documented although sightings continue.

FISHERIES MANAGEMENT

Early Stocking

During the mid- to late 1800's, exploitation of pristine fisheries combined with environmental degradation resulted in the decline of fish populations and stimulated early management efforts consisting primarily of stocking. In the early years of fishery management in the Adirondacks, volunteers who applied for fish from the state and federal hatcheries would drive to the hatchery or to train depots with horse and buggy to pick up their allocated cans of fish for stocking. Later on, hatchery employees would employ wagons and teams to haul fish to individual waters or to train depots for more distant delivery (Pieffer 1979). In the year 1891, the state purchased its own wooden railroad car specially designed for transporting fish, and appropriately named "The Adirondack". Initially, the railroad companies furnished free transportation as a public service (Lindsey 1958).

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

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

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

The New York Forest, Fish and Game Commission feared that many of our Adirondack lakes had received bass and other fish from the United States Commission of Fisheries (obtained by volunteers via application) "which never should have been placed in trout waters." In its report to the legislature in the year 1909, the Forest, Fish and Game Commission expressed concern about stocking nonnative fishes via the federal stocking program and cited New York law "prohibiting the placing of anything but trout

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in Adirondack waters. We most certainly desire to continue to produce from the Federal hatcheries every year such allotments as are necessary to keep up the stock in our inland waters, but we respectfully submit that this allotment should only be made with the advice of this Commission based on the scientific knowledge of the State Fish Culturist.” (NYS Forest, Fish and Game Commission, 1909). Similarly, “... the one outstanding reason why so many of the lakes, ponds and streams of this and other Adirondack areas are now unfit for the native species is that smallmouthed bass, perch, northern pike and other species of non-native warmwater fishes have been introduced” (1932 Biological Survey of the Upper Hudson Watershed).

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 (shiners, dace, etc.) also feed primarily on invertebrates (Scott and Crossman 1973). In low fertility waters such as Adirondack ponds, competition for such forage can be intense.

In addition to competing with brook trout for food, many fishes prey directly on brook trout. Northern pike, largemouth bass, smallmouth bass, and rock bass are highly 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 has greatly reduced the abundance of brook trout sustained by natural reproduction. Only about 40 (10%) of the traditional brook trout ponds in public ownership in the Adirondack Park now support viable, self-sustaining brook trout populations, and they are subject to reproductive failure as other fishes become established.

Human introductions of nonnative and native-but-widely-introduced (NBWI) fishes have nearly eliminated natural brook trout monocultures in the Adirondacks. The presence of brook trout monocultures is well known, and the survival of even a few such unique communities through the massive environmental disturbances and species introductions of the 19th and 20th centuries is quite remarkable.

Recent Management Activities

Recent fish management in the GMWC has emphasized the native brook trout. Area waters generally are subject to statewide angling regulations, with the exception that the use of fish as bait is prohibited in the unit to minimize the potential for introducing additional nonnative fishes.

Management Guidelines

GUIDING DOCUMENTS

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

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

The APSLMP provides guidance for the use and management of lands which it classifies as “Wilderness” by establishing basic guidelines. APSLMP management guidelines for Wilderness Areas are outlined in Appendix XIV.

It is important to understand that the State Land Master Plan has structured the responsibilities of the Department and the Agency in the management of State lands within the Adirondack Park. Specifically, the APSLMP states that:

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

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

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

- Administrative Use of Motor Vehicles and Aircraft in the Forest Preserve (CP-17)
- Standards and Procedures for Boundary Line Maintenance (NR-91-2; NR-95-1)
- Tree Cutting on Forest Preserve Land (O&D #84-06)
- Cutting and Removal of Trees in the Forest Preserve (LF-91-2)
- The Administration of Conservation Easements (NR-90-1)

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- Acquisition of Conservation Easements (NR-86-3)
- Division Regulatory Policy (LF-90-2)
- Adopt-A-Natural Resource (ONR-1)
- Policies and Procedures Manual Title 8400 - Public Land Management
- Fishery Management in Wilderness, Primitive and Canoe Areas, as amended – November 2, 1993 (O&D #93-35)
- Adirondack Subalpine Forest Bird Conservation Area – Management Guidance

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

The recommendations presented in this unit management plan are subject to the requirements of the State Environmental Quality and Review Act of 1975. All proposed management activities will be reviewed and significant environmental impacts and alternatives will be assessed.

APPLICATION OF GUIDELINES AND STANDARDS

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

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

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

- Locating lean-tos to minimize necessary cut and fill;
- Locating lean-tos to minimize tree cutting;

- Locating lean-tos away from streams, wetlands, and unstable slopes;
- Use of drainage structures on trails leading to lean-to sites, to prevent water flowing into site;
- Locating lean-tos on flat, stable, well-drained sites;
- Limiting construction to periods of low or normal rainfall.

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

- Locating parking lots to minimize necessary cut and fill;
- Locating parking lots away from streams, wetlands, and unstable slopes wherever possible;
- Locating parking lots on flat, stable, well-drained sites using gravel for surfacing or other appropriate material to avoid stormwater runoff and erosion;
- Locating parking lots in areas that require a minimum amount of tree cutting;
- Limiting construction to periods of low or normal rainfall;
- Wherever possible, using wooded buffers to screen parking lots from roads;
- Limiting the size of the parking lot to the minimum necessary to address the intended use.

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

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

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

THE AMERICANS WITH DISABILITIES ACT (ADA) AND ITS INFLUENCE ON MANAGEMENT ACTIONS FOR RECREATION AND RELATED FACILITIES

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

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

The Americans with Disabilities Act Accessibility Guidelines

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

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

ADAAG apply to newly constructed structures and facilities and alterations to existing structures and facilities. Furthermore, it applies to fixed structures or facilities, i.e., those that are attached to the earth or another structure that is attached to the earth. Therefore, when the Department is planning the construction of new recreational facilities, assets that support recreational facilities, or is considering an

alteration of existing recreational facilities or the assets supporting them, it must also consider providing access to the facilities or elements for people with disabilities. The standards which exist in ADAAG or are contained in the proposed ADAAG also provide guidance to achieve modifications to trails, picnic areas, campgrounds, campsites and beaches in order to obtain programmatic compliance with the ADA.

ADAAG Application

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

DEED RESTRICTIONS

The only known deed restriction involves access to a family burial plot adjacent to the East Trail parking area on US Route 9.

Administration and Management Principles

ADMINISTRATION

Administration of the GMWC is shared by several programs in the Department.

Within the context of the GMWC, Department programs fill the following functions:

The Division of Lands and Forests acquires and maintains land for public use, manages the Forest Preserve lands, promotes responsible use of public lands and provides educational information regarding the use of the Forest Preserve.

The Division of Fish, Wildlife and Marine Resources protects and manages fish and wildlife species, provides for public use and enjoyment of natural resources, stocks freshwater fish, licences fishing, hunting and trapping, protects and restores habitat, and provides public fishing, hunting and trapping access.

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

The Division of Air Resources regulates, permits and monitors sources of air pollution, forecasts ozone and stagnation events, educates the public about reducing air pollution and researches atmospheric dynamics, pollution and emission sources. The ALSC is part of the Division of Water.

The Division of Operations designs, builds and maintains Department facilities and infrastructure, operates Department Campgrounds and day-use facilities and maintains trails and lean-tos.

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The Division of Public Affairs and Education is the public communication wing of the Department. The Division communicates with the public, promotes citizen participation in the UMP process, produces, edits and designs Department publications.

The Division of Law Enforcement is responsible for enforcing all of New York’s Environmental Conservation Laws relating to hunting, fishing, trapping, licence requirements, endangered species, possession, transportation and sale of fish and wildlife, trespass, and damage to property by hunters and fishermen.

The Division of Forest Protection and Fire Management is responsible for the preservation, protection, and enhancement of the State’s forest resources, and the safety and well-being of the public using those resources. Forest Rangers are the stewards of the Forest Preserve and are the primary public contact for the DMWA and responsible for fire control and search and rescue functions. In 1980, state law designated Forest Rangers as Peace Officers with all powers to enforce all state laws and regulations with emphasis on the Article 9 of the Environmental Conservation Law and 6 NYCRR 190.

MANAGEMENT PRINCIPLES

General Forest Preserve Principles

The primary goal of Forest Preserve management is the perpetuation of Forest Preserve lands as “forever wild forest lands” consistent with New York State Constitution, Article XIV, Section 1. In conformance with the constitutional and legal constraints that embody this goal, DEC manages the Forest Preserve to protect and preserve the natural resources of the Unit and to provide opportunities for a variety of recreational activities for people of all abilities where those activities are permissible under the APSLMP, Department regulations and policies, and will not compromise the natural resource. Through partnerships with local governments, organizations, and individuals, DEC provides for the use and enjoyment of the Forest Preserve in a manner that is supportive of the economy of the region while protecting the wild forest character of the area.

The Department allows and promotes recreational use of the Forest Preserve to the extent that it does not degrade the character of the area. To achieve this the DEC uses the “minimum tool” necessary to obtain specific objectives, employing indirect methods (limiting parking, etc.) whenever possible, and developing regulations only where necessary and as a final resort. Existing programs that promote backcountry use and etiquette will be utilized where appropriate and feasible. Examples of successful programs and messages used in other management units include, Leave No Trace™ and the International Mountain Biking Association’s “Rules of the Trail™.”

Public use controls are not limited to assessing and matching types and levels of use to physical and biological resource impacts. Social issues, such as user preferences, are also considered. This presents a unique challenge in managing the Forest Preserve, as access is free and use is relatively unregulated.

Management Principles specific to Wilderness Areas

The following principles, first adopted in the HPWA UMP, attempt to introduce professional wilderness management guidelines in writing long-term policy and day-to-day problem solving for wilderness managers. As with the HPWA UMP, these principles will also guide managers in addressing management problems of the GMWC.

- Manage Wilderness as a Composite Resource, Not as Separate Parts.

Wilderness is a distinct resource producing many societal values and benefits. One of wilderness's distinctive features is the natural relationship between all its component parts: geology, soil, vegetation, air, water, fish and wildlife – everything that makes up a wilderness. In most cases, separate management plans will not be developed for vegetation, fish, wildlife, recreation, etc. Rather, one plan must deal simultaneously with the interrelationships between these and all other components.

- Manage the Use of Other Resources and Activities Within Wilderness in a Manner Compatible with the Wilderness Resource Itself.

All proposed management actions must consider their effect on the wilderness resource so no harm comes to it. For example, recreation should be managed and kept within acceptable levels that maintain the Unit's wilderness character, including opportunities for solitude or a primitive and unconfined type of recreation emphasizing a quality visitor experience (APSLMP, 2001; Hendee et.al, 1990).

- Allow Natural Processes to Operate Freely in Wilderness.

This principle is derived in part from the APSLMP definition of wilderness in dealing with the term "natural conditions." According to the APSLMP, the primary wilderness management guideline will be to achieve and perpetuate a natural plant and animal community where man's influence is not apparent (APSLMP, 2001, Page 20). It means not introducing exotic plants and animals not historically associated with the Adirondacks nor manipulating vegetation to enhance one resource over another.

- Attain a High Level of Wilderness Character Within Legal Constraints.

An important APSLMP wilderness goal is to retain and make where necessary, Adirondack wilderness areas as wild and natural as possible. Examples of this principle include efforts to rehabilitate alpine summits and restoring severely eroded trails.

- Preserve and Enhance Wilderness Air and Water Quality.

Wilderness air and water quality bear testimony to the general health of our environment. Federal and state laws are designed specifically to protect air and water quality. In wilderness, internal pollution sources such as human and domestic animal wastes must be controlled.

- Safeguard Human Values and Benefits While Preserving Wilderness Character.

Wilderness areas are not just designated to protect natural communities and ecosystems; they are also for people. The APSLMP directs that "human use and enjoyment of those lands (meaning state lands within the Adirondack Park) should be permitted and encouraged, so long as the resources in their physical and biological context and their social and psychological aspects are not degraded" (APSLMP, 2001, Page 1). This is especially true for wilderness.

- Preserve Opportunities Primitive and Unconfined Types of Recreation.

This principle comes directly from the APSLMP definition of wilderness (APSLMP, 2001, Page 21). Levels of solitude within any given wilderness will vary; sometimes substantially. Management strategies to protect the wilderness resource should strive to minimize the amount of contact or control over visitors once they are in the unit (Hendee et.al, 1990).

- Control and Reduce the Adverse Physical and Social Impacts of Human Use in Wilderness Through Education and Minimum Regulation.

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When human use must be controlled to prevent misuse and overuse, it is best to do so by education followed by minimum degree of regulation necessary to meet management objectives. The latter option is sometimes called the minimum tool rule – application of the minimum tools, equipment, regulations, or practices that will bring the desired result (Hendee et.al, 1990).

- **Favor Wilderness Dependent Activities When Managing Wilderness Use.**

Wilderness is a distinct resource, and many recreational or other activities taking place there can be enjoyed elsewhere. Not all outdoor activities require a wilderness setting. Examples are large group use, orienteering schools, competitive events, and other organized events . A Department management goal is to refer these activities to Wild Forest Areas.

- **Remove Existing Structures and Terminate Uses and Activities Not Essential to Wilderness Management Except for Those Provided by the APSLMP.**

“A wilderness area is further defined to mean an area of state land or water having a primeval character without significant improvements or permanent human habitation....” (APSLMP, 2001, page 20). Except for those conforming structures, uses, and administrative actions specifically identified by the APSLMP, the Department is mandated to remove all non-conforming structures and uses not compatible with a wilderness environment as soon as possible (APSLMP 2001, page 20).

- **Accomplish Necessary Wilderness Management Work with the “Minimum Tool.”**

This principle requires every management action to be scrutinized to see first if it is necessary, then plan to do it with the “minimum tool” to accomplish the task. The Department has established guidelines and policies for many administrative activities in classified Wilderness Areas, including, but not limited to, trail construction, boundary line marking, use of motorized equipment and vehicles, cutting and removal of trees, and fisheries management in Wilderness Areas. Its goal is to have the least possible impact on the environment and the visitor experience (Hendee and others, 1990).

- Establish Specific Management Objectives, with Public Involvement, in a Management Plan for Each Wilderness.

Working together within the constraints of the APSLMP, managers and the public need to define acceptable levels of use and specific management practices for each Adirondack wilderness. These need to be clearly stated in management plans available for public review and comment. It is essential visitors and other users understand wilderness values, and managers clearly know their management responsibilities (APSLMP, 2001; DEC policy 1972-present; Hendee et.al, 1990).

- Harmonize Wilderness With Adjacent Land Uses.

Wilderness management should be coordinated with the management of adjacent state and private lands in a manner that recognizes differing land management goals.

- Manage Wilderness With Interdisciplinary Scientific Skills.

Because wilderness consists of complex relationships, it needs the skills of natural resource professionals and social scientists that work as an interdisciplinary team focusing on preserving wilderness as a distinct resource. Environmental and social sciences are used in decision-making.

- Manage Special Exceptions Provided by The APSLMP With The Minimum Impact on The Wilderness Resource.

The APSLMP (2001) authorizes certain uses and structures in wilderness areas. These exceptions include such structures as interior outposts, existing dams on established impoundments, existing or new fish barrier dams, trails, bridges, signs, trail shelters (lean-tos), etc. (See generally APSLMP 2001, Pages 21-26). Construction of additional conforming structures and improvements will be restrained to comply with wilderness standards, and all management and administrative actions will be designed to emphasize the self-sufficiency of users in an environmentally sound and safe way.

Management Issues, Needs and Desires

Several issues are of concern for the Department and the public in the development of this plan. Information has been obtained from the public by way of an Open House, held on February 8, 2001 at Keene Valley Fire Department, by mail, and email. The following list of issues, needs and desires were received from the public and Department staff. Some of the issues, needs and desires have not resulted in Proposed Management Actions being developed.

- **Application of regulations prescribed under the HPWA UMP:** The most comments received dealt with the degree to which the new regulations adopted under the HPWA should be incorporated into the GMWC UMP. Opinions varied from wholesale adoption of all regulations to various subsets of regulations. Most comments indicated that some regulations were needed, however comments were mixed on which ones were needed. Specific concerns were regulations relating to group sizes, fires and restrictions on camping (where designated-site only camping is needed).
- **Access concerns on Route 73:** Many comments identified congestion along Route 73 as a concern. As identified elsewhere off-road parking is extremely difficult due mainly to terrain constraints. The present road shoulder parking is a safety concern during the winter and peak-use weekends.
- **Potential for overuse:** Another concern identified is the potential for overuse problems that are being addressed in the HPWA to “spill-over” into the GMWC. This issue will only become more imperative if use restrictions increase in the HPWA.

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- **Lack of accurate use data:** As identified in most Department UMPs there is no coordinated attempt to collect reliable data on recreational use in the Unit.
- **Creation of a new trail on Knob Lock Mountain:** Both pro and con arguments have been made by the public. Arguments included the desire to create additional trails to disperse use from the busy HPWA trail network and the desire to maintain the area in its primitive character without a marked route. At this time the Department is not considering a trail to this peak since existing light level of use has not caused a significant impact to the area and it provides an easily accessible area for a trail-less experience to a mountain summit.

The issues listed above are addressed in the appropriate section(s) of the following chapter.

A summary of comments received during the public review/comment period have been included along with the Department's response in Appendix XVI.

Section 4 – Proposed Management Actions

This section of the plan breaks down the various resources of the Unit into the following categories; bio-physical resources, land protection, man-made facilities and public use and access. Each category is further broken down into component units where the present conditions are assessed, management objectives developed and management actions proposed. All recommended actions are consistent with the management guidelines and principles outlined above, and are based on information gathered during the inventory process, through public input and in consultation with the Planning Team.

Bio-Physical Resources

WATER

Present Conditions:

Of the three ponds in the Unit, only Giant's Washbowl (4.2 ac.) has had any survey work undertaken. Water quality studies have been conducted by the ALSC, researching the effects of acidic deposition. Additionally, the Bureau of Fisheries routinely conducts biological surveys. No studies have been conducted to determine the effects of recreation use on water quality. As focal points for visitation, streams, springs, lakes, ponds, and wetlands are often on the receiving end of more human disturbance than upland forest areas. With increasing levels of use, the potential for deterioration of water quality is anticipated. Visitors must be advised that water ought not to be considered potable and must be properly treated before consumption.

No instances of aquatic invasive plant species have been identified within the unit, however presently there is little existing inventory work available with respect to the presence of invasive plant species in the unit. The importance of this issue to the Adirondack ecosystems has been underscored in the establishment of the Adirondack Park Non-Native Invasive Plant Species Project, a project jointly undertaken by the APA, NYS-DOT, Nature Conservancy and NYS-DEC.

An area within 1/4 mile of either bank of the Bouquet River downstream from the Route 73 bridge is designated as a "Recreational River" under the New York State Wild, Scenic and Recreational Rivers Act. ECL §15-2713 (2)(d), 6 NYCRR 666 (Department regulations) and 9 NYCRR 577 (APA Regulations) provide for the management of Wild, Scenic, and Recreational Rivers. There are presently no structures, facilities or uses that are non-conforming with the direction provided in statute or regulation with respect to Recreational Rivers within the river management corridor. No management activity proposed in the river management corridor by this UMP will result in any structure, facility or use that would be in violation of the Rivers Act or regulations promulgated thereunder.

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Objectives:

- Stabilize and improve water quality.
- Monitor all riparian areas, including “recreational” river corridors, within the unit to identify potential impacts on water resources.
- Reduce the potential for pathogenic contamination (especially giardiasis) from all water sources.
- Monitor for the location and extent of aquatic invasive plant species found within the unit.
- Reduce or eliminate aquatic invasive plant species found within the unit.

Management Actions:

- Develop LAC indicators and standards for vegetation in riparian areas near lakes and streams.
- Aquatic and riparian habitats will be maintained and/or improved. Any new use which would likely incur damage above LAC indicators of riparian vegetation will not be allowed.
- Any primitive campsite which is not compliant with water and trail setback requirements will be closed and rehabilitated. Where a new site can be located compliant with APSLMP guidelines, the site will be relocated away from water and designated. Lean-tos will be relocated when major repair or replacement becomes necessary. Minimum setbacks for pit privies and non-designated campsites are 150 feet.
- Close or rehabilitate lake shore and streamside areas should they become severely impacted by bank erosion from recreation use.
- Biological survey work , such as ALSC and DEC studies, will be incorporated in all water related planning activities.
- Continue to monitor activities under existing DEC rules and regulations on adjacent lands; especially timber harvesting and road building, that have the potential to impact GMWC waters.
- Advise the public through DEC information and education programs to treat all water prior to consumptive use.
- Train DEC staff working within the unit to identify and document the location of key invasive plant species.
- A comprehensive inventory of the presence and extent of invasive plants in the unit should be undertaken.
- Management of identified populations of invasive plant species should be undertaken. These actions may be carried out by NYSDEC personnel or by members of APIPP or other volunteers under supervision of NYSDEC through an Adopt a Natural Resource Agreement.
- Periodic monitoring and further management of identified invasive plant populations will be undertaken.

SOIL

Present Conditions:

Detailed soil maps are not available for the GMWC. Broad soil types (accurate to an area about 40 acres in size) were delineated on aerial photographs by the USDA Soil Conservation Service. Interpretations have not been completed for each soil type. Little information has been documented on wide-spread soil loss and deposition, except that there are sites where soil disturbances on trails, summits, stream sides, and campsites require rehabilitative actions. Trail widening, trail use during wet weather, camping too close to sensitive riparian areas, and summit trampling are contributing factors. Additional trail maintenance funding to control erosion is needed.

Objective:

- Keep soil erosion caused by recreation use within acceptable limits that closely approximates the natural erosion process.

Management Actions:

- Inventory, map, and monitor soil conditions affected by recreation use.
- Develop LAC indicators and standards for soil erosion.
- When LAC standards are exceeded, correct undesirable conditions by rehabilitating the area and/or relocating use to more durable sites.
- Relocate trails, designated campsites, and lean-tos which are less than 100 feet from water, to reduce sedimentation and/or contamination of water resources.
- Target trail maintenance to heavily eroded trails; develop a priority list based on resource need rather than on user convenience.
- Request voluntary compliance in seasonal closures of high elevation trails and certain low elevation trails during period of wet weather; usually from November 1- December 15 and April 1– May 15, or at appropriate times set by the area manager.

VEGETATION

Present Conditions:

Much of the GMWC's vegetated landscape has been altered by wind, fire, insects and disease, pre-Forest Preserve logging, and recreational use. Despite these influences, the Unit has several unique ecosystems requiring special attention. These areas include the rare flora vegetation found along the Rocky Peak/Giant Mtn. ridgeline, small portions of old growth forest, wetland communities, and potentially some areas not yet identified through the unit management planning process.

The high peaks area is known world-wide for harboring an unusually large number of rare, threatened, and endangered species protected by federal and state law. Vegetation has been impacted by concentrated human activity in areas such as trail corridors, riparian areas, and mountain summits. On high elevation summits, trampling by people and pets is a major cause of species decline. Continued winter camping above 4,000 feet elevations, atop thin wind-blown snowpacks, places an added stress on alpine environments. Recreation during wet weather (late fall and early spring), at high elevations

Section 4 – Proposed Management Actions

and on some low lying trails, exacerbates erosion and plant loss. Vegetation on some severely disturbed sites is not sufficient for natural revegetation.

Despite special designation, protective measures, and programs, such as the Nature Conservancy's Natural Area Registry, the New York Natural Heritage Program, and the Summit Stewards Program, many species remain in jeopardy and are near extinction due to heavy and sustained visitor use. The Summit Stewards' education program has contacted more than 171,000 summit visitors in the adjacent HPWA since its inception in 1989. Summit Steward presence in the GMWC is presently limited to 1-2 days per summer, mainly to undertake species inventory .

The Nature Conservancy has identified a infestation of Japanese knotweed along The Branch in the Town of Elizabethtown. Presently, there is little existing inventory work available with respect to the presence of invasive plant species in the unit. The importance of this issue to the Adirondack ecosystems has been underscored in the establishment of the Adirondack Park Non-Native Invasive Plant Species Project, a project jointly undertaken by the APA, NYS-DOT, Nature Conservancy and NYS-DEC.

Annual trail maintenance has focused on visitor safety and resource protection rather than on user convenience. Trees are cut, by permit, for construction and maintenance of authorized improvements when suitable materials cannot be brought in from sources outside wilderness.

Objectives:

- Allow natural processes to play out their roles to insure that the succession of plant communities is not altered by human impacts.
- Preserve and protect known locations of sensitive, rare, threatened, and endangered species.
- Continue and enhance programs to identify and map sensitive, rare, threatened, and endangered species.
- Assist natural forces in restoring natural plant associations and communities where they have been severely altered by human activity.
- Monitor for the location and extent of terrestrial invasive plant species found within the unit.
- Reduce or eliminate terrestrial invasive plant species found within the unit.

Management Actions:

- Develop LAC indicators and standards for condition of vegetation in camping areas and diversity and distribution of plant species.
- All vegetation protection and restoration programs will emphasize information and education as the primary means to reduce impacts and slow unnatural change.
- Conduct botanical examinations to produce a more complete inventory of rare, threatened, and endangered species.
- The current citizen-sponsored alpine education and information, summit steward stewardship, and vegetation restoration efforts in place in the HPWA should be expanded to provide a steward on the summit of Giant Mountain during the summer weekend periods.
- All proposed scientific research projects in the GMWC must be authorized by a temporary revocable permit, issued by DEC.

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- Ecological inventories and maps will be correlated with recreation, and fish and wildlife project plans to prevent unintended and undesirable impacts to sensitive, rare, threatened, and endangered species.
- A marker or unobtrusive sign will be developed and placed on the approaches and outer bounds of sensitive areas to inform the public of such significance and advise them of special precautions. For example, the public should be informed where the 3,500 and 4,000 feet in elevation contour is encountered because the APSLMP prohibits camping above 4,000 feet in wilderness areas and allows camping in wilderness areas between 3,500 and 4,000 feet only at designated campsites where physical and biological conditions are favorable (APSLMP, 2001, Page 21).
- Camping above 4,000 feet will be prohibited all times. This action, required by the APSLMP, is necessary to protect sensitive upper elevation spruce-fir ecotypes, subalpine and rare summit vegetation.. This prohibition will be implemented through promulgation of rules and regulations to be included in 6 NYCRR Part 190.
- The HPWA seasonal voluntary trail closures, protecting vegetation and reducing erosion, will be extended into the GMWC, and may be employed on all trails, when the ground is wet; usually November 1 – December 15 (frost-in) and April 1 – May 15 (frost-out). Time frames may be altered at the discretion of the area manager. A list of alternative trails on drier sites will be provided to those who want to hike during these times of the year. The criteria and standards for when, and if, further action will be necessary will be included in the LAC process for soils (see Soils section above). If voluntary seasonal trail closures are ineffective in reducing damage to soils and vegetation during these seasons, mandatory restrictions may be implemented through the development of rules and regulations.
- There will be no cutting of vegetation in the GMWC to improve scenic vistas in keeping with wilderness policy which allows natural processes of succession to operate freely in wilderness.
- Minimum impact techniques will be used to revegetate sites where concentrated use has destroyed natural vegetation. Native seedlings, trees, shrubs, and grasses will be planted to accelerate return to natural conditions when necessary. Rocks used in conjunction with rehabilitation will be utilized from those found on-site or off-site providing that off-site material conforms as much as possible to the natural rock of the area.
- Visitors will be encouraged to use portable cook stoves and refrain from building campfires. Such messages will be prescribed in LEAVE-NO-TRACE™ wilderness education and information programs.
- As an additional protective measure for summit vegetation, rules and regulations will be promulgated to prohibit the ignition or maintenance of campfires at elevations of 4,000 feet or higher, at any time.
- As an additional protective measure for riparian vegetation, rules and regulations will be promulgated to prohibit the ignition or maintenance of campfires below 4,000 feet except in legal camping locations (designated campsites, lean-to sites, and areas 150 ft or more from road, trail or water).
- Vegetation in alpine areas will be monitored annually or more frequently as required so that changes can be detected before unacceptable conditions arise.
- Vegetation at primitive tent sites will be monitored in conjunction with the campsite monitoring program described in the following section on campsites.

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- Train DEC staff working within the unit to identify and document the location of key invasive plant species.
- A comprehensive inventory of the presence and extent of invasive plants in the unit should be undertaken.
- Management of identified populations of invasive plant species should be undertaken. These actions may be carried out by NYSDEC personnel or by members of APIPP or other volunteers under supervision of NYSDEC through an Adopt a Natural Resource Agreement.
- Periodic monitoring and further management of identified invasive plant populations will be undertaken.

WILDLIFE

Present Conditions:

A number of changes have occurred over the past several decades that have impacted a variety of wildlife species within the GMWC. Habitat changes have resulted from pre-Forest Preserve logging, wildfires, acid precipitation, recreation use, natural plant succession, protection of the forest and wildlife species through legislation, attempted reintroduction of extirpated species of wildlife and immigration of extirpated species to the area. The development of Interstate 87 had disrupted one of the region's larger deer wintering yards. These factors tend to place GMWC wildlife into three categories: (1) wilderness-dependent wildlife, (2) wilderness-associated wildlife, and (3) common wildlife found. Most wildlife management activities have been directed to improving knowledge of the wildlife found in the unit.

One of the original factors attracting visitors to the Adirondacks, in general, was the vast array of hunting, fishing and trapping opportunities. The APSLMP indicates that these uses are legitimate and compatible with wilderness concepts (APSLMP, 2001, Page 26). DEC policy encourages these activities as part of a larger wilderness experience, not just a quest for game (Doig, 1976).

Habitat areas heavily used by wildlife are often also choice locations for human trails and campsites. (Hendee and others, 1990) Bears often scrounge for food and garbage where people habitually camp. While negative human/bear encounters are minimal, the concentration of camping in distinct locations poses the potential for this to be a problem in the future. Domestic pets, mainly dogs, may also harass and stress wildlife.

Objectives:

- Re-establish self-sustaining wildlife populations of species that are extirpated, endangered, threatened or of special concern in habitats where their existence will be compatible with other elements of the ecosystem and human use of the area.
- Monitor and afford extra protection, where warranted, to species which are endangered threatened or of special concern that are currently using the GMWC.
- Maintain and perpetuate annual hunting and trapping seasons as legitimate uses of the wildlife resources compatible with wilderness recreation.
- Provide information, advice and assistance to individuals, groups, organizations and agencies interested in wildlife whose activities and actions may affect, or are affected by, the wildlife resources or the users of wildlife.

- Develop and implement protocols, procedures and philosophies designed to minimize, alleviate and respond to nuisance wildlife complaints in wilderness areas.

Management Actions:

- Monitor peregrine falcons and bald eagles for nesting activity. Produce informational materials and signs to educate rock climbers that falcon nesting is occurring in certain sites and that climbing will be prohibited at these sites during nesting.
- Monitor moose that enter the area through visual observation, reports from the public and by radio collaring moose whenever the opportunity presents itself.
- Continue pelt sealing of species to determine level of harvest, guarding against over harvest for species especially vulnerable to trapping (marten and fisher).
- Stress the wilderness aspect of hunting in the GMWC by refraining from developing programs that would attract additional hunters to high use areas.
- Promote education efforts stressing multiple use and hunting seasons that are concurrent with other anticipated uses of the area. Advise non-hunters of the fact that there is hunting in the wilderness area so that they may dress and act accordingly during the hunting season.
- Advise visitors to the area that the potential for conflict with wildlife exists and suggest means of avoiding conflicts through a combination of on-site signage, printed Department media, and direct contact with Department staff.

FISHERIES

Present Conditions:

Fish management in the GMWC has emphasized the native brook trout. Area waters generally are subject to statewide angling regulations, with the exception that the use of fish as bait is prohibited in the Unit to minimize the potential for introducing additional nonnative fishes.

Little active fishery management has been conducted on streams within the Unit because of their remoteness and small size. However, portions of the Boquet have been stocked with landlocked Atlantic salmon.

Objectives:

The 1993 Organizational and Delegation Memorandum regarding “Fishery Management Policy in Wilderness, Primitive, and Canoe Areas” forms the basis for fishery management goals in the unit. That memorandum includes policy guidelines that resulted from negotiations between the DEC, APA and several citizen organizations.

- Restore native fish communities with emphasis on native species that have declined due to man’s influences. This goal is consistent with the primary wilderness management guideline in the SLMP. Implementation may include reclamations, liming, stocking and other activities as per the “Fishery Management Policy in Wilderness, Primitive, and Canoe Areas.”
- Protect native fish communities from the addition of undesirable non-native fishes. This goal is also consistent with the primary wilderness management guideline in the SLMP.

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- Provide recreational angling as part of a larger wilderness experience emphasizing quality over quantity.
- Protect the fishless state of naturally barren waters that have not been stocked.

Management Actions:

- Reduce the distribution of nonnative and native-but-widely-introduced fish species, and increase the abundance of the depressed native brook trout. This will include reclaiming Giant Washbowl to eliminate nonnative fishes and manage it as an Adirondack Brook Trout pond. A heritage strain of brook trout will be stocked, and follow-up surveys will assess the success of natural reproduction. Maintenance stocking of brook trout will continue if necessary to maintain the species.
- Maintain and enforce regulations that prohibit the use of fish as bait in the unit. The use of fish as bait is a potentially significant vector for introductions of disruptive non-natives.
- Promote angler use of the waters in the unit, but generally only in the context of numerous additional waters throughout the Adirondacks. For example, leaflets distributed to anglers will list waters in the Giant Unit along with other waters that provide similar fish resources; they will not highlight the Giant waters over other waters.
- Enhance partially effective natural fish barriers, and construct fish barrier dams as needed to prevent the spread of non-natives and NBWI fishes. The SLMP specifies that fish barrier dams are conforming structures in wilderness areas. When non-natives have been established upstream of an existing barrier, enhanced/constructed fish barriers may be the only option to prevent the spread of fishes further upstream in that portion of the watershed. Specific sites for newly enhanced or constructed barriers are not proposed in this plan. If or when the need for a new barrier site is identified, the UMP will be amended to include the proposed work.
- Fish stocking will emphasize native species, although historically associated fishes may be stocked as per the "Fishery Management Policy in Wilderness, Primitive, and Canoe Areas." Heritage strains of brook trout are preferred in ponds where habitat and the degree of competition allow viable brook trout populations to be maintained. Historically associated species that are predators on brook trout would not be stocked in waters with good brook trout populations. If the abundance of non-native/competing fishes increases to the point that the viability of the brook trout population declines, then brown trout are likely to be stocked.
- Conduct biological surveys of waters within the Unit as required.

LAND PROTECTION

Present Conditions:

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

The Unit has 38.8 miles of boundary lines that must be maintained on a regular basis, 10.4 miles of which follow riparian or highway boundaries.

Objectives:

- Locate and post all boundary lines on a scheduled basis.
- Physically identify APSLMP Unit designations on the ground for administrative and public use.
- Recommend reclassification of Forest Preserve parcels where reclassification would better define the Unit and where those parcels would be expected to conform to the Guidelines and Criteria for Wilderness Areas specified in the APSLMP.

Management Actions:

- Physically inspect the boundary to determine resurvey and maintenance needs; assign a priority to each. Undertake maintenance activity to ensure all boundaries are identified and marked within the five-year implementation of this plan. Brush, paint, and sign all boundary lines at least once every seven years. Mark boundaries where they cross any trail, road, or stream. Monitor boundaries for unauthorized activities, such as illegal motor vehicle and mountain bike entry and timber trespass.
- Sign Unit boundaries with boundary signs identifying the land classification of the Unit. Sign trailheads, trails and other entrances to the GMWC with specific signage identifying the Unit's designation, so that both DEC personnel and the public know individual unit designations.
- The Department recommends that a roughly triangular parcel of Wild Forest approximately 387 acres in size located in the Town of Keene, south of Keene Valley and sharing a common boundary with the GMWA be reclassified as wilderness. The Department has identified no easement, deed reservation or other restriction on this parcel that would preclude inclusion as part of the GMWA.

Man-Made Facilities

TRAILS

Present Conditions:

Trail management involves not just the trail itself, but also the corridor it occupies. Trails are not self-sustaining. Once developed, all trails must receive a degree of maintenance; otherwise non-maintained trails will deteriorate and cause resource problems.

An inventory of GMWC trails was completed in 2001 and has been incorporated into a trails classification system, patterned after the U.S. Forest Service's Nationwide Trails Program as endorsed by the U.S. General Accounting Offices, 1989 (Appendix II). DEC has incorporated this system into its GMWC trails program and each trail has been assigned a classification based on its present condition and level of use. Five trail classifications are used ranging from unmarked footpaths (Class I) on through to intensively maintained trunk trails (Class V). Trail standards and maintenance prescriptions, reflecting different types and levels of use, are defined for each class in the Appendices. The classification system acknowledges the fact that all trails do not require the same degree nor frequency of maintenance.

Several sections of the GMWC trail network are poorly located, with long stretches of grade three to four times steeper than present acceptable design standards. As grades approach 50 percent, the point of being able to control erosion is passed. Summit trails, with these long steep grades, tend to channel water and create gullies accelerating erosion (Trapp et.al., 1994). These are “weak links” in the system and require extensive work and investment.

Trail maintenance and reconstruction is needed on the majority of the Unit's trails. DEC relies on volunteers and trail contractors to close the gap. User groups, clubs, and other organizations raise resources, financial and otherwise, for trail work. Contributions come in terms of labor, materials, and planning assistance. Other programs, such as cost-sharing, ADK Chapter, Adirondack 46ers, and ATIS trail adoption also help. The use of contractors and volunteers, though effective, has associated costs and other limitations. For example, DEC personnel must devote time to planning and coordination, training, supervision, and logistical support to volunteers. Trail planning is conducted semi-annually between staff, potential trail contractors, and volunteers.

Many trails in the Unit are marked with “private” organization’s trail markers. These trails were either originally built on private lands which subsequently were purchased by the State or were built on Forest Preserve lands through the initiative of private individuals or organizations with implicit permission of the Department. By and large, maintenance of these trails continues to be undertaken by the organization identified on the private markers on those trails.

In 1989, the Department acquired a parcel of land between New Russia and Elizabethtown for the purpose of providing public access to Iron Mountain. This parcel had been logged prior to State acquisition and a resulting network of skid trails and lumber roads provide access to a point very close to the summit of Iron Mountain. The parcel extended State ownership to the highway and would provide for parking for users of the area.

The Town of Keene has recently initiated an effort to reestablish the “Valley Trail,” an historic trail that connected the hamlets of St. Huberts, Keene Flats (Keene Valley) and Keene. Portions of this route originally lay on lands that are now part of the GMWC.

Several popular rock climbing areas are accessed by one or more access trails which, rather than being designed, have been created by use. These trails follow no sort of order and are often in locations that are causing compaction, erosion and other related resource impacts.

Objectives:

- Provide visitors with a trail system that offers a range of wilderness recreational opportunities in a manner that keeps physical and visual trail and resource impacts to a minimum.
- Maintain and reconstruct trails to appropriate wilderness standards.
- Identify need for trail relocations and/or need for new trails.
- Provide a unified system of trail signage and markers on Forest Preserve lands.

Management Actions:

- Formally adopt, as a matter of Department policy, the trails classification and standards system contained in the Appendix II for all trail management activities. Under this system, all developed trails will be maintained, relocated, or reconstructed to specified standards. Wilderness trail maintenance will emphasize resource protection and visitor safety rather than user convenience or comfort.
- Develop LAC indicators and standards for extent of soil erosion on trails.
- Develop LAC indicators and standards for noise on trails.
- Attempts should be made to formalize public recreation easements on trails that currently lack deeded public access rights. Deeded easements shall be the preferred mechanism, however revocable easements should be pursued where land owners prefer not to grant permanent public access. In cases where public access has been denied, connecting trails on Forest Preserve will be brushed in and closed, with no additional maintenance permitted.
- Trail construction, relocation, or reconstruction activities will not be undertaken in the absence of an approved trail project plan.
- Trail maintenance will include removal of downed trees, ditching, clearing of brush, water bar construction and cleaning, bridge repairs and reconstruction in accordance with annual work plans and availability of funds. Bridge repair and construction will occur only in cases where public safety and/or resource protection is jeopardized.
- The Adirondack Park Agency will be consulted in any trail management activities in wetlands and in areas adjacent to wetlands to determine if an Agency wetlands permit is required.
- Utilize the existing network of abandoned skid trails and logging roads on the Iron Mountain parcel to establish a Class III trail to the summit of Iron Mountain.
- Cooperate with the Town of Keene in the Valley Trail project. Preference in reestablishment of sections of the Valley Trail in the GMWC should be given where the original route can be utilized. In situations where a new route may be necessary, establishment of sections of the Valley Trail in the GMWC should be considered when (1) the original route can not reasonably be reestablished on private lands, (2) public access from public roadways is secured via written easement (either deeded

Section 4 – Proposed Management Actions

public easement or a revocable easement) on both ends of the trail segment, and (3) adequate off-highway parking has been secured. In no situation will reestablishment of section in the GMWC be considered without public access on both ends of the trail segment secured by a written (deeded or revocable) easement. Should a revocable public access easement to a trail segment in the GMWC be lost, the trail segment will be brushed in and marking and maintenance of the trail will be discontinued. All sections of the Valley Trail in the GMWC or other Forest Preserve parcels will be marked using official Department markers.

- Trail sections, vulnerable to excessive damage, which cannot be relocated, will be designated and closed during wet seasons. Postings will be done at trail heads and through the media. Voluntary compliance will be the first strategy employed; mandatory regulation and enforcement will be the actions of last resort.
- Ladders made from natural materials may be used to assist users over Class III, IV or V trails on certain slopes in order to protect soils and vegetation if no alternatives exist. Devices such as cable and ropes are non-conforming improvements (APSLMP, 2001, Page 21) and will not be utilized.
- Contractual and volunteer trail maintenance agreements, approved by DEC, will be renewed annually and additional volunteer agreements will be sought.
- Marking informal trails with plastic ribbons, paint, or blazes or other devices without DEC approval will be prohibited by regulation.
- Trails signed with other than official DEC trail markers or signage will be replaced with official DEC signage and markers over the five year life of the plan to comply with a 1982 Division directive regarding trail marking. Trails adopted by various organizations will be formalized using the Adopt-a-Natural Resource program (ONR-1). Appropriate signage and recognition will be utilized to recognize those organizations' role in maintenance as provided for under ONR-1.
- Access trails to rock climbing areas will be identified and classified as either Class II or III trails. All trails will be maintained, relocated, or reconstructed to specified standards, as identified in the trails classification and standards system.

TRAILHEADS

Present Conditions:

The GMWC is served by seven developed entry points. Four trailheads are situated on private land, with deeded access guaranteed on only one. The remaining three are all situated on Forest Preserve lands. A trailhead is defined as the starting or termination point of one or more designated trails at a point of entrance to state land which may contain some or all of the following: vehicle parking, trail signs, and peripheral registration structures (Van Valkenburg, 1987). A trailhead classification system was adopted in 1986 to provide for consistency in their location and development. Class I trailheads are the most developed and are found at the major entrances to backcountry. Class II and Class III are encountered at lesser used trails with correspondingly less development.

Managing parking at trailheads is a problem at popular trailheads on peak weekends and holidays. Terrain constraints along Rt. 73 are limiting factors in location and expansion of parking facilities. The mountainous terrain often results in ingress to and egress from these parking areas on blind turns and areas with little visibility to passing motorists. Of the four trailheads on Route 73, only one has any official parking area, the remaining three rely on road shoulder parking. When parking areas reach

capacity, visitors park along roadsides, and occasionally trespass on private lands and restrict private rights-of-ways. Improper and unsafe parking remains a problem at other Route 73 access points and is a problem shared by DEC, the Department of Transportation (DOT), and town governments. These issues were identified in the Route 73 Scenic Corridor Management Plan. Potential funding sources exist for improvement of pull-off parking areas identified in this plan.

The APA has long been aware of parking safety and overuse problems at trailheads along the Rte. 73 corridor. As a followup to the development of the Route 73 Scenic Corridor Management Plan, APA applied for, and received, federal funds under the Transportation Equity Act for the 21st Century (TEA-21) to inventory and study the parking related safety problems along the Route 73 travel corridor and make some infrastructure improvements. The project, expected to be complete by the end of 2003, will examine the nature and extent of trailhead parking and public safety use problems along Rte 73, develop an overall management plan to mitigate these safety related problems, and make appropriate physical improvements to identified selected priority trailhead parking locations consistent with applicable APA, DOT and DEC statutory and regulatory requirements.

In 1999, DEC and the Town of Keene implemented a parking shuttle system for the Garden which significantly reduced management problems with parking at the Garden trailhead. The demonstration project was continued in 2000 and 2001 and is being considered for a long-term solution to the Garden parking problems identified in the HPWC UMP. This program, if adopted as a long-term program, has the potential to address some of the parking concerns identified at other points on Route 73.

The Town of Keene has established “No Parking” zones on town highways leading to popular trailheads such as at the Adirondack Mountain Reserve.

Litter is picked up by volunteers and DEC personnel. Adjunct facilities, such as privies, trailhead shelters, and signs are provided at the more popular trailheads.

Objectives:

- Provide and manage adequate trailhead facilities to protect resource values and to accommodate visitor needs.
- Indirectly manage interior use by balancing parking lot capacities to interior visitor capacities.
- Prohibit parking on access roads adjacent to parking facilities.
- Mitigate parking problems in cooperation with affected parties.

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Management Actions:

- Revisit, analyze, and update existing easements to determine improvement needs. Where public access is presently allowed, but not secured by easement, the Department shall seek either revocable or deeded easements to ensure continued public access consistent with the landowner's wishes.
- Erect signage alerting motorists to upcoming trailheads along Route 73. Work with local government, DOT and State Police to establish no-parking zones adjacent to road shoulder parking facilities to reduce unsafe parking.
- Maintain the present parking area capacities as peripheral control for managing interior use. Improvement or relocation of parking areas should be considered in highway right of way maintenance by either DOT or through Scenic Corridor Management Plan action items.
- Improve the existing road side parking area on the Iron Mountain tract adjacent to Route 9 to accommodate parking for six vehicles. This trailhead would accommodate the parking for the new Iron Mountain trail identified in the Trails section above. The trailhead would be established as a Class II trailhead.
- Recommend improvement of the existing parking area at the Ridge Trail (Zander Scott) Trailhead consistent with the Route 73 Corridor Management Plan.
- Investigate expansion of the Keene Hiker Shuttle to service the Round Pond trailhead during summer holiday weekends.
- Schedule routine maintenance of trailheads and litter removal.
- Develop partnerships with local governments and outside volunteers to maintain and snowplow roadside trailhead parking facilities.

CAMPSITES

Present Conditions:

Despite the size of the GMWC, the land area for environmentally suitable camping is quite small. High elevation eco-types, steep mountains, rock outcrops, wetlands, poorly drained soils, etc., severely restrict camping and intensify the demand for available campsites. Campsite suitability diminishes with an increase in elevation due to shallow, highly erodible soils, with poor drainage, and a coniferous tree overstory that tends to hold moisture. As noted above, the APSLMP limits camping to designated sites at elevations between 3,500 and 4,000 feet and prohibits all camping above 4,000 feet because of fragile ecological conditions.

Existing camping regulations permit camping only at locations that are at least 150 feet or more from a road, trail or water or at specific sites designated by the Department (6 NYCRR §190.3(b)). The former is referred to as the "150 foot rule" which permits "at-large" camping subject to those requirements. Currently camping is prohibited on sites above 4,000 feet from April 30 to December 15 of each year to protect fragile alpine environments (6 NYCRR §190.3(b)). This does not comply with APSLMP requirements that prohibit camping above 4,000 feet at all times. There are no regulations to restrict tent camping or provide separation distances at or near lean-tos.

Also present in the unit are several campsites along roadsides that are directly accessible by motor vehicles. These locations exist along the Boquet River adjacent to US9.

Objectives:

- Reduce, eliminate, or mitigate the adverse effects on natural resources that result from improperly located campsites.
- Comply with the APSLMP campsite standards to disperse use.
- Eliminate all camping above 4,000 feet at all times to comply with the APSLMP.
- Maintain historical camping opportunities where such use is compliant with APSLMP guidelines.

Management Actions:

- The on-going campsite and lean-to inventory and monitoring program in the eastern High Peaks will be expanded to cover the GMWC. This study will be used to identify and designate campsites that comply with APSLMP standards by YEAR THREE of this plan. Campsites will be selected on physical criteria and the sight and sound criteria of the APSLMP. Actions to address inappropriate motor vehicle access to sites will be implemented at the completion of the campsite study and the TEA-21 improvement project for parking facilities on NY73. Such actions may include road closure with barricades or the designation of an off-highway parking area and the closure of related campsites.
- Develop LAC indicators and standards for extent of soil erosion at campsites.
- Develop LAC indicators and standards for noise in campsites.
- Develop LAC indicators and standards for condition of vegetation in camping areas
- A primitive tent site, commonly referred to as a designated campsite, is one identified by a DEC permissive sign or disk, providing space for not more than three tents, designed to accommodate a maximum of eight people on a temporary or transient basis, and located so as to accommodate the need for shelter in a manner least intrusive to the environment (APSLMP, 2001, Page 18). Campsites will be designated to direct campers to previously used disturbed areas, to define proper camp locations, to disperse use, or limit adverse impacts to resources and other campers.
- Camping sites adjacent to lean-tos that do not comply with APSLMP guidelines will be closed and revegetated. Sites will be relocated if appropriate locations can be identified.
- So-called “at-large” camping will be permitted in accordance with 6 NYCRR §190.3(b). This regulation prohibits camping within 150 feet any road, trail, spring, stream, pond, or other body of water except at camping areas designated by the department.
- “At-large” camping will be prohibited above 3,500 feet in elevation.
- Where terrain permits, primitive tent sites shall be properly screened and a minimum of 150 feet from water and trails. Where the 150 ft setback can not be achieved sites may be located at lesser setback distances, provided however that in no case shall they be less than 50 feet from such features regardless of site durability.
- All closed campsites will be restored to a natural condition. Fire rings, tree stumps and other evidence of past use will be removed.
- Annual work plans shall incorporate campsite maintenance and rehabilitation.

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- Primitive tent sites in popular areas will be monitored annually; all campsites throughout the wilderness will be reinventoried every 5 years. Indicators and standards will be developed for primitive tent sites. Primitive tent sites will be closed, revegetated and/or relocated when standards are exceeded.
- Primitive tent sites at elevations between 3,500 and 4,000 feet will be monitored and evaluated to determine their effectiveness in reducing resource damage and dispersing use.

SIGNS

Present Conditions:

Signs are provided to mark trails, minimize impacts, and provide safety information. Signing is kept to a minimum to avoid interfering with wilderness values and guidelines.

Currently, Lands and Forests, Operations, and Fish and Wildlife all use signs in the Unit. Trailheads and much of the wilderness boundary are not well identified. Trailhead signing is limited to small signs on standards. Several entrances have register boxes which provide minimal information. Interior signing is limited to trail junctions, special information and regulatory signs.

Progress is being made to use smaller sign boards (6"x 16") at interior locations. Sign theft and vandalism is an occasional problem near wilderness boundaries.

Objectives:

- Provide for the minimal use of signs necessary to manage and protect the wilderness resource and user safety.
- Bring current signing into compliance with wilderness standards: i.e., made of rustic materials and limited in number (SPSLMP, 2001, Page 22).

Management Actions:

- Update and maintain sign inventory annually.
- Coordinate and review all sign needs through a single area manager.
- Signs will be provided for visitor safety and resource protection, not for the convenience of the user.
- Signs may be erected at trail junctions, showing directions with arrows; wording will be reduced to the minimum necessary.
- No new memorial trail signs or plaques of any kind will be placed in the Unit without written Department approval.
- Minimize regulatory signs at interior locations in favor of signs posted at trailheads or access points and published, where feasible, in brochures and maps or otherwise made available to users prior to entry into the Unit.

LEAN-TOS

Present Conditions:

Prior to the advent of light-weight backpack tents, lean-tos were erected for user convenience and to provide shelter from inclement weather. The structures were often built immediately adjacent to trails and close to water and firewood sources. They were sometimes clustered in scenic areas to accommodate increased visitor demand and to facilitate maintenance. Many were afforded stone and concrete fireplaces, pit privies, and picnic tables.

During the summer season, lean-to sites are generally dominated by novice users and/or large groups. Many do not bring tents or possess adequate camping gear. This lack of proper equipment and personal shelter causes serious safety problems when the lean-tos are full and visitors are forced to seek shelter elsewhere.

The APSLMP acknowledges lean-tos as conforming structures in units classified as Wilderness, provided they meet minimum setback distances (100 ft.) from water and have proper sight and sound separation distances from adjoining campsites or other lean-tos (APSLMP 2001, Page 21.).

The GMWC presently has only one lean-to.

Objectives:

- Limit lean-tos to appropriate locations as prescribed by the APSLMP.

Management Actions:

- Any future lean-to(s) will be set back a minimum distance of 100 feet or more from the water as required by the APSLMP. This same minimum setback will also apply to trails where feasible.
- The maximum capacity of a lean-to site (including associated tent camping) shall not exceed 8 persons.
- Communicate any facility changes to the public through the media, the Unit's information and education programs, trailhead messages, and personal contact.
- No new lean-tos are proposed at this time. Should the Department decide to make any such proposal, it will be done as an amendment to this UMP.

SANITATION

Present Conditions:

Improper waste disposal can affect the environment and the health and safety of wilderness visitors. Most overnight use is concentrated around lakes and streams. As use increases, water quality protection becomes increasingly important. Some hikers have reported contraction of protozoan parasitic diseases, such as giardiasis, from contaminated drinking water sources. Improper disposal of human waste in the backcountry, coupled with high concentrations of users, compounds this problem. Soaps, shampoos, and other wastes affect the delicate chemical/biological balance of area waters. Soap suds and leftover food scraps can be found on the shores of many lakes and streams.

Public cooperation with the “pack it out” policy for litter removal has helped considerably. However, litter still remains a problem in some areas, i.e. trailhead parking facilities, popular campsite and lean-to locations, and in fire rings. Broken glass and unburned refuse take much expense, time to clean-up and are a safety risk to Department staff and volunteers cleaning up these areas.

Proper human waste disposal is of critical importance in regularly visited places. DEC uses pit privies (outhouses) in areas where use levels are usually high and adequate dispersal of “catholes” - buried

Section 4 – Proposed Management Actions

wastes - is difficult. The APSLMP requires that all pit privies be located a minimum distance of 150 feet from water (APSLMP, 2001, page 21.). Aside from high elevation sites (above 3,500 feet) having cool, wet, and shallow soils inhibiting decomposition, pit privies can be effective in minimizing health risks and water contamination if they are properly located and maintained. Chemical, vault and composting toilets have not been used in the wilderness. The appropriateness of these toilets in wilderness is questioned (Cole, 1989). Decisions about appropriateness involves tradeoffs between increasing the number and extent of toilet facilities for sanitary benefits and reducing levels of use in problem areas.

Objectives:

- Prevent or mitigate the adverse chemical/biological and visual effects that result from the improper disposal of human waste.

Management Actions:

- The present use of “Porta-john” at the Roaring Brook Falls trailhead during the summer months will be continued since locations for environmentally sound location for privy location are not available.
- Information and education efforts and LEAVE-NO-TRACE™ programs will stress proper treatment of drinking water and the need for proper human waste disposal.
- The “pack it out” policy for litter will be given renewed emphasis. All litter will be bagged and packed out. Department I&E efforts will include encouraging users not to burn garbage in fire rings.
- Use of any soap or detergent, or the disposal of food scraps in any waters will be prohibited by regulation.
- Campsites will be located where waste disposal will not be a problem (for example, where soil is deep).

CAMPFIRES

Present Conditions:

Even though the number of visitors using portable gas stoves is increasing, there are campfire rings at every established campsite in the GMWC. Virtually every established campsite shows some evidence of fire: blackened rocks, charcoal, hacked trees, and occasionally partially burned garbage, melted and broken glass. With the exception of the alpine and subalpine zones where fires are prohibited above 4,000 feet, campfires can be built almost anywhere. They occasionally are improperly built in parking lots, in the middle of trails, inside lean-tos, and along the immediate shorelines of lakes and ponds. “There is no question that camp fires have substantial environmental impacts” (Cole and Dalle-Moll, 1982).

Conversely, campfires have historically been associated with the camping experience. Many users value the presence of a campfire as an important part of their backcountry camping experience. While many users now carry portable backpacking stoves, eliminating their need for a fire for cooking, the fire remains a important social focus. Existing Department regulations allow for fires for the purpose of “cooking, warmth or smudge” on most public forest land in the State (6 NYCRR §190.1[a]) except for portions of the HPWA where stricter regulations have been promulgated...

Physical impacts associated with campfires in the backcountry are numerous. Although actual fire sites are quite small, a more serious aspect involves firewood gathering which by itself causes widespread impacts. This activity greatly increases the area of disturbance around campsites. The disturbed areas can be 10-20 times greater in size than the actual devegetated zone around the campsite. Campfires consume wood which would otherwise decompose and replenish soil nutrients. Excessive firewood gathering has fostered the cutting of live and standing dead trees once all available on-ground sources are consumed. The latter are habitats to many cavity nesting birds and insects. Pulling off limbs results in visual impacts for other users. Unburned refuse left in fire rings has attracted wildlife in search of food and leads to increased human/wildlife conflicts; especially with bears.

DEC has attempted to build fire rings in popular locations to concentrate fire use in order to avoid excessive damage. DEC staff routinely advocate the use of small portable gas stoves. With the exception of an open fire ban in the eastern zone of the HPWA, few DEC rules and regulations currently address fire use.

Objectives:

- Reduce the effects of recreational use of campfires on GMWC natural resources and the natural scene as viewed by visitors.

Management Actions:

- The LEAVE-NO-TRACE™ program will stress proper fire use in appropriate locations, encourage greater use of portable gas stoves, and explain the rationale for avoiding the use of campfires.
- Document campsite areas where serious ecological and/or visual impacts due to fire use are occurring as part of the campsite inventory and monitoring program. Restrict or prohibit fires by regulation in severely impacted areas if needed.
- Campfires shall be prohibited by regulation at an elevation of 4,000 feet or higher, at any time. The following will be used to inform visitors of the closure and the rationale behind it: the unit's overall information and education program; media announcements; permit attachments; maps; and signs.

Section 4 – Proposed Management Actions

- Regulation will be promulgated restricting campfires to only be allowed in safe locations at primitive tent sites (designated campsites), lean-tos or in any other area below 3,500 ft elevation and at least 150 feet from any road, trail, or water.

Public Use and Access

PUBLIC USE

Present Conditions:

Many visitors consider large groups inappropriate and undesirable in wilderness. Aside from behavioral factors, the potential to cause impact varies with party size and the type of user. Parties larger than 8 persons in a group have been documented to cause greater impacts to certain environmental and sociological resources than smaller groups (Cole, 1987, 1989, Hendee, 1990, and USDA Forest Service, 1994). Although large party use in the Unit represents a small proportion of total users, they contribute a disproportionate amount of impact when compared to smaller parties.

Regardless of activity (overnight or day use), large groups commonly create congestion problems in trailhead facilities, on trails, rock and ice climbing sites, and mountain summits. It is very difficult to control and confine large groups in vulnerable locations, such as on alpine summits or riparian areas. The rate of unacceptable change on a particular resource can be accelerated by large group occupancy of a site over a short period of time. Higher noise levels and sound issues are associated with large groups.

Large camping groups require greater campsite space and often clear areas to accommodate additional tents, store equipment, or make room to eat and congregate. Large groups cooking with wood fires generally consume greater amounts of fuel wood and extend firewood gathering areas. Impacts tend to be more spread out and extend well beyond campsite boundaries. DEC regional practice limits overnight groups in Wilderness Areas to a maximum of 12 individuals. Forest rangers issue the permits and are given the authority to lower this ceiling depending on campsite suitability, time of desired use, and location.

There are no restrictions limiting day use. Groups of any size may enter the GMWC. Day use groups exceeding 20 persons are increasingly common. With restriction of day use group sizes in the HPWA, trails in adjacent units, including the GMWC are seeing increasing numbers of large day groups. It is a major source of visitor dissatisfaction when large groups, just by their sheer size, displace other users. There is also a problem when groups from one organization split into several smaller groups and then rejoin at interior locations, often fragile summit areas.

The number of pets, particularly dogs, brought into the backcountry is increasing. Dogs are encountered on trails, in campsites, along shorelines, and atop summits. Some dogs are well controlled; others are not. DEC receives general complaints of barking dogs, dog fights, dog bites (to humans and other dogs) threatening actions as dogs establish territories in and around campsites, summit trampling by unleashed dogs, and fecal contamination of water resources, conflicts with bears, and harassment of deer and other wildlife.

Many wilderness managers agree with Cole (1996) that greater attention be given to the management of day users – the particular problems day users create and the varied recreation opportunities they seek which may or may not require a wilderness setting.

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While long term data on use of the GMWC is lacking, Department staff have observed an increase in recreational use of the GMWC since adoption of use restrictions in the nearby HPWA. While recreational use in the HPWA has decreased in the last 3 years, use in the GMWC has increased. Use of the GMWC by larger groups has also increased, with greater numbers of tour busses dropping off large numbers of users at GMWC trailheads. Wilderness management literature (Hendee, et.al 1990, Cole 1989, 1994, Cole, Petersen, and Lucas, 1987) have correlated larger group size with increasing ecological and social impacts. It is believed that restrictions on group size in the HPWA has shifted these impacts to the DMWA and GMWC.

Selecting a specific group size regardless of activity requires judgement; no magic formula exists to calculate an ideal number. The situation is parallel to setting speed limits to control use on highways. Research indicates that the size of a group should be low, ideally 4-6 people per group, but generally less than 10 persons per party to be effective in reducing environmental and sociological impacts (Cole, and others, 1987).

Objectives:

- Manage visitor use to keep impacts on the resource and experiences of all visitor at an acceptable level consistent with the concept of wilderness as described by the APSLMP.
- Monitor changes in use and level of use over time.
- Encourage both overnight and day users to keep parties small and establish desirable maximum party sizes.
- Provide fair and equitable access to interior camping facilities.
- Manage rock climbing sites to minimize environmental impacts.
- Keep the effects of visitor use on resources to a minimum.
- Increase visitor self-sufficiency and knowledge of personal protection.

Management Actions:

- Adopt regulations to limit the maximum number of persons per campsite to eight. This will be implemented over a two year period.
 - YEAR ONE – Inform the public of the impending change through an information and education effort.
 - YEAR TWO – Adopt a specific regulation to conform with the APSLMP to reduce the maximum number of persons per campsite to eight.
- A maximum day use limit of 15 persons per party will be established by regulation in YEAR ONE.
- When larger groups split up to meet size limits, each subgroup must be equipped as a self-sustaining group. Each division of a larger group must have the ability to treat their own water, cook their own food, etc. and must camp and travel at least one mile apart from other divisions of the group so as not to violate group size limits. Day use groups must adhere to this same requirement and not congregate into larger groups on trails or at destination points.
- Develop uniform method of collecting use data across the unit.
- Develop LAC indicators and standards for extent of soil erosion at rock climbing areas.
- Develop LAC indicators and standards for noncompliant behavior.

Section 4 – Proposed Management Actions

- Develop LAC indicators and standards for managing conflicts between different user groups.
- Information about limits must be disseminated through the Unit's information and education and LEAVE-NO-TRACE™ programs and regulations will be enforced. Informing visitors of limits during trip planning and/or prior to arrival is essential.
- Those groups desiring a larger group size for day and overnight activities will be referred to appropriate Wild Forest areas where a higher degree of recreational use can be sustained and is permitted by the APSLMP.
- All pets, except hunting dogs in appropriate hunting season under the control of a licensed hunter, will be required by regulation to be leashed at campsites and lean-tos, elevations above 4,000 feet, or at areas where the public has congregated. No dog may be left unattended at any time and must be under the complete control of the owner or handler at all times.
- Adopt regulations to:
 - Prohibit the possession of glass containers, other than those necessary for medication.
 - Prohibit the use of any audio device which is audible outside the immediate area of a primitive tent site.
 - Prohibit the use of any motorized equipment by the public, as required in the APSLMP.

ROCK AND ICE CLIMBING

Present Conditions:

The Adirondack region remains one of few areas in the country where the placement of fixed climbing anchors (bolts) is not common–place. The reputation of the region is one of traditional climbing, one where bolts and pitons are the exception rather than the rule. The use of fixed anchors, particularly fixed expansion bolts, placed in holes drilled into the rock has been an issue of controversy in public land management (Access Fund, 2001). Fixed anchors have long been used by climbers as a method of protection where use of traditional removable protection (camming devices, chocks and nuts) is not possible. Fixed anchors, including bolts and slings placed around trees have also been used for rappel anchors. This practice can provide some level of protection to the natural resource by reducing damage to trees by girdling, caused when rappel ropes wrapped around trees are pulled down at the end of a climbing session. When placed indiscriminately, bolts and related fixed anchors can mar cliff faces and result in visibility impacts from the ground. The use of fixed anchors as a resource protection tool, when properly managed can be an important management tool to protect the natural resource. Use of fixed anchors for protection on a climb that might not be possible without the placement of fixed or artificial anchors has engendered much more controversy both within and without the climbing community. The use of fixed anchors for this purpose in some areas has fundamentally altered the sport of climbing, resulting in a “climbing gym” atmosphere where numerous bolts are used to create a route where none previously existed. While this has occurred in some locations on Forest Preserve, it has not yet occurred in this Unit. The appropriateness of this use of fixed anchors considered to some as contrary to wilderness philosophy.

At this point in time the placement of bolts, or other fixed anchors which involve drilling or defacement of the rock is a violation of Department regulations (6 NYCRR 190.8(g) -- “No person shall deface, remove, destroy, or otherwise injure in any manner whatsoever any . . . rock, fossil or mineral . . . excepting under permit from the Commissioner of Environmental Conservation and the Assistant

Commissioner for State Museum and State Science Service . . .”). The APSLMP does not discuss the appropriateness of fixed anchors in the Adirondack Forest Preserve.

Large rock and ice climbing groups have become a management issue at several locations in the Unit. Large groups cause a disproportionate amount of physical impact to a site, have a large social impact, and often exhibit poor supervision by group leaders causing safety issues both with other members of the group and with other climbers in the immediate area. The very nature of the climbing activity concentrates use on a very small area. Individuals who are not climbing congregate at the base of the climb, causing loss of vegetation and erosion. Erosion, compaction and soil loss at the base of several top-rope climbs has been measured in excess of three feet. This congregating effect also impacts other climbing parties since multiple climbing routes begin in close proximity to one another and open space at the base of the climbs is already quite limited. Due to the limited number of climbing routes suitable for group instructional purposes one large group routinely can monopolize all the suitable “top-rope” routes in an area. Often single individuals from these climbing groups will hike in to a climbing area in advance of the remainder of the group to “claim” use of favored top-rope climbs by establishing belay systems, effectively excluding any other individuals or groups from using those routes.

Objectives:

- Manage visitor use to keep impacts on the resource and experiences of all visitors at an acceptable level consistent with the concept of wilderness as described by the APSLMP.
- Monitor changes in use and level of use over time.
- Provide fair and equitable access to rock and ice climbing resources.
- Manage rock climbing sites to minimize environmental impacts.
- Keep the effects of visitor use on resources to a minimum.

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Management Actions:

- All rock climbing groups will be limited by regulation to a maximum size of 10 persons and limited to utilizing a maximum of three roped climbing routes at any given time. Affiliated groups shall maintain a separation distance of at least 1 mile. Department regulations will be promulgated to take effect in YEAR TWO of the plan implementation. The public will be alerted to the impending change through an information and education effort during YEAR ONE. To minimize the risk associated with rock and ice climbing rescue operations, the Department will continue rescue training operations in these areas. It is expected that the size of the administrative use of climbing sites by the Department for rescue training will exceed the group size limits on no more than 8 occasions in a given calendar year. The regulations will not prohibit this use.
- Stabilize soil at the top and base of climbing routes where erosion is identified as a problem.
- A temporary moratorium will be established relative to the establishment of new, or replacement of existing, bolts or fixed pitons. The Department will undertake an inventory of all existing fixed anchors in the Unit during Year One of implementation of this plan. The Department will convene a focus group, including Department and Agency staff, members of the climbing community, environmental organizations and other interested parties to develop a park-wide policy on the management of fixed anchors on Forest Preserve lands. Such group will be convened during Year One of implementation with establishment of policy by the Department by the end of Year Two of plan implementation.
- Access trails to climbing routes will be identified and classified as a Class 2 Trail (Path). Access trails at the Roaring Brook Falls will be classified as a Class 3 trail (Primitive Trail).
- At popular climbing areas, kiosks providing climbing-specific LEAVE-NO-TRACE™ information shall be erected within 500 ft. of the wilderness boundary and in conformance with the APSLMP Boundary structures and improvements and boundary marking guidelines.
- Information about limits will be disseminated through the unit's information and education and LEAVE-NO-TRACE™ programs and regulations will be enforced. Informing visitors of limits during trip planning and/or prior to arrival is essential.

ACCESS FOR PERSONS WITH DISABILITIES

Present Conditions:

Past management of the GMWC has not focused on provision of access for people with disabilities. Slopes and other terrain constraints make most of the Unit difficult to access. Exposed roots, rocks and other natural barriers limit access. The primitive nature of wilderness coupled with APSLMP guidelines that wilderness be “without significant improvement,” and “generally appears to be affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable” severely limits what forms interior modification can be undertaken. The APSLMP provides for limited development along the periphery of the unit. These areas remain the most likely candidates for development of accessible facilities.

Objectives:

- Increase access opportunities for people with disabilities where such development is economically feasible, does not alter the fundamental nature of existing programs, is compliant with Department regulation and policy, and conforming under the guidelines of the APSLMP.

Management Actions:

- Incorporate accessible signage at trailhead access points.
- Identify potential opportunities in the unit.
- Conduct assessment of all facilities.

Proposed Regulations

Several of the management proposals outlined in this section require the promulgation of new rules and regulations in accordance with Department policies and procedures, the State Environmental Quality Review Act (SEQRA), and the APSLMP. Statutory authority for regulations is found in the ECL §9-0105(3), ECL §9-0105(3) and in of the Adirondack Park Agency Act (Executive Law §§816.1 – 816.3). Executive Law §816.3 directs the Department to develop rules and regulations necessary to implement the APSLMP. Existing regulations relating to public use of State lands under the jurisdiction of the Department are found in 6 NYCRR, Part 190. These proposed regulations constitute the minimum level of direct regulation necessary to assure APSLMP compliance and directly influence visitor behavior to protect resources and the experiences of visitors.

Amend 6 NYCRR §190.13 (Wilderness Areas in the Adirondack Park) to apply the following regulations to the GMWC:

- 190.13(c) Group size restrictions: which prohibit day use groups of sixteen or more people, prohibit camping groups of nine or more people on or after July 1, 2004, and prohibit larger groups unless separated into smaller groups which do not exceed such limitations and such smaller groups maintain a separation distance from each other of at least one mile at all times.
- 190.13(d) Camping restrictions which prohibit tent platforms or camp structures other than tents, tarps, lean-tos, or those composed of snow, prohibit camping above 4,000 feet in elevation, and prohibit camping above 3,500 feet in elevation but equal to or less than 4,000 feet in elevation except at a primitive tent site.
- 190.13 (e) prohibitions on campfires above 4,000 feet in elevation and at elevations of 3,500 feet or less at any location within 150 feet from any road, trail, spring, stream, pond or other body of water except that a campfire may be ignited or maintained [in a fire ring] at a primitive tent site or lean-to site.
- 190.13(f) Miscellaneous Restrictions requiring registration at trail registers, prohibiting the use of any audio device which is audible outside the immediate area of a campsite, prohibiting the use soap or detergent in any pond, stream or other water body, prohibiting the disposal of any food scrap, food matter or food container in any pond, stream or other water body, prohibiting the use any motorized equipment, prohibiting the marking of trails with plastic ribbons, paint, blazes or other devices, cut or clear trails, or the marking of summits with canisters except by written permission of the department, and prohibiting unattended pets or fail to maintain complete control over the pet; pets not under the complete control of their owners. Also, failing to have proof of a valid and current rabies inoculation for any dog which is accompanying them, erecting or maintaining any commemorative features, such as signs, plaques or markers depicting cultural sites; undertaking any

Section 4 – Proposed Management Actions

research project except under permit of the department, and possessing a glass container, except that glass containers which are necessary for the storage of prescribed medicines shall be exempt from this prohibition.

Promulgate the following additional regulations, as a subdivision of 6NYCRR §190.13:

- Promulgate the following additional rules and regulations, under 6 NYCRR §190.13, pertaining to rock climbing at climbing sites:
 - In the Giant Mountain Wilderness Area no person shall
 - be part of a group organized for the purpose of rock climbing which exceeds 10 persons.
 - be a member of an affiliated group whose total number exceeds the numerical limitations established above.
 - be a member of a climbing group utilizing more than three distinct climbing routes at a given time.
 - In the Giant Mountain Wilderness Area, every person must leash pets at primitive tent sites, at lean-to sites, at elevations above 4,000 feet, or at other areas where the public congregates, and must maintain complete control over their pet provided that this provision shall not be applicable to hunting dogs which, with a licensed hunter, are actively hunting during appropriate hunting seasons at locations other than primitive tent sites, lean-to sites, at elevations above 4,000 feet, or at other areas where the public congregates.

Section 5 – Schedule for Implementation and Estimated Budget

The following tables outline a schedule for implementation of the proposed management actions and their estimated costs. Accomplishments are contingent upon sufficient staffing levels and available funding. The estimated costs of implementing these projects is based on historical costs incurred by the Department for similar projects. Values for some projects are based on projected costs for service contracting. These cost estimates do not include capital expenditures for items such as equipment, nor do they include the value of program staff salaries. Where existing staff resources will be utilized for implementation of a specific action, an estimate of the amount of staff time required to complete that task is listed.

Annual Maintenance and other Activities	Estimated Annual Cost
Boundary Line Maintenance (7 miles/year @ \$400/mi.).	\$2,800
Basic Trail Maintenance – blowdown removal and drainage clearing.	\$19,000
Expand the funding for the Summit Steward program to incorporate a weekend presence on Giant Mtn.	\$5,000
Remark 1/5 of trails marked with private trail markers with official DEC Foot Trail markers. Establish alternate means of recognizing trail maintenance efforts of other organizations.	\$500
Enact voluntary trail closures during “frost-in” and “frost-out.”	n/a
Conduct biological, chemical, and/or physical surveys of selected Unit waters to assess management needs and to determine progress towards the objectives stated in this plan.	3 person-days
Stock fish in Unit water consistent with Bureau of Fisheries policies and the <i>Programmatic Environmental Impact Statement on Fish Species Management Activities of the New York State Department of Environmental Conservation, Division of Fish and Wildlife (1980)</i> .	\$850
Total Cost – Annual maintenance and other activities	\$28,150

Section 5 – Schedule for Implementation and Estimated Budget

Year 1 (SFY 2003)	Estimated Cost
Rock Climbing LNT Kiosks for Roaring Brook Falls and The Spider's Web/Lower Washbowl Cliff.	\$2,000
Inventory of fixed expansion bolts in unit.	10 person-days
Convene focus group to develop Adirondack Forest Preserve-wide policy on use of fixed climbing anchors.	50 person-days
Upgrade four trailhead registers to Class II standard design.	\$1,200
Trail rehabilitation projects – Roaring Brook Trail.	\$5,000
Trail rehabilitation projects– East Trail to Giant.	\$5,000
Complete trail logs for all unit trails. Develop priority list of trail maintenance needs.	\$2,000
Develop and print GMWC brochure.	\$5,000
Promulgate regulations, as identified.	5 person-days
Limit day-use groups to 15 people per group.	A/a
Baseline inventory of all established campsites.	\$1,000
Develop uniform method of collecting use data across the unit.	3 person-days
Reclaim Giant Washbowl.	\$6,000
Request DOT sign parking areas on Route 73.	1 person-days
Formally request re-classification of 387-acre wild forest parcel in Keene.	4 person-days
Total Cost – Year 1	\$27,200

Section 5 – Schedule for Implementation and Estimated Budget

Year 2 (SFY 2004)	Estimated Cost
Trail rehabilitation projects – Roaring Brook Trail.	\$5,000
Trail rehabilitation projects – Ridge Trail.	\$5,000
Trail rehabilitation projects – Mossy Cascade Trail.	\$5,000
Limit overnight camping to 8 people per group.	n/a
Develop assessment process for disabled assess. Identify potential disabled access possibilities in the unit.	10 person-days
Develop LAC guidelines and standards to monitor environmental and sociological conditions.	30 person-days
Total Cost – Year 2	\$15,000

Year 3 (SFY 2005)	Estimated Cost
Trail rehabilitation – Roaring Brook Trail.	\$5,000
Trail rehabilitation projects – North Trail to Giant.	\$5,000
Reprint DMWA brochure.	\$5,000
Total Cost – Year 3	\$15,000

Year 4 (SFY 2006)	Estimated Cost
Trail rehabilitation projects – North Trail to Giant.	\$5,000
Re-measure/monitor all established campsites.	3 person-days
Total Cost – Year 4	\$5,000

Section 5 – Schedule for Implementation and Estimated Budget

Year 5 (SFY 2007)	Estimated Cost
Trail rehabilitation projects – Ranney, Mossey Cascade, and Spread Eagle trails.	\$5,000
Initiate UMP review and 5–year update.	200 person-days
Total Cost – Year 5	\$5,000

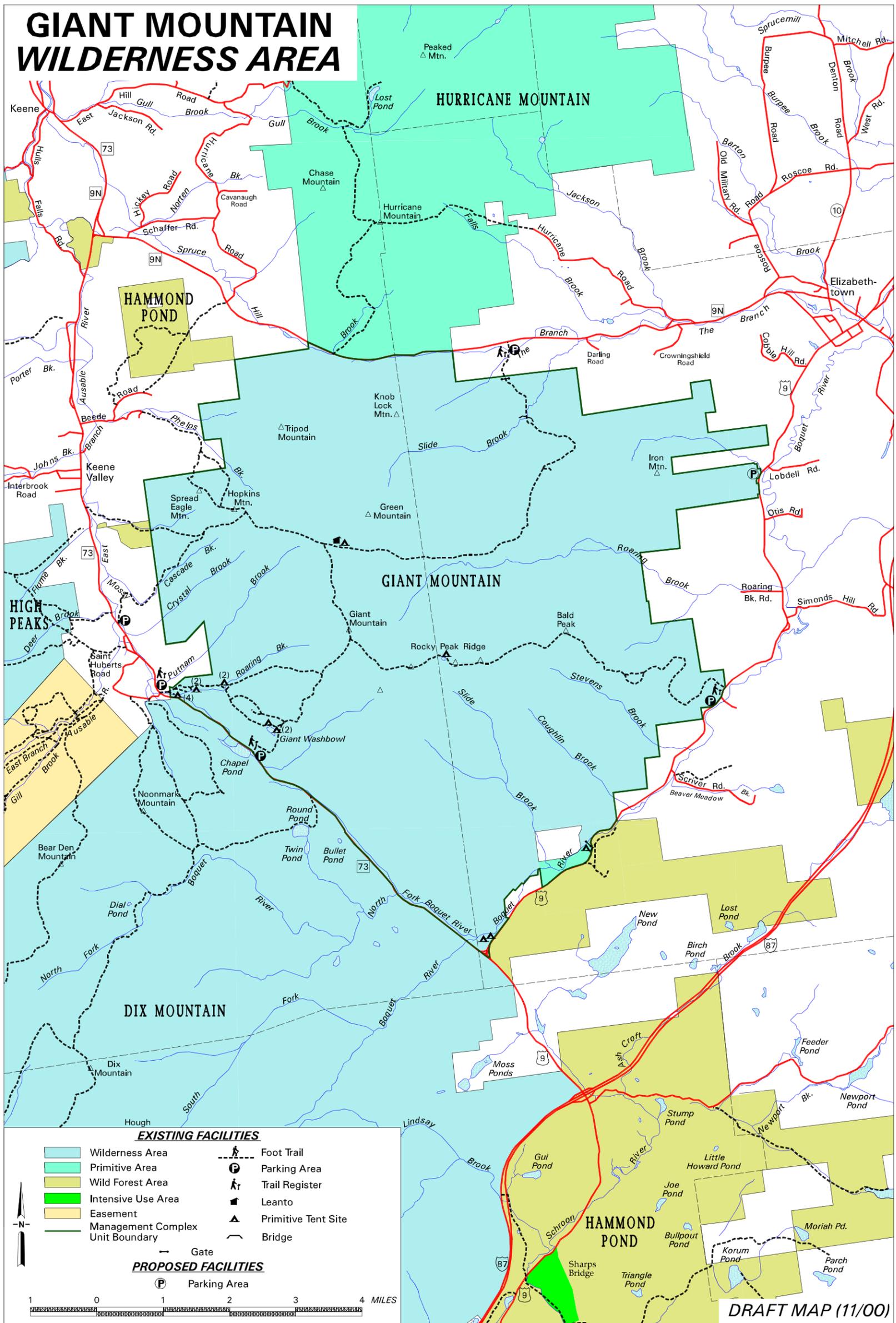
Cost Summary

Annual Maintenance Costs: **\$ 140,750**

Five year annual total: **\$ 67,200**

Total Cost of New Projects: **\$ 207,950**

Appendix I – Unit Map



Appendix II – Facilities

Remote Campsites:	(total 16)	QUANTITY
Boquet River just east of jct Rt 9 and 73		2
East side of BRPA		1
Giant's Washbowl		3
Jct Roaring Brook Trail with trail to Washbowl		2
Lake Marie Louise		1
Vicinity of Top of Roaring Brook Falls		2
Vicinity of Giant lean-to		1
Vicinity of Base of Roaring Brook Falls		4

Pit Privies:	(total 3)	QUANTITY
Giant lean-to		1
Base of Roaring Brook Falls		1
Roaring Brook Trailhead		1 ¹

Lean-tos:	(total 1)
Giant	

Major Foot Bridges	(total 1)
Slide Brook (North trail to Green Mtn)	

Parking Lots	(total 6)		
Name	Location		Capacity
Mossy Cascade trail	Route 73		5 ²
North Trail to Giant	Route 9N		16
East Trail to Giant	Route 9		14
Roaring Brook Falls Trailhead	Route 73		20 ³

¹ "Porta-john" used in this area for months June through October. Removed from site during winter season.

² Estimated road shoulder parking – no official parking area exists at this site

³ Capacity for 12 in parking lot and 8 on highway shoulder

Appendix II – Facilities

Zander Scott Trailhead/ Chapel Pond Slab (rock climbing)	Route 73	40 ¹
Spanky's Wall / Noble Mountain		10 ²

Road Barriers: (total 2)

Access road at BRPA boundary
State boundary on North trail to Giant

Trails – Listed by class

Location/Name	Length (mi.)	Marker	Maintenance Provided by:	Notes:
Class II Hiking Trails – Paths	0.4 mi total			
Spur trail to Owl's Head Lookout	0.1	none	use	Herdpath
Trail around north side of Washbowl	0.3	none	use	Herdpath
Class III Hiking Trails – Primitive Trails	10.9 mi total			
Blueberry Cobble bypass	0.3	red	DEC	Located on East trail to Rocky Peak Ridge and Giant
Spur trail to base of Roaring Brook Falls	0.1	none	ATIS	
Spur trail to top of Roaring Brook Falls	0.2	none	ATIS	
Giant's Nubble from Roaring Brook trail	0.5	ATIS	ATIS	
Giant's Nubble from Ridge trail	0.5	ATIS	ATIS	
Giant's Washbowl from Roaring Brook trail	0.8	ATIS	ATIS	
Ranney trail	1.6 (0.6 ³)(0.3 ⁴)	ADK	ADK	Mileage from Rte 73 to jct with Mossy Cascade trail
Hopkins Mtn. to jct with North trail to Giant	1.3	ADK	ADK	
Hopkins Mtn. via Spread Eagle Mtn.	2.1 (1.3 ¹)	ADK	ADK	

¹ Estimated road shoulder parking – no official parking area. This area provides shared parking for Giant Mtn trail hikers as well as parking for rock climbers accessing any of a number of cliffs in the immediate vicinity, both in the DMWA and GMWA.

² A DOT pull-off area providing parking for rock climbers and bushwhackers

³ Trail length on private land (no easement)

⁴ Trail length in Wild Forest parcel

Appendix II – Facilities

Location/Name	Length (mi.)	Marker	Maintenance Provided by:	Notes:
Hopkins via direct trail	0.9 (0.4 ¹)	ADK	ADK	
Mossy Cascade trail	2.6 (1.0 ¹)	ATIS	ATIS	Mileage from Rte 73 to Hopkins trail
Class IV Hiking Trails – Secondary Trails	15.3 total			
North trail to Giant	7.4 (0.4 ¹)	red	46-R	
East trail to Giant via Rocky Peak Ridge	7.9	yellow	DEC	Mileage from New Russia to jct with Ridge trail
Class V Hiking Trails – Primary Trails	6.2 total			
Ridge trail to Giant	2.3	ATIS	ATIS	Zander Scott trail
The “Over” bypass on the Ridge trail	0.3	ATIS	ATIS	
Roaring Brook trail to Giant	3.6	ATIS	ATIS	Mileage from Rte 73 to jct with Ridge trail

GMWC Trails – Summary (miles)

	Class II (unmarked)	Class III (marked trails)	Class IV	Class V	Total
Trails in GMWC	0.4	7.3	14.9	6.2	28.8
Access trails on adjacent private land – deeded access	0.0	0.0	0.4	0.0	0.4
Access trails on adjacent private land – unsecured access	0.0	3.3	0.0	0.0	3.3
Access trails on adjacent Forest Preserve parcels	0.0	0.3	0.0	0.0	0.3
Total	0.4	10.9	15.3	6.2	32.8

¹ Trail length on private land (deeded easement)

Appendix II – Facilities

TRAIL CLASSIFICATION SYSTEM – GIANT MOUNTAIN WILDERNESS AREA

TITLE	EXAMPLE	MARKING	TREAD	BARRIERS	USE LEVEL	ACCEPTABLE MAINTENANCE
I Unmarked Route	Fisherman's Path	None	Intermittently apparent, relatively undisturbed organic soil horizon	Natural obstructions present, Logs and water courses	Occasional	None
II Path	Spur trail to Owl's Head Lookout	Intermittent	Intermittently apparent, compaction of duff, mineral soils occasionally exposed	Same as unmarked route	Low, varies by location	Intermittent marking with consideration given to appropriate layout based on drainage, occasional barrier removal only to define appropriate route.
III Primitive	Mossy Cascade trail	Trail markers, sign at junction with secondary or other upper level trail	Apparent, soil compaction evident	Limited natural obstructions (logs and river fords)	Low	Drainage (native materials) where necessary to minimize erosion, blowdown removed 2-3 years, brushing as necessary to define trail (every 5-10 years). Bridges only to protect resource (max - 2 log width). Ladders only to protect exceptionally steep sections, Tread 14"-18", clear: 3' wide, 3' high.
IV Secondary	North trail to Giant	Markers, signs with basic information	Likely worn and possibly quite eroded. Rocks exposed, little or no duff remaining	Up to one year's accumulated blowdown, Small streams.	Moderate	Drainage where needed to halt erosion and limit potential erosion (using native materials), tread hardening with native materials where drainage proves to be insufficient to control erosion. Remove blowdown annually. Brush to maintain trail corridor. Higher use may warrant greater use of bridges (2-3 logs wide) for resource protection. Ladders on exceptionally steep rock faces. Tread 18"-24", Clear 4' wide, 3' High.
V Trunk or Primary Trail	Roaring Brook trail to Giant	Markers, signed with more information and warnings.	Wider tread, worn and very evident. Rock exposed, possibly very eroded.	Obstructions only rarely, Small streams	High	Same as above; Plus: regular blowdown removal on designated ski trails, non-native materials as last resort, Extensive tread hardening when needed, bridge streams (2-4 logs wide) difficult to cross during high water, priority given to stream crossings below concentrations of designated camping. Tread 18"-26", clear 6' wide, 8' high, actual turn piking limited to 2% of trail length.

TRAIL CLASSIFICATION SYSTEM – GIANT MOUNTAIN WILDERNESS AREA

TITLE	EXAMPLE	MARKING	TREAD	BARRIERS	USE LEVEL	ACCEPTABLE MAINTENANCE
VI Front Country		Heavily marked, detailed interpretive signing	Groomed	None	Very High	Extensive grooming, some paving, bark chips, handicapped accessible. This is to be implemented within 500' of wilderness boundary.
VII Horse Trail		Marked as Trunk or Secondary	Wide tread, must be rather smooth.	Same as Trunk Trail.	Moderate to High	Same as trunk trail, except use techniques appropriate for horses. Bridges: 6' minimum width with kick rails, nonnative dimensional materials preferred. Tread: 2'-4" wide, clear 8' wide, 10' high.
VIII Ski Trail		Marked High. Special markers, sign at all junctions with hiking trails.	Duff remains. Discourage summer use	Practically none due to hazards.	High	Focus on removal of obstructions, maintenance should be low profile, tread determined by clearing 6' (Should be slightly wider at turns and steep sections. Provide drainage using native materials to protect resource.

Appendix III – Definitions/Acronyms

ADA	American with Disabilities Act
ADAAG	American with Disabilities Act Accessibility Guidelines
ADK	Adirondack Mountain Club
AFR	Assistant Forest Ranger
ALSC	Adirondack Lakes Survey Corporation
AMR	Adirondack Mountain Reserve, the Ausable Club
ANC	Acid neutralizing capacity
APA	Adirondack Park Agency
APLUDP	Adirondack Park Land Use Development Plan
APSLMP	Adirondack Park State Land Master Plan
ARTC	Adirondack Regional Tourism Council
ATV	All Terrain Vehicle
ATIS	Adirondack Trail Improvement Society
BP	Years Before Present
BRPA	Boquet River Primitive Area
CAC	Citizens' Advisory Committee
DEC	New York State Department of Environmental Conservation
DMU	Deer Management Unit
DMWA	Dix Mountain Wilderness Area
DOC	New York State Department of Corrections
DOT	New York State Department of Transportation
ECL	Environmental Conservation Law
EIS	Environmental Impact Statement
EPA	Environmental Protection Act of 1993
EQBA	Environmental Quality Bond Act
FAA	Federal Aviation Administration
FR	Forest Ranger
GMWA	Giant Mountain Wilderness Area
GMWC	Giant Mountain Wilderness Complex
HPWA	High Peaks Wilderness Area

HPWC	High Peaks Wilderness Complex
LAC	Limits of Acceptable Change
NBWI	Native-But-Widely-Introduced
NHPC	Natural Heritage Plant Community
NPS	National Park Service
NYCRR	New York Code of Rules and Regulations
NYS	New York State
ORDA	Olympic Regional Development Authority
OSP	Open Space Plan
SEQRA	State Environmental Quality Review Act
SUNY-ESF	State University of New York College of Environmental Science and Forestry
TNC	The Nature Conservancy
UFAS	Uniform Accessibility Standards
USGS	United States Geologic Survey
UMP	Unit Management Plan
USFS	United States Forest Service
WMU	Wildlife Management Unit

Appendix IV – Mammalian Inventory

Appendix IV – Mammalian Inventory

MAMMALS OF THE GIANT MOUNTAIN WILDERNESS AREA

SCIENTIFIC NAME	COMMON NAME	HABITAT TYPES	PROTECTED STATUS (NYS)	NATURAL HERITAGE PROGRAM RANK
<i>Alces alces</i>	Moose	DF, MF, CF, wetlands	game species	S1
<i>Blarina brevicauda</i>	Northern Short Tailed Shrew	all habitats	unprotected	S5
<i>Canis latrans</i>	Coyote	all habitats	game species	S5
<i>Castor canadensis</i>	Beaver	MF, adjacent to water	game species	S5
<i>Clethrionomys gapperi</i>	Southern Red-Backed Vole	DF, CF, boreal forest	unprotected	S5
<i>Condylura cristata</i>	Star-nosed Mole	DF, wetlands	unprotected	S5
<i>Didelphis virginian</i>	Virginia Opossum	villages, roadsides	games species	S5
<i>Eptesicus fuscus</i>	Big Brown Bat	wooded, semi-wooded area	unprotected	S5
<i>Erethizon dorsatum</i>	Porcupine	DF, MF, CF	unprotected	S5
<i>Glaucomys sabrinus</i>	Northern Flying Squirrel	CF, MF	unprotected	S5
<i>Glaucomys volans</i>	Southern Flying Squirrel	DF, MF	unprotected	S5
<i>Lasioncteris noctivagans</i>	Silver-Haired Bat	forests adj. lakes, ponds	unprotected	S4
<i>Lasiurus cinereus</i>	Hairy Bat	DF, MF	unprotected	S4
<i>Lasiurus borealis</i>	Red Bat	all, forested areas	unprotected	S5
<i>Lepus americanus</i>	Varying Hare	CF, MF, alder swamps	game species	S5
<i>Lutra canadensis</i>	River Otter	lakes, ponds, streams	game species	S5
<i>Lynx rufus</i>	Bobcat	DF, MF, CF	game species	S4
<i>Marmota monax</i>	Woodchuck	open areas, DF, roadsides	unprotected	S5
<i>Martes americana</i>	Marten	DF, MF, CF	game species	S3
<i>Martes pennanti</i>	Fisher	DF, MF, CF	game species	S3
<i>Mephitis mephitis</i>	Striped Skunk	open Forests, fields, villages	game species	S5
<i>Microtus pennsylvanicus</i>	Meadow Vole	old fields, bogs, marshes	unprotected	S5

MAMMALS OF THE GIANT MOUNTAIN WILDERNESS AREA

SCIENTIFIC NAME	COMMON NAME	HABITAT TYPES	PROTECTED STATUS (NYS)	NATURAL HERITAGE PROGRAM RANK
<i>Microtus chrotorrhinus</i>	Rock Vole	moist talus slopes	unprotected	S4
<i>Microtus pinetorum</i>	Woodland Vole	DF, meadows	unprotected	S5
<i>Mus musculus</i>	House Mouse	buildings	unprotected	SE
<i>Mustela erminea</i>	Ermine	DF, MF, CF, old fields	game species	S5
<i>Mustela vison</i>	Mink	forested wetlands	game species	S5
<i>Mustelas frenata</i>	Long-tailed Weasel	old fields, DF	game species	S5
<i>Myotis leibii</i>	Small-footed Bat	unknown/caves	special concern	S1
<i>Myotis keea</i>	Keenes Myotis	woodlands buildings	protected	S5
<i>Myotis sodalis</i>	Indiana Bat (Indiana Myotis)	caves (winter) summer (unk.)	endangered	S1
<i>Myotis lucifugus</i>	Little Brown Bat	buildings, caves	unprotected	S5
<i>Odocoileus virginianus</i>	White-tailed Deer	DF, MF, CF	game species	S5
<i>Ondatra zibethicus</i>	Muskrat	marshes, rivers w/cattail	game species	S5
<i>Parascalops breweri</i>	Hairy-tailed mole	DF	unprotected	S5
<i>Peromyscus leucopus</i>	White-footed Mouse	woodland edges, DF, CF, MF	unprotected	S5
<i>Peromyscus maniculatus</i>	Deer Mouse	DF, CF, MF, open areas	unprotected	S5
<i>Pipistrellus subflavus</i>	Eastern Pipistrelle	open areas, woodland edges	unprotected	S5
<i>Procyon lotor</i>	Raccoon	DF, MF, CF, adjacent to water	game species	S5
<i>Rattus norvegicus</i>	Norway Rat	buildings	unprotected	SE
<i>Sciurus carolinensis</i>	Gray Squirrel	mature DF, villages, towns	game species	S5
<i>Sorex palustris</i>	Water Shrew	high elevation, woodlands	unprotected	S4
<i>Sorex dispar</i>	Longtailed or Rock Shrew	talus slopes	unprotected	S4
<i>Sorex hoyi</i>	Pygmy Shrew	woodland edges	unprotected	S4
<i>Sorex fumeus</i>	Smokey Shrew	DF, MF	unprotected	S5

Appendix IV – Mammalian Inventory

MAMMALS OF THE GIANT MOUNTAIN WILDERNESS AREA

SCIENTIFIC NAME	COMMON NAME	HABITAT TYPES	PROTECTED STATUS (NYS)	NATURAL HERITAGE PROGRAM RANK
<i>Sorex cinereus</i>	Masked Shrew	all habitat with ground cover	unprotected	S5
<i>Sylvigaus transitionalis</i>	New England Cottontail	forests edges, brushy areas	game species	S3
<i>Sylvilagus floridanus</i>	Eastern Cottontail	fields, bogs, brushy areas	game species	S5
<i>Synaptomys cooperi</i>	Southern Bog Lemming	DF, bogs	unprotected	S4
<i>Tamias striatus</i>	Eastern Chipmunk	DF, MF, hedgerows	unprotected	S5
<i>Tamiasciurus hudsonicus</i>	Red Squirrel	CF, MF	unprotected	S5
<i>Urocyon cinereoargenteus</i>	Gray Fox	lightly wooded, brushy areas	game species	S5
<i>Ursus americanus</i>	Black Bear	DF, CF, MF	game species	S5
<i>Vulpes vulpes</i>	Red Fox	woodland edges, DF, open areas	game species	S5
<i>Zapus hudsonius</i>	Meadow Jumping Mouse	open and brush areas in swamp	unprotected	S5

Habitat Keys:

- CF - Coniferous Forests Pools - Vernal pools or quiet water needed for breeding
- DF - Deciduous Forests Streams - Lives in, or adjacent to streams, or springs, wetlands
- MF - Mixed Forests

* Based on NYSDEC Vertebrate Abstract Data; Significant Habitat Unit, Delmar, New York

Appendix V -- Amphibian Inventory

AMPHIBIANS OF THE GIANT MOUNTAIN WILDERNESS AREA

SCIENTIFIC NAME	COMMON NAME	HABITAT TYPES	PROTECTED STATUS (NYS)	NATURAL HERITAGE PROGRAM RANK
<i>Ambystoma maculatum</i>	Spotted Salamander	DW, pools	special concern	S5
<i>Ambystoma laterale</i>	Blue-spotted Salamander	DW, MF, pools	special concern	S4
<i>Bufo americanus</i>	American Toad	all areas	unprotected	S5
<i>Desmognathus ochrophaeus</i>	Mountain Dusky Salamander	logs adjacent to streams	unprotected	S5
<i>Desmognathus fuscus</i>	Dusky Salamander	streams	unprotected	S5
<i>Eurycea bislineata</i>	Two-lined Salamander	streams	unprotected	S5
<i>Gyrinophilus porhyriticus</i>	Spring Salamander	streams, wetlands	unprotected	S5
<i>Hyla versicolor</i>	Gray Treefrog	forests near streams, pools	unprotected	S5
<i>Notophthalmus viridescens</i>	Red-Spotted Newt	DF, MF, lakes, ponds	unprotected	S5
<i>Plethodon cinereus</i>	Redback Salamander	all woodlands	unprotected	S5
<i>Rana clamitans</i>	Green Frog	swamps, lakes, ponds, pools	game species	S5
<i>Rana catesbeiana</i>	Bullfrog	swamps, lakes, ponds, pools	game species	S5

Habitat Keys:

- CF - Coniferous Forests
- DF - Deciduous Forests
- MF - Mixed Forests
- Pools - Vernal pools or quiet water needed for breeding
- Streams - Lives in, or adjacent to streams, or springs, wetlands

* Based on NYSDEC Vertebrate Abstract Data; Significant Habitat Unit, Delmar, New York

Appendix VI – Reptile Inventory

Appendix VI – Reptile Inventory

REPTILES OF THE GIANT MOUNTAIN WILDERNESS AREA

SCIENTIFIC NAME	COMMON NAME	HABITAT TYPES	PROTECTED STATUS (NYS)	NATURAL HERITAGE PROGRAM RANK
<i>Caelydra serpentina</i>	snapping turtle	marshes, rivers, bogs, lakes	unprotected	S5
<i>Chrysemys picta</i>	painted turtle	marshes, rivers, bogs, lakes	unprotected	S5
<i>Clemmys insculpta</i>	wood turtle	woodlands adj. to ponds, brooks	special concern	S4
<i>Diaophis punctatus</i>	ringneck snake	moist woodlands	unprotected	S5
<i>Lampropeltis triagulum</i>	milk snake	DF, CF, MF, brush	unprotected	S5
<i>Nerodia sipedon</i>	northern water snake	Lakes, ponds, rivers, bogs	unprotected	S5
<i>Orpheidrys vernalis</i>	smooth green snake	meadows, grassy marshes	unprotected	S5
<i>Storeria occipitomaculata</i>	redbelly snake	moist woodlands, bogs	unprotected	S5
<i>Storeria dekayi</i>	brown snake	all, esp. old growth forests	unprotected	S5
<i>Thamnophis sauritus</i>	eastern ribbon snake	adj. to streams, swamps	unprotected	S5
<i>Thamnophis sirtalis</i>	common garter snake	All	unprotected	S5

Habitat Keys:

CF - Coniferous Forests

DF - Deciduous Forests

MF - Mixed Forests

Brush - Brushy areas, usually abandoned farmlands

* Based on NYSDEC Vertebrate Abstract Data; Significant Habitat Unit, Delmar, New York

Appendix VII – Consumptive Recreation

New York State Deer Take by Town

Year	Elizabethtown (Town)		Keene (Town)		TOTAL	
	Bucks	Total	Bucks	Total	Bucks	Total
2001	41	48	98	106	139	154
2000	68	72	99	108	167	180
1999	31	38	66	71	97	109
1998	47	57	42	47	89	104
<i>Annual average take</i>	47	54	76	83	123	137
<i>Percentage of Town in GMWC</i>	23%	23%	11%	11%	15%	15%
<i>Estimated annual take in GMWC</i>	11	12	8	9	18	21

New York State Bear Take by Town

Year	Elizabethtown (Town)	Keene (Town)	TOTAL
2001	3	12	15
2000	6	14	20
1999	4	6	10
1998	0	1	1
<i>Annual average take</i>	3	8	12
<i>Percentage of Town in GMWC</i>	23%	11%	15%
<i>Estimated annual take in GMWC</i>	1	1	2

Appendix VII – Consumptive Recreation

New York State Furbearer Harvest by Town

Town	2000-01	1999-2000	1998-1999	Annual Average
<i>BEAVER</i>				
<i>Elizabethtown</i>	2	23	3	9
<i>Keene</i>	6	7	53	22
<i>Total</i>	8	30	56	31
<i>FISHER</i>				
<i>Elizabethtown</i>	0	14	6	7
<i>Keene</i>	6	17	12	12
<i>Total</i>	6	31	18	18
<i>OTTER</i>				
<i>Elizabethtown</i>	1	0	0	0
<i>Keene</i>	2	0	1	1
<i>Total</i>	3	0	1	1
<i>BOBCAT</i>				
<i>Elizabethtown</i>	0	0	0	0
<i>Keene</i>	0	0	4	1
<i>Total</i>	0	0	4	1
<i>COYOTE</i>				
<i>Elizabethtown</i>	0	1	1	1
<i>Keene</i>	0	11		4
<i>Total</i>	0	12	1	4
<i>MARTEN</i>				
<i>Elizabethtown</i>	0	0	0	0
<i>Keene</i>	0	13	0	4
<i>Total</i>	0	13	0	4

Appendix VIII – Rare Communities and Species

Rare Communities and Species Documented by the Natural Heritage Program,
Giant Mountain Wilderness and Boquet River Primitive Areas

Quality of Occurrence	Quad Map	Scientific Name	Common Name	Global Rank	State Rank	Most Recent Observation
<u>Birds</u>						
H	Elizabethtown	Falco peregrinus	peregrine falcon	G4	S3	1935
H	Rocky Peak Ridge	Falco peregrinus	peregrine falcon	G4	S3	1955
E	Rocky Peak Ridge	Falco peregrinus	peregrine falcon	G4	S3	1996
E	Rocky Peak Ridge	Falco peregrinus	peregrine falcon	G4	S3	1998
<u>Communities</u>						
A	Rocky Peak Ridge		acidic talus slope woodland	G4	S3S4	1997
A	Keene Valley		hemlock-northern hardwood forest	G4G5	S4	1992
A	Rocky Peak Ridge		mountain spruce-fir forest	G2G3	S2	1996
A	Rocky Peak Ridge		rocky summit grassland	G3G4	S2S3	1996
A	Rocky Peak Ridge		spruce-fir rocky summit	G4	S3S4	1996
<u>Vascular Plants</u>						
H	Keene Valley	Carex cumulata	clustered sedge	G4?	S2S3	1941
C	Rocky Peak Ridge	Draba arabisans	rock-cress	G2	S2	1997
H	Rocky Peak Ridge	Poa glauca	white bluegrass	G5	S1	1960
C	Rocky Peak Ridge	Prenanthes nana	dwarf rattlesnake-root	G5	S1	1996

Source: New York Natural Heritage Program Database
Young (2001) and Regan (2001)

Technical Reference: Mitchell and Tucker (1997)

Quality of Occurrence: A = excellent
B = good
C = marginal
D = poor
E = extant with insufficient
F = failed to find based on a limited search
X = extirpated
H = historical with no recent information
? = unknown
I = introduced

Appendix VIII – Rare Communities and Species

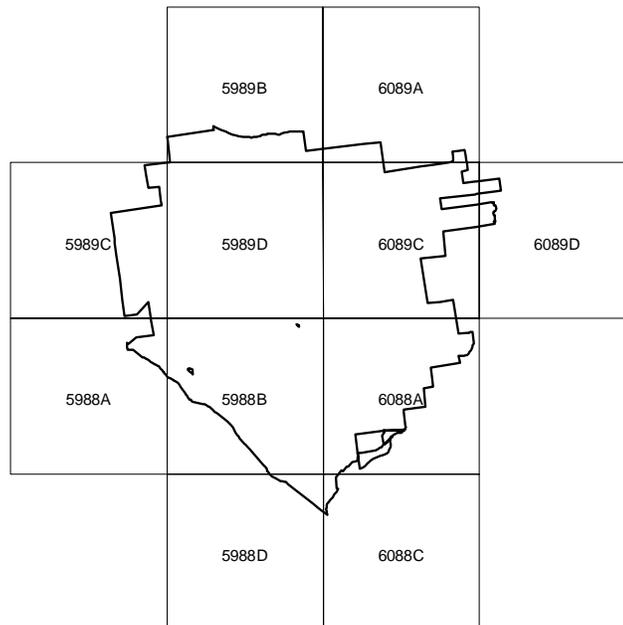
Information to rank A-D

Appendix IX – Birds

NEW YORK STATE BREEDING BIRD ATLAS
 BREEDING SPECIES OF THE
 GIANT MOUNTAIN WILDERNESS and
 BOQUET RIVER PRIMITIVE AREAS

Alphabetical Order by Scientific Name

Summary of the following survey blocks covering the GMWC:



Scientific Name	Common Name	Possible	Number of Blocks			TOTAL
			Probable	Confirmed		
<i>KITES, EAGLES, HAWKS & ALLIES</i>						
<i>Accipiter striatus</i>	sharp-shinned hawk	1	--	--		1
<i>Accipiter gentilis</i>	northern goshawk	1	--	2		3
<i>Buteo jamaicensis</i>	red-tailed hawk	--	--	3		3
<i>Buteo lineatus</i>	red-shouldered hawk	--	1	--		1
<i>Buteo platypterus</i>	broad-winged hawk	--	3	4		7
<i>KINGFISHERS</i>						
<i>Ceryle alcyon</i>	belted kingfisher	4	2	1		7
<i>SWANS, GEESE & DUCKS</i>						

Appendix IX – Birds

Scientific Name	Common Name	Number of Blocks			TOTAL
		Possible	Probable	Confirmed	
<i>Lophodytes cucullatus</i>	hooded merganser	--	--	1	1
<i>Anas platyrhynchos</i>	mallard	--	--	1	1
<i>Anas rubripes</i>	American black duck	--	--	1	1
<i>Mergus merganser</i>	common merganser	--	--	1	1
<i>Branta canadensis</i>	Canada goose	--	--	1	1
<i>SWIFTS</i>					
<i>Chaetura pelagica</i>	chimney swift	--	--	2	2
<i>BITTERNs, HERONS & ALLIES</i>					
<i>Ardea herodias</i>	great blue heron	--	--	1	1
<i>Botaurus lentiginosus</i>	American bittern	--	--	1	1
<i>WAXWINGS</i>					
<i>Bombycilla cedrorum</i>	cedar waxwing	4	5	--	9
<i>GOATSUCKERS</i>					
<i>Caprimulgus vociferus</i>	whip-poor-will	--	1	1	2
<i>GROSBEAKS & BUNTINGS</i>					
<i>Cardinalis cardinalis</i>	northern cardinal	1	--	1	2
<i>Passerina cyanea</i>	indigo bunting	1	3	3	7
<i>Pheucticus ludovicianus</i>	rose-breasted grosbeak	1	7	3	11
<i>VULTURES</i>					
<i>Cathartes aura</i>	turkey vulture	--	--	2	2
<i>CREEPERS</i>					
<i>Certhia americana</i>	brown creeper	1	1	4	6
<i>PLOVERS & LAPWINGS</i>					
<i>Charadrius vociferus</i>	killdeer	1	--	1	2
<i>PIGEONS & DOVES</i>					
<i>Zenaida macroura</i>	mourning dove	--	1	2	3
<i>Columba livia</i>	rock dove	--	1	--	1
<i>JAYS, MAGPIES & CROWS</i>					
<i>Corvus corax</i>	common raven	1	1	2	4
<i>Cyanocitta cristata</i>	blue jay	4	5	2	11
<i>Corvus brachyrhynchos</i>	American crow	2	1	4	7
<i>TOWHEES, BUNTINGS, SPARROWS & ALLIES</i>					
<i>Junco hyemalis</i>	dark-eyed junco	1	5	2	8
<i>Melospiza melodia</i>	song sparrow	4	3	2	9
<i>Melospiza lincolni</i>	Lincoln's sparrow	1	--	1	2

Appendix IX – Birds

Scientific Name	Common Name	Possible	Number of Blocks			TOTAL
			Probable	Confirmed		
<i>Melospiza georgiana</i>	swamp sparrow	--	1	--		1
<i>Pipilo erythrophthalmus</i>	eastern towhee	--	1			1
<i>Zonotrichia albicollis</i>	white-throated sparrow	6	4	1		11
<i>Poocetes gramineus</i>	vesper sparrow	1	--	--		1
<i>Spizella pusilla</i>	field sparrow	1	1	1		3
<i>Spizella passerina</i>	Chipping sparrow	5	3	1		9
<i>CARACARAS & FALCONS</i>						
<i>Falco peregrinus</i>	peregrine falcon	1	--	2		3
<i>Falco sparverius</i>	American kestrel	--	1	1		2
<i>FINCHES</i>						
<i>Loxia leucoptera</i>	white-winged crossbill	--	--	2		2
<i>Carduelis tristis</i>	American goldfinch	1	3	4		8
<i>Carduelis pinus</i>	pine siskin	--	--	1		1
<i>Carpodacus purpureus</i>	purple finch	1	5	3		9
<i>SWALLOWS</i>						
<i>Hirundo rustica</i>	barn swallow	4	1	2		7
<i>Riparia riparia</i>	bank swallow	3	--	--		3
<i>Tachycineta bicolor</i>	tree swallow	5	2	2		9
<i>BLACKBIRDS</i>						
<i>Icterus galbula</i>	Baltimore oriole	3	1	1		5
<i>Molothrus ater</i>	brown-headed cowbird	1	--	--		1
<i>Agelaius phoeniceus</i>	red-winged blackbird	3	3	1		7
<i>Quiscalus quiscula</i>	common grackle	4	2	1		7
<i>Dolichonyx oryzivorus</i>	bobolink	--	2	--		2
<i>MOCKINGBIRDS, THRASHERS & ALLIES</i>						
<i>Dumetella carolinensis</i>	gray catbird	1	3	1		5
<i>Toxostoma rufum</i>	brown thrasher	--	3	--		3
<i>CHICKADEES & TITMICE</i>						
<i>Poecile hudsonicus</i>	boreal chickadee	--	2	3		5
<i>Poecile atricapillus</i>	black-capped chickadee	4	5	2		11
<i>Baeolophus bicolor</i>	tufted titmouse	--	--	1		1
<i>WOOD WARBLERS</i>						
<i>Dendroica fusca</i>	blackburnian warbler	--	4	3		7
<i>Dendroica coronata</i>	yellow-rumped warbler	2	4	3		9
<i>Dendroica caerulescens</i>	black-throated blue warbler	2	5	4		11

Appendix IX – Birds

Scientific Name	Common Name	Number of Blocks			TOTAL
		Possible	Probable	Confirmed	
<i>Dendroica pensylvanica</i>	chestnut-sided warbler	2	5	1	8
<i>Dendroica petechia</i>	yellow warbler	--	2	4	6
<i>Dendroica striata</i>	blackpoll warbler	2	--	4	6
<i>Mniotilta varia</i>	black-and-white warbler	4	2	3	9
<i>Dendroica virens</i>	black-throated green warbler	1	8	--	9
<i>Dendroica magnolia</i>	magnolia warbler	1	1	3	5
<i>Geothlypis trichas</i>	common yellowthroat	3	4	2	9
<i>Seiurus aurocapillus</i>	ovenbird	3	6	1	10
<i>Setophaga ruticilla</i>	American redstart	5	2	1	8
<i>Seiurus noveboracensis</i>	northern waterthrush	--	--	1	1
<i>Vermivora ruficapilla</i>	Nashville warbler	2	2	2	6
<i>Wilsonia canadensis</i>	Canada warbler	1	3	2	6
<i>PARTRIDGES, GROUSE & TURKEYS</i>					
<i>Bonasa umbellus</i>	ruffed grouse	6	1	1	8
<i>Meleagris gallopavo</i>	wild turkey	--	--	2	2
<i>Phasianus colchicus</i>	ring-necked pheasant	--	--	1	1
<i>WOODPECKERS & ALLIES</i>					
<i>Colaptes auratus</i>	northern flicker	3	2	2	7
<i>Sphyrapicus varius</i>	yellow-bellied sapsucker	7	2	--	9
<i>Picoides villosus</i>	hairy woodpecker	6	1	2	9
<i>Dryocopus pileatus</i>	pileated woodpecker	--	3	6	9
<i>Picoides pubescens</i>	downy woodpecker	4	4	2	10
<i>KINGLETS</i>					
<i>Regulus satrapa</i>	golden-crowned kinglet	--	3	4	7
<i>SANDPIPERS, PHALAROPES & ALLIES</i>					
<i>Scolopax minor</i>	American woodcock	--	1	--	1
<i>Actitis macularia</i>	spotted sandpiper	1	--	1	2
<i>NUTHATCHES</i>					
<i>Sitta carolinensis</i>	white-breasted nuthatch	--	3	5	8
<i>Sitta canadensis</i>	red-breasted nuthatch	1	2	7	10
<i>TYPICAL OWLS</i>					
<i>Bubo virginianus</i>	great horned owl	--	--	1	1
<i>Strix varia</i>	barred owl	--	--	6	6
<i>Asio otus</i>	long-eared owl	--	--	1	1
<i>STARLINGS & ALLIES</i>					

Appendix IX – Birds

Scientific Name	Common Name	Possible	Number of Blocks			TOTAL
			Probable	Confirmed		
<i>Sturnus vulgaris</i>	European starling	2	--	2		4
<i>TANAGERS</i>						
<i>Piranga olivacea</i>	scarlet tanager	--	3	2		5
<i>HUMMINGBIRDS</i>						
<i>Archilochus colubris</i>	ruby-throated hummingbird	--	7	1		8
<i>WRENS</i>						
<i>Troglodytes aedon</i>	house wren	2	--	1		3
<i>Troglodytes troglodytes</i>	winter wren	2	4	1		7
<i>THRUSHES</i>						
<i>Catharus guttatus</i>	hermit thrush	1	6	3		10
<i>Sialia sialis</i>	eastern bluebird	3	--	--		3
<i>Turdus migratorius</i>	American robin	6	1	4		11
<i>Catharus ustulatus</i>	Swainson's thrush	1	3	3		7
<i>Catharus fuscescens</i>	veery	2	5	2		9
<i>Hylocichla mustelina</i>	wood thrush	--	7	3		10
<i>Catharus bicknelli</i>	Bicknell's thrush	1	--	1		2
<i>TYRANT FLYCATCHERS</i>						
<i>Tyrannus tyrannus</i>	eastern kingbird	3	2	1		6
<i>Empidonax minimus</i>	least flycatcher	2	4	3		9
<i>Contopus cooperi</i>	olive-sided flycatcher	--	1	1		2
<i>Empidonax flaviventris</i>	yellow-bellied flycatcher	--	1	1		2
<i>Contopus virens</i>	eastern wood-pewee	--	2	4		6
<i>Empidonax alnorum</i>	alder flycatcher	2	1	--		3
<i>Sayornis phoebe</i>	eastern phoebe	4	--	1		5
<i>Myiarchus crinitus</i>	great crested flycatcher	2	3	1		6
<i>BARN OWLS</i>						
<i>Tyto alba</i>	barn owl	--	1	--		1
<i>VIREOS</i>						
<i>Vireo olivaceus</i>	red-eyed vireo	3	7	1		11
<i>Vireo philadelphicus</i>	Philadelphia vireo	--	2	--		2
<i>Vireo solitarius</i>	blue-headed vireo	3	4	1		8
<i>Vireo gilvus</i>	warbling vireo	--	3	1		4

Appendix X – Individual Pond Descriptions

POND MANAGEMENT CLASSIFICATIONS

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

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

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

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

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

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

INDIVIDUAL POND DESCRIPTIONS

The NYS Biological Survey lists one pond in the Unit, Giant Washbowl. Also, two ponds are shown on recent topographic maps but were not included in the Biological Survey. Those waterbodies are very small, but are included in the following discussion.

1. Giant Washbowl (P273 - CH)

Giant Washbowl is the largest pond in the GMWC yet it has a surface area of only 4.2 acres. Its maximum depth is 23 feet. The 1984 fisheries survey collected brook trout sustained by stocking, white suckers, golden shiners (nonnative), fathead minnows (nonnative), creek chubs (native but widely introduced), and northern redbelly dace.

Giant Washbowl will be reclaimed to eliminate non-native fishes. Subsequent management will emphasize the native brook. It is expected that a helicopter will be used during the off-peak period to assist with the reclamation.

Management Class: Adirondack Brook Trout

2. Dipper Pond (no pond number assigned)

Dipper Pond is a small, with a surface area of less than 1 acre. The pond has never been surveyed, but it probably supports minimal, or no, fish life.

Dipper Pond will be will be managed to preserve its aquatic habitat.

Management class: Unknown

3. **Marie Louise Pond** (no pond number assigned)

Marie Louise Pond is a small, with a surface area of less than 1 acre. The pond has never been surveyed, but it probably supports minimal, or no, fish life.

Marie Louise Pond will be will be managed to preserve its aquatic habitat.

Management class: Unknown

Appendix XI – Ponded Water Survey Data

Appendix XI – Ponded Water Survey Data

Table 1. Giant Mountain Wilderness Area – Ponded Water Physical Data

Name	P#	File	Wshed ¹	County	USGS Quad (7.5')	Area ² (ac.)	Max. Depth (ft.)	Mean Depth (ft.)	Year	Last Chemistry Survey Source ³	ANC (ueq/l)	pH	Conductivity	
														Area ² (ac.)
Dipper	none	none	CH	Essex	Rocky Peak Ridge	0.9	n/a	n/a	n/a	none				
Giant's Washbowl	273	316	CH	Essex	Rocky Peak Ridge	4.2	23.0	8.0	1984	ALSC	242	7.3	40	
Marie Louise	none	none	CH	Essex	Rocky Peak Ridge	0.9	n/a	n/a	n/a	none				
Total area											6.0			

¹ CH – Champlain Watershed

² New York State Biological Services Unit

³ ALSC – Adirondack Lakes Survey Corporation

Table 2. Giant Mountain Wilderness Area – Ponded Water Biological Data

Name	P#	File	Wshed ¹	Mgt. Class	Area ² (ac.)	Max Depth (ft)	Last Biological Survey		
							Year	Source	Fish Species Present and Number Caught ³
Dipper	none	none	CH	unknown	0.9	n/a	none		
Giant's Washbowl	273	318	CH	Brook trout	4.2	23.0	1984	ALSC	ST (16), CC (5), WS (13), GS (8), NRD (2), FHIM.(1)
Mary Louise	none	none	CH	unknown	0.9	n/a	none		
Total:	3 ponds totaling 6.0 ac.			Adk. Brook: 0 ponds, 4.2 ac. Other: 0 ponds, 0.0 ac.					
				Coldwater: 0 pond, 0.0 ac. Unknown: 2 ponds, 1.8 acreage					

¹ CH – Champlain Watershed; UH – Upper Hudson Watershed

² New York State Biological Services Unit

³ BHC – Brown Bullhead
 NRB – Northern Redbelly Dace
 WS – White Sucker
 GS – Golden Shiner
 ST – Brook Trout
 CC – Creek Chub
 RW – Round Whitefish
 BNM – Bluntnose Minnow
 RT – Rainbow Trout
 BND – Blacknose Dace
 PKS – Pumpkinseed

Appendix XII – Classification of Common Adirondack Upland Fish Fauna

Appendix XII – Classification of Common Adirondack Upland Fish Fauna

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	redbreast sunfish	slimy sculpin
white sucker	finescale dace	lake chub
longnose sucker	creek chubsucker	common shiner
northern redbelly dace	longnose dace	round whitefish
Native Species Widely Introduced within the Adirondack Upland¹		
brook trout	pumpkinseed	lake trout
brown bullhead	cisco	creek chub
Nonnative to Adirondack Upland		
golden shiner	northern pike	Atlantic salmon
chain pickerel	rock bass	walleye
largemouth bass	bluntnose minnow ²	central mudminnow
brown trout	pearl dace	redhorse suckers (spp.)
Splake	smallmouth bass	black crappie
lake whitefish	yellow perch	fallfish ³
rainbow smelt	fathead minnow ⁴	banded killifish ⁵
bluegill	rainbow trout	Johnny darter

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

² Not mentioned by Mather (1884) from Adirondack collections, widely used as bait.

³ Adventive through stocking.

⁴ Not mentioned by Mather (1884) from Adirondack collections, minor element southern Adirondack Uplands (Greeley 1930-1935).

⁵ Early collections strongly suggest dispersal as a bait form.

Appendix XIII – State Environmental Quality Review Act Requirements (SEQR)

**SEQR
State Environmental Quality Review
NEGATIVE DECLARATION
Notice of Determination of Non-Significance
Identifying #**

Project No.:

Date: August 16, 2002

This notice is issued pursuant to Part 617 of the implementing regulations of Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The Department of Environmental Conservation as lead agency, has determined that the proposed action described below will not have a significant impact on the environment and a Draft Environmental Impact Statement will not be prepared.

Name of Action: Giant Mountain Wilderness and Boquet River Primitive Areas Unit Management Plan

SEQR Status: Type I Action

Conditioned Negative Declaration: No

Description of Action:

Comprehensive unit management plan addressing use of and preservation of public lands. Actions include boundary line marking and maintenance, trail and parking lot construction, search and rescue operations, maintenance of existing facilities, public information and education, and public use controls.

Location: Adirondack Forest Preserve, Towns of Elizabethtown, and Keene, Essex County.

Reasons Supporting this Determination:

The entire purpose of this unit management plan for the Giant Mountain Wilderness and Boquet River Primitive Areas is to manage this resource as a Wilderness and Primitive area respectively, pursuant to the management guidelines for Wilderness and Primitive areas in the APSLMP. The APSLMP defines a "Wilderness area" as "an area where the earth and its community of life are untrammelled by man—where man himself is a visitor who does not remain...an area of state land or water having primeval character, without significant improvement or permanent human habitation, which is protected and managed so as to preserve, enhance and

restore, where necessary, its natural conditions...” Primitive areas are lands managed essentially as Wilderness, however for one or more reasons, do not meet the definition of a Wilderness area under the APSLMP.

This UMP sets forth management goals and objectives to protect, preserve and where necessary restore the Giant Mountain Wilderness and Boquet River Primitive Areas by monitoring and regulating human use of the areas so that user impacts are virtually nonexistent. For example, one of the plan’s management objectives is to indirectly manage interior use by balancing parking lot capacities to interior visitor capacities. In addition, campsites will be designated to direct campers to previously used disturbed areas, to define proper camp locations, to disperse use, or limit adverse impacts to resources and other campers. Through regulation, at-large camping will be prohibited above 3500 feet in elevation in order to protect the resource. Rather than having adverse impacts to the environment, this UMP will have beneficial impacts.

Specifically, this plan proposes to maintain, reconstruct and relocate trails to appropriate wilderness standards (see Appendix II). These wilderness trail standards emphasize resource protection and visitor safety rather than user convenience or comfort. For example, such trail maintenance will include: drainage (using native materials) only where necessary to minimize erosion, bridges only where necessary to protect the resource, ladders only where necessary to protect exceptionally steep sections. APA will be consulted in any management activities in wetlands and in adjacent to wetlands to determine if an APA wetlands permit is required. The APA wetlands permit process ensures that wetlands will not be negatively impacted as that process requires a site specific assessment of impacts.

The plan also proposes to reclaim the Giant’s Washbowl pond. Pond reclamations are a Division of Fish and Wildlife program which will be carried out pursuant to the *Programmatic Environmental Impact Statement On Undesireable Fish Removal By The Use Of Pesticides Under Permit Issued By The Department Of Environmental Conservation Division Of Lands And Forests Bureau Of Pesticides Management*, March 24,1981. All fish stocking in the plan will be undertaken pursuant to the *Programmatic Environmental Impact Statement on Fish Species Management Activities of the Department of Environmental Conservation*, December, 1979. All liming projects will be in compliance with the *Final Generic Environmental Impact Statement on the New York State Department of Environmental Conservation Program of Liming Selected Acidified Waters*, October, 1990.

Appendix XIII – State Environmental Quality Review Act Requirements (SEQR)

All tree cutting activities will be in compliance with the Commissioner's Delegation Memorandum #84-06 on Tree Cutting in the Forest Preserve.

For Further Information:

Contact Person: Kristofer A. Alberga, Senior Forester

Address: NYSDEC - Region 5 Headquarters
PO Box 296, Route 86
Ray Brook, NY 12977

Telephone: (518) 897-1350

For Type I Negative Declarations, a Copy of this Notice Must be Filed With:

- Chief Executive Officer of the Towns of Elizabethtown, Keene and North Hudson, Essex County.
- Lead Agency, DEC, Region 5;
- Any involved agencies (APA);
- Any person requesting a copy; and
- Environmental Notice Bulletin.

Appendix XIV – Wilderness Areas: Guidelines for Management and Use (APSLMP)

Basic guidelines

1. The primary wilderness management guideline will be to achieve and perpetuate a natural plant and animal community where man's influence is not apparent.
2. In wilderness areas:
 - a) no additions or expansions of non-conforming uses will be permitted;
 - b) any remaining non-conforming uses that were not removed by the December 31, 1975 deadline provided for in the original version of the master plan will be removed by March 31, 1987;
 - c) non-conforming uses resulting from newly-classified wilderness areas will be removed as rapidly as possible and in any case by the end of the third year following classification; and,
 - d) primitive tent sites that do not conform to the separation distance guidelines will be brought into compliance on a phased basis and in any case by the end of the third year following adoption of a unit management plan for the area.
3. No new non-conforming uses will be permitted in any designated wilderness area.
4. Construction of additional conforming structures and improvements will be restrained to comply with wilderness standards for primitive and unconfined types of recreation and to permit better maintenance and rehabilitation of existing structures and improvements.
5. No new structures or improvements in any wilderness area will be constructed except in conformity with finally adopted unit management plans. This guideline will not prevent ordinary maintenance or rehabilitation of conforming structures or improvements, minor trail relocation, or the removal of non-conforming uses.
6. All conforming structures and improvements will be designed and located so as to blend with the surrounding environment and to require only minimal maintenance.
7. All management and administrative action and interior facilities in wilderness areas will be designed to emphasize the self-sufficiency of the user to assume a high degree of responsibility for environmentally-sound use of such areas and for his or her own health, safety and welfare.
8. Any new, reconstructed or relocated lean-tos or primitive tent sites planned for shorelines of lakes, ponds, rivers or major streams will be located so as to be reasonably screened from view from the water body to avoid intruding on the natural character of the shoreline and public enjoyment and use thereof. Any such lean-tos will be set back a minimum of 100 feet from the mean high water mark of lakes, ponds, rivers or major streams.
9. All pit privies will be located a minimum of 150 feet from the mean high water mark of any lake, pond, river, or stream or wetland.

Structures and improvements

1. The structures and improvements listed below will be considered as conforming to wilderness standards and their maintenance, rehabilitation and construction permitted:
 - scattered Adirondack lean-tos, not including lean-to clusters, below 3,500 feet in elevation;
 - primitive tent sites below 3,500 feet in elevation that are out of sight and sound and generally one-quarter mile from any other primitive tent site or lean-to:
 - (i) where physical and biological conditions are favorable, individual unit management plans may permit the establishment, on a site-specific basis, of primitive tent sites between 3,500 and 4,000 feet in elevation, and,
 - (ii) where severe terrain constraints prevent the attainment of the guideline for a separation distance of generally one-quarter mile

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between primitive tent sites, individual unit management plans may provide, on a site-specific basis, for lesser separation distances, provided such sites remain out of sight and sound from each other, be consistent with the carrying capacity of the affected area and are generally not less than 500 feet from any other primitive tent site;

- pit privies;
 - foot trails;
 - cross country ski trails;
 - foot trail and cross country ski trail bridges constructed of natural materials and, where absolutely necessary, ladders constructed of natural materials;
 - horse trails, except that any new horse trails will be limited to those that can be developed by conversion of appropriate abandoned roads, snowmobile trails, or state truck trails;
 - horse trail bridges constructed of natural materials;
 - horse hitching posts and rails;
 - existing or new fish barrier dams, constructed of natural materials wherever possible;
 - existing dams on established impoundments, except that, in the reconstruction or rehabilitation of such dams, natural materials will be used wherever possible and no new dams will be constructed;
 - directional, informational and interpretive signs of rustic materials and in limited numbers;
 - peripheral visitor registration structures; and,
 - wildlife management structures on a temporary basis where essential to the preservation of wilderness wildlife values and resources.
2. All other structures and improvements, except for interior ranger stations themselves (guidelines for which are specified below), will be considered nonconforming. Any remaining non-conforming structures that were to have been removed by the December 31, 1975 deadline but have not yet been removed, will be removed by March 31, 1987. These include but are not limited to:
- lean-to clusters;
 - tent platforms;
 - horse barns;
 - boat docks;
 - storage sheds and other buildings;
 - fire towers and observer cabins;
 - telephone and electrical lines;
 - snowmobile trails;
 - roads and state truck trails;
 - helicopter platforms; and,
 - buoys.

Ranger stations

1. No new interior stations will be constructed and all remaining interior stations, other than Lake Colden, will be phased out on a scheduled basis determined by the Department of Environmental Conservation, in favor of stations or other facilities at the periphery of the wilderness areas at major points of access to provide needed supervision of public use. This phase-out should be accomplished as soon as feasible, as specified in the individual unit management plans.
2. New methods of communication and supply, complying with wilderness guidelines, will be employed with respect to all ranger stations maintained by the Department of Environmental Conservation after December 31, 1975.
3. Due to heavy existing and projected winter use in the Eastern High Peak area and the presence of the most rugged terrain in the Adirondacks, the Lake Colden station together with an associated on-ground line (i.e., a line laid on or just under the ground

surface which rapidly becomes covered by leaves) for telephone communication may be retained indefinitely but their status will be periodically reviewed to determine if their eventual removal is feasible.

Motor vehicles, motorized equipment and aircraft

1. Public use of motor vehicles, motorized equipment and aircraft will be prohibited.
2. Administrative personnel will not use motor vehicles, motorized equipment or aircraft for day-to-day administration, maintenance or research.
3. Use of motorized equipment or aircraft, but not motor vehicles, by administrative personnel may be permitted for a specific major administrative, maintenance, rehabilitation, or construction project if that project involves conforming structures or improvements, or the removal of non-conforming structures or improvements, upon the written approval of the Commissioner of Environmental Conservation.
4. Such use of motorized equipment or aircraft will be confined to off-peak seasons for the area in question and normally will be undertaken at periodic intervals of three to five years, unless extraordinary conditions, such as a fire, major blow-down or flood mandate more frequent work or work during peak periods.
5. Irrespective of the above guidelines, use of motorized equipment or aircraft, but not motor vehicles, for a specific major research project conducted by or under the supervision of a state agency will be permitted if such project is for purposes essential to the preservation of wilderness values and resources, no feasible alternative exists for conducting such research on other state or private lands, such use is minimized, and the project has been specifically approved in writing by the Commissioner of Environmental Conservation after consultation with the Agency.
6. Irrespective of the above or any other guidelines in this master plan, use of motor vehicles, motorized equipment and aircraft will be permitted, by or under the supervision of appropriate officials, in cases of sudden, actual and ongoing emergencies involving the protection or preservation of human life or intrinsic resource values -- for example, search and rescue operations, forest fires, or oil spills or similar, large-scale contamination of water bodies.
7. In light of the special circumstances involving Whitney Lake in the West Canada Lake Wilderness Area, seasonal float plane use from spring ice-out to and including June 15 and from October 15 to fall or winter ice-in may be allowed on that lake, by, and subject to permit from the Department of Environmental Conservation for an interim period ending no later than December 31, 1993. Such permits shall require annual reporting of all flights and the number of passengers to and from Whitney Lake. During the winter of 1988-89 the Department shall determine, from the use trends indicated, whether Whitney Lake should then be closed to float plane use for either or both seasonal periods or whether such use should be allowed to continue until the final deadline of December 31, 1993.
8. Written logs will be kept by the Department of Environmental Conservation recording use of motorized vehicles, motorized equipment and aircraft. The Department will prepare an annual report providing details of such motorized uses and the reasons therefor and file it with the Agency.

Roads, snowmobile trails and state truck trails

1. No new roads, snowmobile or state truck trails will be allowed.
2. Existing roads and state truck trails that were to have been closed by the December 31, 1975 deadline but have not yet been removed will be closed by no later than March 31, 1987. Any non-conforming roads, snowmobile trails or state truck trails resulting from newly classified wilderness areas will also be phased out as rapidly as possible and in any case will be closed by the end of the third calendar year following classification. In each case the Department of Environmental Conservation will:
 - close such roads and snowmobile trails to motor vehicles as may be open to the public;
 - prohibit all administrative use of such roads and trails by motor vehicles; and,

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- block such roads and trails by logs, boulders or similar means other than gates.
- 3. During the phase-out period:
 - the use of motorized vehicles by administrative personnel for transportation of materials and personnel will be limited to the minimum required for proper interim administration and the removal of non-conforming uses; and,
 - maintenance of such roads and trails will be curtailed and efforts made to encourage revegetation with lower forms of vegetation to permit their conversion to foot trails and, where appropriate, horse trails.

All terrain bicycles

1. Public use of all terrain bicycles will be prohibited.
2. Administrative personnel will not use all terrain bicycles for day-to-day administration but use of such vehicles may be permitted for specific major administrative research, maintenance, rehabilitation or construction projects involving conforming structures or improvements, or the removal of non-conforming structures in the discretion of the Department of Environmental Conservation.

Flora and fauna

There will be no intentional introduction in wilderness areas of species of flora or fauna that are not historically associated with the Adirondack environment, except: (i) species which have already been established in the Adirondack environment, or (ii) as necessary to protect the integrity of established native flora and fauna. Efforts will be made to restore extirpated native species where such restoration appears feasible.

Recreational use and overuse

1. The following types of recreational use are compatible with wilderness and should be encouraged as long as the degree and intensity of such use does not endanger the wilderness resource itself:
 - hiking, mountaineering, tenting, hunting, fishing, trapping, snowshoeing, ski touring, birding, nature study, and other forms of primitive and unconfined recreation.
 - Access by horses, including horse and wagon, while permitted in wilderness, will be strictly controlled and limited to suitable locations and trail conditions to prevent adverse environmental damage.
2. Each individual unit management plan will seek to determine the physical, biological and social carrying capacity of the wilderness resource. Where the degree and intensity of permitted recreational uses threaten the wilderness resource, appropriate administrative and regulatory measures will be taken to limit such use to the capability of the resource. Such administrative and regulatory measures may include, but need not be limited to:
 - the limitation by permit or other appropriate means of the total number of persons permitted to have access to or remain in a wilderness area or portion thereof during a specified period;
 - the temporary closure of all or portions of wilderness areas to permit rehabilitative measures.
3. An intensified educational program to improve public understanding of backcountry use, including an anti-litter and pack-in, pack-out campaign, should be undertaken.

Boundary structures and improvements and boundary marking

1. Where a wilderness boundary abuts a public highway, the Department of Environmental Conservation will be permitted, in conformity with a duly adopted unit management plan, to locate within 500 feet from a public highway right-of-way, on a site-specific basis, trailheads, parking areas, fishing and waterway access sites, picnic areas, ranger stations or other facilities for peripheral control of public use, and, in limited instances, snowmobile trails.
2. Where a wilderness boundary abuts a water body accessible to the public by motorboat, the Department of Environmental Conservation will be permitted, in

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conformity with a duly adopted unit management plan, to provide, on a site-specific basis, for ranger stations or other facilities for peripheral control of public use or for the location of small, unobtrusive docks made of natural materials on such shorelines in limited instances where access to trailheads or the potential for resource degradation may make this desirable.

3. Special wilderness area boundary markers will be designed and installed at major access points to enhance public recognition of wilderness boundaries and wilderness restrictions.

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Basic guidelines

1. The primary primitive management guideline will be to achieve and maintain in each designated primitive area a condition as close to wilderness as possible, so as to perpetuate a natural plant and animal community where man's influence is relatively unapparent.
2. In primitive areas:
 - (a) No additions or expansions of non-conforming uses will be permitted.
 - (b) Any remaining non-conforming uses that were to have been removed by the original December 31, 1975 deadline but have not been removed will be removed by March 31, 1987.
 - (c) Those non-conforming uses of essentially a permanent nature whose removal, though anticipated, cannot be provided for by a fixed deadline will be phased out on a reasonable timetable as soon as their removal becomes feasible.
 - (d) Non-conforming uses resulting from newly classified primitive areas will be removed as rapidly as possible, except for those described in c above, and in any case by the end of the third year following classification.
 - (e) Primitive tent sites that do not conform to the separation distance guidelines will be brought into compliance on a phased basis and in any case by the third year following adoption of the unit management plan for the area.
3. Effective immediately, no new, non-conforming uses will be permitted in any primitive area.
4. Upon the removal of all nonconforming uses, a designated primitive area that otherwise meets wilderness standards will be reclassified as wilderness.
5. Construction of additional conforming structures and maintenance of existing facilities and improvements will follow the guidelines for wilderness areas.
6. No new structures or improvements in primitive areas will be constructed except in conformity with finally adopted unit management plans. This guideline will not prevent ordinary maintenance rehabilitation or minor relocation of conforming structures or improvements or the removal of nonconforming uses.
7. All conforming structures and improvements will be located so as to blend with the surrounding environment and to require only minimal maintenance.
8. All management and administrative actions and interior facilities in primitive areas will be designed to emphasize the self-sufficiency of the user to assume a high degree of responsibility for environmentally sound use of such areas and for his or her own health, safety and welfare.
9. Any new, reconstructed or relocated lean-tos or individual primitive tent sites located on shorelines of lakes, ponds, rivers or major streams will be located so as to be reasonably screened from the water body to avoid intruding on the natural character of the shoreline and public enjoyment and use thereof. Any such lean-tos will be set back a minimum of 100 feet from the mean high water mark of lakes, ponds, rivers or major streams.
10. All pit privies will be located a minimum of 150 feet from the mean high water mark of any lake, pond, river, stream or wetland.

Structures and improvements

1. All structures and improvements that conform to wilderness guidelines will be acceptable in primitive areas.
2. In addition, existing structures and improvements
 - (a) whose removal, though anticipated, cannot be provided for by a fixed deadline, or,
 - (b) in the case of areas not destined to become wilderness, whose retention is compatible with the character of the area and whose removal is not essential

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to protect the resource, will also be permissible, in each case as specified in a duly adopted unit management plan.

3. Non-conforming uses, other than those that meet the criteria in section 2 above, will be removed by no later than March 31, 1987.

Ranger stations

Ranger stations will be subject to the same guidelines as in wilderness areas, except that in areas not destined to become wilderness or in other special situations the indefinite retention of such stations may be provided for as specified by the Department of Environmental Conservation in a duly adopted unit management plan.

Motor vehicles, motorized equipment and aircraft

1. All uses of motor vehicles, motorized equipment and aircraft permitted under wilderness guidelines will also be permitted in primitive areas.
2. Addition, the use of motor vehicles, motorized equipment and aircraft by administrative personnel will be permitted to reach and maintain existing structures, improvements or ranger stations:
 - (a) whose eventual removal is anticipated but cannot be removed by a fixed deadline; or,
 - (b) in primitive areas not destined to become wilderness whose presence is of an essentially permanent character; in each case as specified in a duly adopted unit management plan.

Roads, snowmobile trails and state truck trails

1. The guidelines specified for wilderness areas will also apply to primitive areas, except that:
 - continued use of existing roads, snowmobile trails and state truck trails by administrative personnel will be permitted, to the extent necessary to reach and maintain structures and improvements whose removal, though anticipated, cannot be effected by a fixed deadline or, in the case of primitive areas not destined to become wilderness, whose presence is of an essentially permanent character; and,
 - existing roads now legally open to the public may remain open for motor vehicles at the discretion of the Department of Environmental Conservation pending eventual wilderness classification, if their continued use will not adversely affect the character of the resources of the primitive area or impinge upon the proper management of an adjacent wilderness area;
 - existing snowmobile trails now legally open to the public may remain open for snowmobiles at the discretion of the Department of Environmental Conservation pending eventual wilderness classification if their continued use will not adversely affect the character or resources of the primitive area or impinge upon the proper management of the adjacent wilderness; in each case as specified in a duly adopted unit management plan.
2. Upon the closure of any road, snowmobile trail or state truck trail, such routes will be effectively blocked as provided in the wilderness guidelines.

All Terrain Bicycles

The same guidelines will apply as in wilderness areas except that all terrain bicycles may be used on existing roads legally open to the public and on state truck trails specifically designated for such use by the Department of Environmental Conservation as specified in individual unit management plans.

Flora and fauna

The same guidelines will apply as in wilderness areas.

Recreational use and overuse

The same guidelines will apply as in wilderness areas.

Boundary structures and improvements and boundary marking

The same guidelines will apply as in wilderness areas.

Appendix XVI – DEC Response to Public Comments Received on the Unit Management Plan Giant Mtn. Wilderness Complex

Formal public comments were solicited from the Department on the draft UMPs between December 28, 2002 and April 17, 2003. The Department held two public meetings, one in Keene and a second in Albany, to present the draft plans and accept public comments. The Department received 111 written or e-mailed comments. In addition 20 oral comments were received at the public meetings, often with additional comments in writing.

ROCK AND ICE CLIMBING

The majority of comments received were from recreationists who were concerned with proposals relating to direct management of rock and ice climbing. Action alerts posted on websites for the Access Fund and NEIce.com resulted in a number of form letter responses being received by the Department. Concerns expressed from climbers came from locations as distant as New Zealand. Comments received relating to rock climbing generally fell into a number of distinct categories:

1. Fixed anchors are an accepted aspect of climbing and restriction of use of fixed anchors would be counter-productive to identified goals of resource protection. Numerous examples of how anchors can protect the resource were identified by commentators along with several recommendations on management action that could allow bolts while indirectly managing the amount of new anchors being placed.

Regulations are already in place that regulate defacement of rock (needed to place a fixed bolt anchor) and leaving personal material on-site except under permit from the Department. The use of fixed anchors is generally accepted by the climbing community, however their use in wilderness and primitive areas is a concern to some and has been debated. Regulation of the use of fixed anchors in wilderness areas across the country varies. The plan proposes a process to address these concerns on the Adirondack Forest Preserve, including the DMWA and GMWA.

2. A ban on replacement of fixed anchors will result in old, existing placements becoming unsafe and dangerous.

Placement of existing bolts on Forest Preserve has been undertaken by individuals in violation of existing Department regulations. The Department has not condoned placement of these anchors, does not inspect, maintain or recommend that they be used. The anchors present in the unit will be inventoried shortly after plan adoption. The policy development process will establish the future disposition of these anchors and appropriate management action will be taken at that time.

3. Concerns identified relative to restrictions on roadside camping near the Beer Walls and Chapel Pond.

Concern was identified with conversion of one camping site and another illegal camping site for construction of barrier free access site for car top boats. The Department has identified several sites at this location that are compliant with APSLMP

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and are not identified for removal. The closure of the camping site will require users to park at the Chapel Pond parking area and carry their gear a short distance to the remaining camp sites. It will, however, not eliminate the availability of camping in the vicinity of the beer walls.

4. Concerns that DEC is focusing access restrictions on the climbing community.

The Department is focusing management action on areas of overuse and resource degradation. In some instances overuse and/or resource degradation is related to rock climbing activities. Management actions proposed in this plan are in response to identified resource management issues throughout the units, with actions proposed to resolve those issues.

5. A group size restriction on climbing, one route and no more than 8 people, focuses more impact on a smaller area than a slightly larger group with allowances for several ropes. Three ropes and 10 people would allow for active climbing by all individuals in the group, minimizing impacts from large groups milling around the base of a single climbing route.

The Department has modified this action to allow for groups of up to 10 persons and no more than three routes, in an effort to better distribute use. The intergroup spacing requirements remain as proposed.

6. Comments were received identifying other social and health and safety concerns relating to large groups using climbing resources.

The Department is aware of these concerns and believes that proposed management actions will begin to address this issue. Monitoring of use will be an essential component of determining whether the implemented management actions have addressed these concerns.

7. Comments were also received asking for the Department to uphold a ban on any fixed anchors on Forest Preserve.

The Department has proposed a process be implemented to identify how fixed anchors will be managed in the Forest Preserve.

8. The use of some forms of fixed anchors, specifically slings left atop climbing routes serve to protect the existing vegetation, are essential in numerous situations, and can be substantially invisible by use of earth-toned colors.

The Department expects that this concern will be addressed in the fixed anchor policy developed during implementation of this plan.

9. Visual impacts of bolts can be mitigated by use of colored anchor brackets.

The Department acknowledges this observation.

10. Group size restrictions should be unit-wide. Focusing on several distinct areas that are presently a problem will likely force groups into other unimpacted areas which can not sustain that level of increased use.

The Department concurs and has made this change in the Plan.

11. Access trails to climbing areas should be managed as Class 3 trails.

The Department will classify trails at the Beer Walls, King Phillips Spring and access trails to Roaring Brook Falls as Class 3 trails. Other trails will be classified as Class 2 trails. Monitoring of the trail condition and use will form the basis of whether a trail would be upgraded to a Class 3 trail in the future.

VISITOR USE

1. DEC should gather data relating to use by day users and overnight users, including percentages of both user types.

The Department has estimated percentages of use (day vs. overnight) by a sampling of trailhead registers. At this point in time the Department believes that this level of detail is sufficient to characterize use in the units.

2. Group size restrictions are excessively restrictive with respect to youth camps and other organized camps. A maximum group size of 8 persons is economically prohibitive to organized camps.

The APSLMP establishes a capacity limit for a primitive tent site as no more than 8 persons and three tents. The Department is mandated to manage Forest Preserve lands in compliance with the APSLMP. Since the capacity of a tent site in wilderness has been established under the APSLMP, the Department must manage overnight use within those established limits.

3. Comments have been received both in favor of additional restrictive measures and in favor of less or no restrictions on control of pets in the back country.

The Department believes that the proposal, as identified in the public draft, will address pet concerns identified by users during the scoping sessions. Undesirable encounters between dogs and other dogs or people will be monitored. Should the proposed controls on dog use not prove to address concerns identified in the UMPs additional restrictive measures will be considered.

4. Trails on trail-less peaks should be formalized as marked trails.

The Department believes that the program proposed in the UMP will stabilize and protect the resource from impact by those hikers seeking to climb the “trail-less” peaks. These peaks currently see light use and establishment of these trails as Class 3 or 4 trails would fundamentally change the character of the experience and only serve to attract additional use and impact.

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5. Opposition to camping ban above 4000 ft in winter.

The APSLMP does not provide for camping above 4,000 ft in elevation at any time of year. The UMP reflects this management direction.

6. Request for a comprehensive definition of a glass container with respect to proposed regulations.

The Department believes that the existing language used in existing regulations (6 NYCRR 190.12) and proposed in the DMWA and GMWA UMPs will restrict undesired glass materials from the units and provide for materials that can not be otherwise carried in plastic reusable containers.

WILDLIFE

1. Unit specific data is lacking on wildlife populations. Better wildlife inventories should be part of all UMPS, budgeted and scheduled. Planning for the return of extirpated species should be improved.

To date, recovery plans have not been formalized for species listed as endangered that migrate or breed within the units. As new information becomes available, the Department will recommend recovery programs. The breeding bird surveys are presently an ongoing statewide project. Studies on wildlife populations should be conducted on a region- or park-wide basis.

2. Bird species lists should be organized in phylogenetic order to be more useful.

The species list has been resorted by Order.

NATURAL RESOURCES

1. Baseline biological data is lacking relating to specific natural resources in the unit.

The Natural resource inventory utilizes the best data available during the planning process. Where additional information is deemed necessary for management of the natural resources management actions to develop that information have been noted.

ADDITIONAL MAPS NEEDED

1. Forest Cover Type Map

The Department does not believe that this information is essential for the planning decisions needed in this plan. General forest cover data is not accurate to a scale that would be usable for site specific decision making. Where facility development is proposed, forest cover, wetlands and other environmental data are used to develop a specific work plan for the facility.

2. Water Resources Map (wetlands, streams, rivers, lakes and ponds)

A wetlands map was prepared for planning use. The scale necessary for this map to be visible does not lend itself to duplication in the published copy of the UMPs. The large

scale map is available for review at the both the Albany and Ray Brook offices of DEC and at the APA offices and on the NYSDEC website.

3. Map showing condition of all boundary lines is needed.

The Department does not have this material inventoried in such a manner as could be easily developed into a visual map.

OTHER

1. Identify overarching goals for management. Description of wilderness values is needed.

Overarching goals for management of wilderness areas are established in the APSLMP. Specific management principles for Forest Preserve lands in general, and wilderness areas specifically, are identified in the UMP.

2. LAC process should be expanded.

The LAC process is not a “one size fits all” approach to planning. It’s use in the DMWA and GMWA units is proposed where LAC is the most appropriate tool and can be successfully implemented.

3. Trip ticket system should be considered as an information gathering and education tool.

DEC does not believe that this approach is warranted at this time. The trip ticket program is costly to implement in terms of materials and staff time in maintaining register facilities on a daily basis. Data analysis is the highest expense, both in terms of funding and personnel involved. This monitoring method is useful in managing areas of extremely high use. Department experience also indicates that the program is least valuable in areas where day use is the predominant type of activity, such as the DMWA and GMWA.

4. Establishment of new trail with modern trail design practices may be more cost effective in the long run than mitigative methods.

The Department concurs with this assessment. It is not always possible to redesign and relocate entire trails with existing resources. New trails and planned rerouting of existing trails are designed using the most current design techniques available. Where funding and/or partnerships with other organizations allow trails may be relocated in the future, pursuant to approved UMPs or UMP amendments.

5. Comments seeking more discussion of fire history.

Fire history is briefly discussed in the plans where warranted. Detailed discussion of this history in the plan, while interesting, does not impact management other than to identify why several unique geographic features appear in the unit.

6. Discrepancy between trail figures and guidebooks.

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Discrepancies exist between the UMP and guidebooks for several reasons, including trail reroutes and differences in how trails were measured. Guidebooks rely on slope distances that are measured by rolling a wheel along the surface of the trail. Trail distances identified in the public draft UMP were pulled from digital map data at a scale of 1:24000 and are measured in horizontal distances. The guidebook distances have been incorporated in this final draft.

7. Requests were received for inclusion of truck, horse, mountain bicycle, and ATV trails at numerous locations in the Units and that forest lands below 4,000 ft elevation be managed for forest products.

These requests are directly in opposition to mandates in the APSLMP for lands classified as wilderness. Their inclusion in the UMPs was not considered.

8. Request DEC reconsider removal of private trail markers in favor of State Markers.

Trails on public lands or on lands where the State holds a trail easement are owned and managed by the State either directly, under contract with a trail maintenance organization or through volunteer trail adopters. It is the Department's stance that these trails should be identified in using a uniform trail marking plan as identified in policy. Other appropriate ways of recognizing the efforts of trail volunteers will be implemented.

MAP CORRECTIONS

1. Round Pond parking area is missing from the map.

The convention used in development of the draft facilities map implied that where a trail register was shown a parking lot also existed. The final map shows a trail register marker where a register exists and will also show a parking marker if a parking area also exists.

Specific Comments – Giant Mtn Wilderness Complex

1. Designation of new campsite opportunities.

The Department will evaluate the potential for designation of additional camping sites in conjunction with the planned baseline inventory of established campsites in Year One of implementation. Should new camping sites noted above be found to be otherwise in compliance with the APSLMP and of a character that is likely to be resilient to repeated use they may be established at that time.

2. Designation of a trailless section in the unit.

The Department has not proposed any additional trails in this unit, except for a trail accessing Iron Mountain in the northeast corner of the unit. There are no plans to designate additional trails in the remainder of the unit, including the areas around Knob Lock and Noble Mountains.

3. Discussion of control of terrestrial invasive species.

The Department has included objectives and proposed management activities with respect to this threat.

4. Designated Campsites between 3500-4000 ft elev. should be considered east of Rocky Peak Ridge.

The Department will evaluate the potential for designation of camping sites in this location in conjunction with the planned baseline inventory of established campsites in Year One of implementation. Should new camping sites noted above be found to be otherwise in compliance with the APSLMP and of a character that is likely to be resilient to repeated use they may be established at that time.

5. Trail work is needed on Mossy Cascade Trail.

Trail projects for this section of trail have been incorporated in the Budget.

6. Add Iron Mtn, proposed conversion of Wild Forest, and Valley Trail as proposed facilities on maps.

The exact location of the Iron Mountain trail will be developed in a separate work plan, developed by the Department after adoption of the UMP. It can not, therefore be displayed on the facilities map at this time. The Department has not received a specific proposal for siting the Valley Trail in portions of the GMWA. When such a proposal is made the proposal will be evaluated and, if compatible with the objectives of the UMP, will be proposed as an amendment to the UMP. The Wild Forest parcel identified as potentially suitable for reclassification to wilderness was identified in the text. It's status remains Wild Forest until APA designates it otherwise.

7. Extend Iron Mountain trail to the North trail to Giant.

The Department does not believe that there is sufficient demand for a connector trail between Iron Mt. and the North Trail to Giant. This area is suitable for an easy bushwhack route for the few individuals who would be interested in the traverse.