The background of the cover is a scenic photograph of a park. In the foreground, a calm pond reflects the sky and the surrounding landscape. The middle ground is filled with a dense forest of trees, many of which have turned vibrant shades of red, orange, and yellow, indicating autumn. In the background, a large, rounded mountain peak rises against a clear blue sky with a few wispy clouds. The overall scene is peaceful and natural.

# **Monadnock State Park Master Plan**

**For Management Strategies  
and Capital Improvements**

**New Hampshire  
Department of Resources and Economic Development  
Division of Parks and Recreation**

**Issued April 1, 2003  
Adopted July 9, 2003**

# Monadnock State Park Master Plan

**For Management Strategies and Capital Improvements**



Prepared for  
NH Department of Resources and Economic Development  
Division of Parks and Recreation

Prepared by  
Thomas Kokx Associates  
With Tracey Petrozzi

Issued April 1, 2003  
Adopted July 9, 2003

Cover Photo by Donald Ramsey  
Mount Monadnock viewed across Perkins Pond



## Foreword

Through partnerships with the Society for the Protection of New Hampshire Forests and the Town of Jaffrey, the State of New Hampshire manages the visitors to the parklands and conservation lands surrounding Mount Monadnock. The 1992 Monadnock Management Plan stated its goal was to “provide managed access to these unique highlands for recreational and educational experiences, while protecting these resources from the ravages of over use.” The 2003 updated Master Plan focuses on management strategies and facility improvements to address evolving visitor management issues surrounding increased usage of the mountain. The updated plan provides for the completion of a number of recommendations in the 1992 Plan and sets forth an action plan with an implementation schedule to achieve the desired outcome.

A Monadnock Master Plan Steering Committee was established in the fall of 2000 to assist the New Hampshire Division of Parks and Recreation in the master planning process. Along with other responsibilities, the Steering Committee worked with the Division to formulate strategies for park programs and facilities that would accommodate and better manage the intensity of use at Monadnock State Park. The stated goal was to “develop a management plan that will balance the needs for recreation, conservation, education and financial stability.”

- *Recreation* includes outdoor experiences for people of all ages, people with disabilities, families, groups, and hikers in search of solitude.
- *Conservation* includes protecting the natural and cultural *resources* of Mount Monadnock while promoting the use of these resources in an appropriate, ecologically sound manner. *Resources* include vegetation, wildlife, soils, water, trails and recreation facilities, sites of historical, geological or archaeological interest, scenic views, vistas and areas of high aesthetic value.
- *Education* involves methods of deepening visitors’ awareness of Mount Monadnock’s geological past, its biological and zoological diversity, and the cultural, social and political aspects of its past. It also includes creating greater awareness of hiker responsibility for safety, etiquette, and proper trail use to protect the environment.
- *Financial stability* involves recognizing that the Division of Parks and Recreation is a self-funded agency funded through fees collected at state parks, beaches and historic sites.

After considering various management strategies, the Division and Steering Committee focused on one that sought to achieve these management goals by distributing vehicle parking and use to the various trailheads around Mount Monadnock, making modest improvements to parking at these trailheads, and installing “Iron Rangers” for voluntary fee collection. It suggests improvements in the infrastructure at Park Headquarters and looks favorably on separating family from youth group camping and relocating it to the Gilson Pond Area. It proposes a reduction and better management of overflow parking. By striving to reduce the number of users of Monadnock State Park on peak weekends while redistributing use around the mountain, this strategy aims to regulate use and preserve the quality of visitor’s experiences on the mountain. It also makes recommendation to improve trail maintenance, manage its natural and cultural resources, and to broaden the educational programs Monadnock State Park has to offer.

The Plan will also assist the Division of Parks and Recreation in the negotiation of the lease renewals with the Society for the Protection of New Hampshire Forests and the Town of Jaffrey for our continued management of their property. The Division of Parks and Recreation is committed to balance recreational opportunity, resource protection and the regional tourism efforts important to southwest New Hampshire.

## Acknowledgements

The Division of Parks and Recreation would like to thank the following who helped in the development of this plan. The information gathered and shared in the steering committee was helpful in making the decisions presented in this plan.

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## PROLOGUE

### Setting

Rising 3,165 feet above sea level, the lone metamorphic schist peak known as Grand Monadnock towers above its neighbors. Shaped by glaciers that receded over 15 - 20,000 years ago, the exposed rocky terrain of this mountain offers the opportunity to observe first-hand the end result of mountain-building forces. Its summit, accentuated by rocky terrain, provides an unparalleled view that stretches across parts of all six New England states.



Monadnock means “mountain standing alone.” Mount Monadnock is one of the most climbed mountains in the world and has been an inspiration for many since it was first climbed in the early 1700s.

*M'an – and – oc*, meaning, “mountain standing alone”, proudly lives up to its Algonquin name. In the mid – 1800s, a Professor Davis in his monograph on the Physical Geography of Southern New England suggested that the “name of this mountain might well be adopted to represent all mountains of this type, prominent isolated hard rock remnants of a prolonged period of erosion.” This suggestion ... received worldwide acceptance among geologists, and all such mountains are now referred to as “monadnocks.” Local residents and visitors from afar were not surprised when Mount Monadnock received the federal National Natural Landmark designation in 1987.

The mountain and its setting, throughout their history, have been a focal point for the inspiration of artists, authors and poets, including Henry David Thoreau, Ralph Waldo Emerson, Mark Twain and Abbot Thayer. Time spent with the writings and paintings of these authors and artists can yield special insights into why this mountain has stood out among others in New England, and why it remains so much a part of people’s quality of life today.



## History of Park and Its Development

The background and history of Grand Monadnock is varied and rich. Significant amounts of information are provided in various references and articles written over time, and a considerable amount of information can be provided on the history of the park and its development. The 1992 Management Plan provided a general narration on the park that provides a good overview of background information for the master plan. The following narration comes from the 1992 Monadnock Management Plan, with a few modifications and additions.

“The first recorded European ascent of Mount Monadnock was made in 1725 by a party of Massachusetts soldiers scouting for Indians. European settlement of the Monadnock region began in earnest in the 1750s. With the exception of a spruce forest on the summit, the mountain was significantly cleared of trees and pastured by the late 1700s. A fire around the year 1800 burned the remaining forest off the summit. The fire apparently burned for a couple of weeks, destroying most of the organic soil on the top of the mountain. It was a result of this fire that erosion began to expose the bedrock in the summit area, eventually creating the familiar bald summit we know today. Subsequent fires, including one fire in the early 1800s, said to have been deliberately set to destroy cover for wolves, facilitated the bedrock exposure.

“The Civil War changed the traditional pattern of life in New England, and many farms were abandoned in the wake of the war. The sparse pastures and rock ledges of the mountain were left to support whatever growth they could. While agricultural activities were declining on the mountain, climbing this prominent peak grew in popularity.

“The sweeping views from the bald summit of Monadnock proved a strong magnet to people living in the region. Climbing Grand Monadnock was a popular activity as early as 1800, and the recreational use on the mountain continued to grow as agriculture declined. The completion of the Third New Hampshire Turnpike in 1801, present day Route 124, provided a commercial route between Keene and Boston. It also provided the basis for a long tradition of visitors to Monadnock from the populated Boston area.

“Gap and Little Monadnock Mountains, adjacent to Grand Monadnock, share the same basic history of land development as Mount Monadnock, although they were not the same magnets to recreation that Monadnock has consistently been. The summits of both Gap and Little Monadnock were cleared pasture once, but are now reverting back to woods.

“The growth of recreation use on Monadnock created a demand for services in the area. There were roughly built shelters operating as taverns on the mountain by 1826. The Half Way House was a substantial inn built on the south side of the mountain in 1860, and remained in operation until fire consumed it in 1954. Other inns, including the Ark, Cutter’s Hotel, the Monadnock Inn and Shattuck Inn, were built near the mountain, but the Half Way House was the most prominent in the history and development of Monadnock.” The Ark remains today as the Monadnock Bible Conference.



“It was partially as a result of this economic activity on the mountain that the Town of Jaffrey acquired 200 acres near the summit of Monadnock. An attempt by the owners of the Half Way House to claim this abandoned land in the late 1860s led the Jaffrey selectmen to pursue acquiring this tract for public enjoyment. In a bold and far-sighted conservation move, the Town of Jaffrey succeeded in obtaining the land from the heirs of the original owner in 1885. This acquisition was among the first spark of a broad conservation movement that was to follow in New Hampshire. The state acquired its first state park in 1893, a four-acre gift of land on the top of Pack Monadnock. The threat of imminent logging on the sides of Monadnock prompted Dublin and Jaffrey residents to form the Monadnock Forestry Association in 1904. This group was successful, working with the State Forestry Commission, in purchasing 500 acres of land on the southeast slope of the mountain to create Monadnock State Park.

“The Society for the Protection of New Hampshire Forests was formed in 1901 in response to the destructive logging practices taking place in the White Mountains. Prominent founding members of the Forest Society were members of the wealthy Dublin summer colony. These people did not need to look outside the Monadnock Region to see destructive logging practices. The abandoned fields of the early settlers had grown back to forest, and this forest was feeding a hungry timber industry. The Society for the Protection of New Hampshire Forests first purchased land for protection on Monadnock in 1912.” Today, the Forest Society owns 3,886 acres on Monadnock, the majority of the 6,817 acres protected for public use on the mountain through ownership and easement stewardship.

“Fires from logging debris were a major problem in the early part of this century. A fire lookout station was built and manned on the summit of Monadnock in 1912. William Falconer, the first fire warden assigned to Monadnock, also represented the first established public management presence on the mountain....

“The New Hampshire Forestry Department, the parent organization for today’s Division of Parks and Recreation, hired the first park rangers to work on Monadnock in 1930. The Civilian Conservation Corps built a campground and related facilities on the state park property in 1934 and 1935. With the exception of an attendance drop during World War II due to gas shortages, recreational use on Monadnock and surrounding peaks has continued to grow through this century....

“In 1974, Stephen H. Foster wrote a “Management Plan of Gap-Monadnock Mountains” for the Society for the Protection of New Hampshire Forests. The plan was based on the work of The Monadnock Policy Committee, a group formed at the urging of the Forest Society to consider solutions for the problems on the mountain. The plan was written, at least in part, to respond to a perceived degradation of the mountain environment, and a reduction in the quality of the “Monadnock experience” due to heavy recreation use on the mountain and development pressures in the area.” Many of the issues identified over 25 years ago in Foster’s plan remain relevant, and to some degree, unresolved today.

“At least a couple of concrete actions resulted from the work of The Monadnock Policy Committee and Foster’s 1974 plan. Perhaps the most significant of these was the creation of the Monadnock Advisory Commission in 1976 (See Appendix F) to “insure the implementation of...the plan”. The Commission provides a forum for community input in the



management of the Gap-Monadnock environs, and coordinates and focuses the management efforts of the New Hampshire Division of Parks and Recreation and the Society for the Protection of New Hampshire Forests.

Also as a result of the 1974 plan, the New Hampshire Division of Parks and Recreation signed a lease in 1979 with the Society for the Protection of New Hampshire Forests to assume recreation management responsibilities on the Society's Monadnock land. That lease was expanded in 1991 to include the Society's land on Gap Mountain. Under the lease agreement, the Forest Society retained management responsibilities of the timber resource. It was shortly after the state assumed these additional management responsibilities that drastic state budget cuts resulted in a reduction of park personnel on the mountain. Some of these positions cut at Monadnock State Park in the early 1980s were recent additions to the staffing that had represented partial implementation of recommendations from Foster's 1974 Management Plan.

“As maintenance and enforcement were reduced on Monadnock, use of the mountain continued to steadily increase through the decade of the eighties. After a long dormancy, a revitalized Monadnock Advisory Commission began to meet on a regular basis again in 1988. Their authority was expanded through legislation in 1989. The Commission became very active in shaping the policy on the mountain through the early 1990's and provided oversight and direction during the writing of the 1992 Monadnock Management Plan.”

Several changes have occurred within the state park in response to the 1992 Management Plan. These include

- Upgrade of the Old Toll Road Trailhead and the implementation of fee collection at this location.
- Installation of the shower facilities at the Headquarters Area.
- Adoption of a mountain-zoning ordinance by the Towns of Jaffrey, Dublin, and Troy and the implementation by Marlborough of their “Residential Scenic District.”

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## CHAPTER 1 - INTRODUCTION

### Purpose

The Monadnock State Park Master Plan has been in the making since the fall of 1998, when legislation was introduced to provide funding from the general fund for the planning effort. The primary motivation was to make capital improvements that would alleviate congestion in the Headquarters Area of the park. That legislation was withdrawn when funding was underwritten by the State Park Fund, which is solely comprised of park income.

As with all state parks, maintaining a current and viable plan is important. The last major plan developed for the park was the 1992 Monadnock Management Plan, which also included management direction for Gap and Little Monadnock Mountains. The 1992 plan contained many good ideas. For a variety of reasons, some have been implemented, but others have not. Recognizing the need to strengthen implementation and management direction and provide a more solid basis for funding requests, the Division of Parks and Recreation undertook a new master planning effort specifically for Monadnock State Park.

In an effort to balance the needs of recreation, conservation, education and financial stability, the 2003 Master Plan focuses on a management strategy that addresses evolving concerns surrounding concentrated visitor use of the mountain. It builds on the proposals made in the 1992 plan and takes them to a higher level by providing more detailed analysis, GIS (Geographical Information System) generated maps, conceptual plans, and preliminary cost estimates. It assigns priorities and sets forth an implementation strategy.

Grand Monadnock and its surrounding highlands represent a unique natural and cultural resource offering exceptional hiking and other recreational opportunities. The area is important from the local, regional and national perspective, for Grand Monadnock is recognized as one of the most hiked mountains in the world. Monadnock is also unique in that its conserved land base is the result of a partnership, between the New Hampshire Division of Parks and Recreation (Division), the Society for the Protection of New Hampshire Forests (Forest Society or SPNHF), and the Town of Jaffrey. Other surrounding communities and non-profit organizations also have an important relationship to this mountain and its management.

It is the desire of the Division of Parks and Recreation to create a common vision between all its partners and the public for the management of Monadnock State Park, with the ultimate goal of protecting this unique resource and what is often referred to as the “Monadnock experience.”



## Project Area

The Monadnock Master Plan focuses on the lands owned by the state, Town of Jaffrey, the SPNHF lands surrounding Grand or Mount Monadnock, and other associated private lands with conservation easements. These lands, totaling 6,817 acres, comprise the area under management by the Division of Parks and Recreation. (See Figure 1.1.) Of the total, State Park lands account for 1,138 acres, Town of Jaffrey, 424 acres, and the SPNHF has a current ownership of 3,886 acres. Private lands with easement agreements account for 1,369 acres.

Both the Town of Jaffrey and the Forest Society have entered into long-term lease agreements with the state for the NH Division of Parks and Recreation to manage their lands for public recreation. The existing major park facilities, including the primary entrance point, parking lots, picnic and campground, and Gilson Pond, are located on state lands, while several small trailheads and the majority of trails are located on Forest Society lands.

The overall, heavily forested environment of the park set in the midst of several small New Hampshire communities creates a distinctive setting. Although it is one of the larger parks in New Hampshire and is within easy drive of major population centers, Monadnock State Park remains an ideal location for more passive, quiet recreational activities and hiking opportunities.

In addition to these factors, the proximity and relationship of surrounding parks and reservations, especially Gap Mountain and Little Monadnock Mountain, are an important consideration. Also, many private parcels surrounding or adjacent to the park are under conservation easements and contribute to the park's importance. During development of the master plan, it was recognized that Monadnock State Park is and will continue to be an integral part of a more comprehensive network of open-space and greenway linkages.

## Planning Process

In the fall of 2000, a steering committee was established to assist the New Hampshire Division of Parks and Recreation in its preparation to update the master plan for Monadnock State Park. Its membership included representation from the Division's land management partners, the Society for the Protection of New Hampshire Forests, the Town of Jaffrey, the Monadnock Advisory Commission, and key stakeholders in the region. The key stakeholders included representatives from the surrounding communities, Antioch Graduate School, Franklin Pierce College, the Harris Center for Conservation Education, the Monadnock-Sunapee Greenway Trail Club, the Monadnock Travel Council, and the New Hampshire Fish and Game Department.

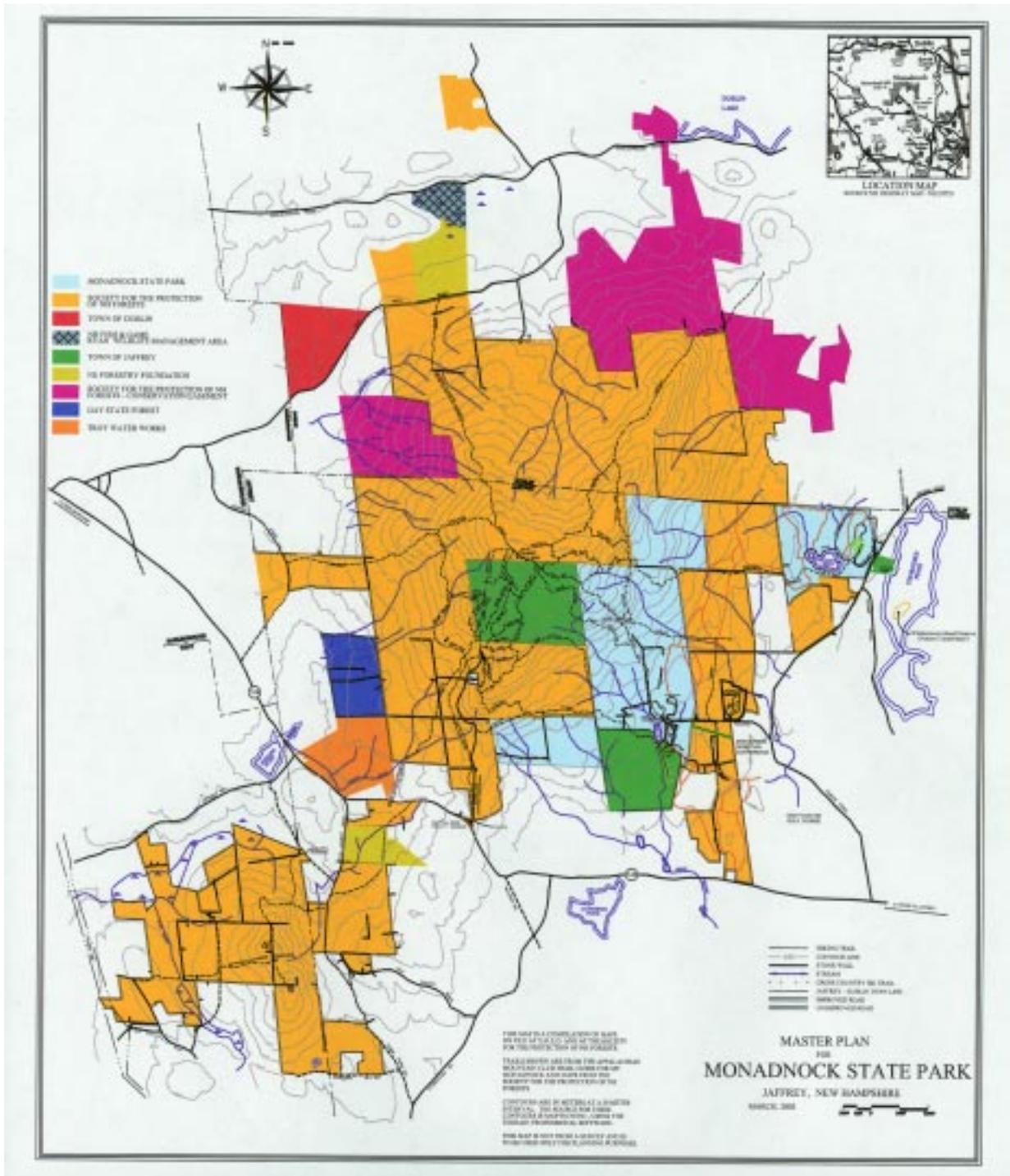


Figure 1.1 – Map of Project Area



The Monadnock Master Plan Steering Committee's role included:

- Sharing ideas;
- Providing background information;
- Acting as a sounding board regarding the feasibility of various development proposals; and
- Aiding in the building of public support for the endorsement and implementation of the updated master plan.

The steering committee met on a monthly basis with all meetings posted and open to the general public. In addition to the responsibilities listed above, the committee assisted in defining the study area, the primary issue and the related concerns; completed baseline data collection; developed a vision statement along with associated goals and objectives; and invited professionals to share their expertise in important resource areas related to the plan. Minutes were recorded at each meeting as part of the planning record.

Specific survey and data collection efforts undertaken or supported by the steering committee included:

- Completion of a Liabilities and Asset Survey;
- Development and application of a Key Issues Survey;
- Development and application of an Appropriate Uses / Activities Survey;
- Development and application of a general Trails Assessment Survey;
- Completion of detailed Trail Condition and Needs Surveys for the White Dot, White Cross and White Arrow Trails; and
- Completion of a Facilities Condition Survey prepared by the Department of Resource and Economic Development's Design, Development and Maintenance section.

Highly important to the plan development and resulting management direction was the completion of a Natural Heritage Inventory of state and Town of Jaffrey lands within the park boundaries. This, along with the supporting bio-inventory work completed by the Forest Society on its lands, became an invaluable tool in addressing the natural resources and conservation elements in the plan. Other important plan preparation work included updating the site surveys of the park, especially for the Headquarters Area and Gilson Pond. Also important, were the GIS (Geographical Information System) and other map layers for resources that included surface hydrology, vegetation, and soils.

In March of 2002, a master plan consultant was hired to provide planning and technical writing assistance, as well as provide some project coordination in completing the plan. The consultant helped the steering committee to summarize the large volume of information and data it had compiled, develop and evaluate alternatives, and complete the writing of the plan.



A stated desire of the Division of Parks and Recreation was that “ consensus building be an integral part of the project.” A public meeting was held in June 2002 for the purpose of review, comment, and input during the early stage of the draft plan development. Attendees were given background to the planning process, the issue and concerns being addressed, information and data collected, management strategies considered, and the initial management direction being developed for the park. A comment period of 20 days followed the formal presentation.

Those responding expressed concern that communication to date was lacking and many aspects of the plan had not been publicized. More public review opportunity was requested. Other comments related to the technical aspects of the plan. These centered on the primary alternative being developed and whether the direction being proposed was appropriate to address management needs.

As a result of public response, the Division of Parks and Recreation adjusted its timeline to allow more time to work with the Master Plan Steering Committee and the Monadnock Advisory Commission before the public review draft was completed and released for comment on April 1, 2003. The new timeline also allowed for a 45-day public review period before the final plan was completed and published. During this time, provision was made for public question, answer and comment, as well as opportunities to meet one-on-one with partners and other organizations as requested.

The Division of Parks and Recreation received 13 written comments in response to the public comment period held from April 1, 2003 to May 16, 2003. A public information session was held on Saturday May 3, 2003 at the park. Approximately 50 people attended the session.

The public information session was staffed by seven division employees familiar with the park and the planning process. The attendees were encouraged to ask questions and review the master plan and conceptual plans for the park. The response by attendees was positive regarding the format and information presented. An opportunity to provide written comment was offered.

The majority of the written comments received were from local residents, with some similar comments between letters. Following is a response and analysis to the comments submitted to the Monadnock Advisory Commission on July 9, 2003.

Public Hearing – The Division of Parks and Recreation will not be holding a public hearing on the plan. The division feels that the public information session provided an equal if not superior format to gather public comment and answer questions by the public.

Emergency Vehicle Access – It is the intention of the division to have a collaborative design process to address emergency access to trailheads and other park areas. Specific to forest fire access, the division will consult with the Division of Forests and Lands, the Forest Protection Bureau, and local fire departments.



Gilson Pond Area – The division purchased the property in 1978. The 1992 plan recommended continuation of overflow parking up to 500 cars and the use of the area for special events and day use. This plan, in response to visitor and management needs, recommends continuation of day use, parking of 400 cars directed by management guidelines, development of family camping area, and use for special events.

Management decisions by park personnel over the last two years have resulted in more efficient parking at the Gilson Pond Area. Parking cars there earlier in the day has lessened safety concerns and the number of cars at the area. Parking at Gilson Pond Area during the peak foliage weekends provides an important revenue stream for the park. Concerns about the use of the town's beach adjacent to the park can be negotiated between the town and the state park. If the town wishes not to extend visitation to the visitors of Monadnock State Park, then the park staff will direct inquiries for public swimming to areas that are open to the public.

Security – The park staff works cooperatively with local law enforcement on a variety of issues. Public order and enforcement of state park rules is managed by the park, however, the town and other law enforcement agencies (county and state police) have authority for crimes committed on state park property. The parking at Gilson Pond Area has occurred for over 20 years and it is anticipated that, with the management changes and staff expansion for the campground, the area will be better patrolled. The definition of parking areas at the Dublin and Marlborough trailheads will assist law enforcement and park staff to readily identify improperly parked cars.

Fees – The Division of Parks and Recreation is a self-funded agency through fees collected at state parks and historic sites. Fees are set through a combination of factors including the statewide park budget and rates charged at commercial attractions and campgrounds. Fees should not be used to limit the public's access to recreational opportunity.

Additionally, there were a few comments provided that were contemplated by the steering committee or the Monadnock Advisory Commission and decisions were made that are contrary, such as moving youth camping to Gilson Pond rather than moving the family camping.

The Monadnock Advisory Commission, after much discussion, amended the plan to remove reference to the numbers of cars parked at Gilson Pond, then voted to accept the plan as amended unanimously.

## **Guiding Principles**

The guiding framework for the Division of Parks and Recreation is the New Hampshire State Comprehensive Outdoor Recreation Plan (SCORP) revised May 29, 2003. Although most policies outlined in the SCORP document have some relevance to the management of Monadnock State Park, there are certain ones that have a higher significance. A sampling of these policies includes:



- Resource Protection: To encourage the preservation of open space; provide a healthful and attractive outdoor environment for work and recreation; and conserve land, water, forest, and wildlife resources.
- Resource Protection: To preserve our unique biological diversity by working to identify, designate, and preserve unique and rare plant and animal species and geologic formations which constitute the natural heritage of the state.
- State Recreation Resources: To develop, operate, and maintain a comprehensive state park system to meet the recreational needs of citizens and visitors to the state and protect unusual scenic, scientific, historical, recreational, and natural areas within the state.
- Park Maintenance: To implement a maintenance program for state parks and recreation areas that protects the state's investment in these facilities and their natural, historic, and recreational values.
- Partnerships: To actively encourage the development of "partnerships" in park and recreation activities: research, planning, operations, public information and meetings.
- Volunteerism: To support volunteerism through technical assistance, training, recreation, special programs and services.

The Master Plan Steering Committee developed a range of goals and objectives specifically to help guide the planning process. **The overall goal of the plan is to "balance the needs for recreation, conservation, education and financial stability in developing and implementing a master plan for Monadnock State Park and environs."** The full list of goals and objectives is included in Appendix A.

Also included as Appendix B are the "Guiding Principles" developed by the Society for the Protection of New Hampshire Forests. As the primary landowner, the Forest Society adopted these principles to guide their participation in the master plan process.

## Vision

Visions for Mount Monadnock and its surrounding environment are as varied as the individuals who hike its slopes and many trails. Responses to a questionnaire, used during the planning process to assess key issues for the mountain, envision that Monadnock will

- Continue as a year-round state park, providing hiking, snowshoeing, cross-country skiing, camping and picnicking activities.
- Still be a quiet, restful place for hikers and campers, providing non-commercial, low-key recreation.
- Continue to be a mountain that retains its natural beauty, offering visitors an aesthetic and inspirational experience.



- Remain a place where families can come and enjoy the outdoors.
- Be a location where people, particularly children, can go to learn / be taught about the mountain and its environment.
- Remain the same tomorrow as it is today.

No matter what the individual vision, concern was usually directed at the mountain itself, its environmental importance, the many uses it provides, or some aspect of its surrounding landscape. In order to help focus the plan and the work of the Monadnock Master Plan Steering Committee, the vision adopted was captured in the following statement:

**“Provide A Quality Mountain Experience, Maintain The Integrity Of The Natural Environment, And Respect The Cultural Landscape.”**



## CHAPTER 2 – ISSUE / PLAN DIRECTION

### Issue

In the simplest terms, **the primary issue being addressed in the master plan is management of the intensity of use at the park, particularly during the peak weekends of fall foliage season, and the ability of the current park facilities and programs to accommodate that use.**

Since the early 1800's Monadnock has seen increasing numbers of hikers traverse its trails. Today, approximately 95,000 visitors come to the state park annually. If spread out over an entire year, this number could be manageable in terms of staff, park facilities and resources, and protection of the environment. However, use tends to be concentrated to specific times of the year, with the highest concentration occurring during fall, and a smaller peak in the spring. Weekends and holidays also receive greater demands in use than weekdays.



**Fig. 2.1** Headquarter Area parking lots are often filled to capacity. Current facilities are inadequate to accommodate needs on heavy and peak use weekends.

There are approximately 17 weekends per year that are considered high-use periods. During those periods, all the existing parking lots are filled, with overflow into areas not designated or designed for parking. The headquarters picnic area is the first area to be utilized for overflow, and is used consistently to accommodate additional parking. In at least four of those seventeen weekends, with Columbus Day Weekend being the busiest, almost 1,200 vehicles are accommodated around the park, including outlying trailheads. Over 750 of



these vehicles cannot be accommodated in designated parking lots and are tightly packed into the Headquarters picnic area, campground, and the Gilson Pond Area fields. The Gilson Pond Area fields are estimated to accommodate more than 500 of these vehicles, concentrating hikers on Birchtoft Trail, which normally only sees a small percentage of that use.

At peak periods on the White Dot and White Cross Trails a steady stream of hikers stretches from top to bottom with several hundred hikers on the summit at the same time. The utilization of the park by many organized groups also taxes parking facilities and contributes to large numbers on the mountain at the same time.



Fig. 2.2 High use creates a constant stream of hikers on the more popular trails. A high presence of hikers on the summit is a regular occurrence.

The effects on the resource and visitor experience are not fully known or understood. What is known is that such intense use causes a significant drain and impact on park staff in their effort to park vehicles, pushes existing facilities to their limits of service, creates numerous safety problems related to traffic and hikers, creates congestion along access roads, and leads to further deterioration of trails and the surrounding environment.

As part of the preparation work for the plan, the Monadnock Master Plan Steering Committee distributed a key issues questionnaire among knowledgeable people from surrounding communities. These included users of the park and those who had a wealth of knowledge about Mount Monadnock. “Overuse” was the response most frequently mentioned, along with its consequences and effects. This is the primary issue the master plan seeks to address through the management recommendations outlined in Chapters 3 through 7.



## **Plan Direction**

Efforts to maintain and improve the quality of the recreation experience and the natural environment associated with Monadnock State Park will result from implementing management initiatives in several categories. It is the goal of the master plan to achieve results through coordinated efforts within the categories of facilities, trails, natural and cultural resources, visitor services and public education, and park administration and operation practices. The direction outlined in the following chapters builds on facility improvements, management directives, creative partnerships, and education efforts that encourage use at non-peak periods and/or at other parks and trails in the region.



## CHAPTER 3 – PARK FACILITIES

Park facilities can be grouped into three areas: Headquarters located on state land on the southeastern flank of the mountain; Gilson Pond, also located on state land east of the mountain; and four trailheads dispersed around Mount Monadnock located on non-state lands.

### Headquarters Area

The Headquarters Area is the historic center of the park and the primary destination of most users. It is an area of intense use, is open all year long, accounts for the major concentration of park facilities, and serves the two primary trails up the mountain. It is also the dominant point for groups to access the mountain. As a result, the area serves as the point for most visitor contact and education opportunities. Facilities at this location include:

- Park entrance road and tollbooth
- Two major parking lots
- Picnic ground and shelter
- Campground (family & youth)
- Park store
- Two toilet buildings, one with a shower
- Park administrative and mountain patrol office
- Visitor center
- Hikers' cabin
- Ranger's residence
- Poole Reservoir

Although these facilities provide the desired services, many are inefficient in their location, size or capacity. In general, they show years of wear with numerous maintenance and rehabilitation needs evident. The area also suffers from poor traffic circulation patterns for both vehicles and pedestrians.

### Gilson Pond Area

Gilson Pond Area serves day use activities. Facilities include a lower parking lot for hikers and an upper parking lot for hikers and picnickers. Pit toilets are located at this site. The only trail out of the area for climbing to the summit of Mount Monadnock is the Birchoft Trail. Prior to its purchase in 1978 by the Division, the Gilson Pond Area was a private campground. Except for one large and one small open field, the area has been rehabilitated to a forested or natural setting since its acquisition. The area provides the only open field view of the mountain on state owned lands within the park. The fields and parking lots at the Gilson Pond Area are utilized during the peak fall weekends to help accommodate an overflow of hundreds of vehicles. Fees are not collected at this location except on peak fall weekends.



### Trailheads

The remaining facilities include four trailheads. Three are located on SPNHF lands and include the Old Toll Road Trailhead, Marlboro Trailhead, and Dublin Trailhead. The Pumpelly Trailhead and trail begin on private land; then the trail moves onto lands owned by SPNHF. This site does not have any designated parking, and users currently park on the shoulder of the town road. There is no management agreement in place for the trailhead or trail for the first mile and a half, other than a deed restriction to allow the right to pass.

## **Management Analysis and Discussion**

In preparation for development, evaluation and discussion of the master plan, site surveys were completed for the park Headquarters and Gilson Pond Areas. These surveys provide detailed outlines of all existing facilities and site features. In addition, DRED's Division of Design, Development and Maintenance completed a building condition survey and assessment in June, 2001 (See Appendix C).

During the planning process, the facilities and infrastructure elements were discussed and evaluated at length. The resulting recommendations are directly linked to the primary issue of park use, distribution of use, and the ability of facilities to accommodate the current as well as desired use levels for Monadnock State Park.

### Parking – General

Capacities currently being accommodated are provided in Table 3.1. This table outlines the design capacity of the parking areas at the Headquarters and Gilson Pond Areas, and the approximate number of vehicles that are accommodated during high use weekends during the year. Peak use is also identified for several days during fall foliage weekends when large numbers of vehicles are accommodated at the Headquarters picnic area, campground, and the fields at the Gilson Pond Area.

The basic concern addressed during the evaluation of parking was the level of use during high and peak use weekends. As indicated in the Issue Section, parking is currently being accommodated in areas not designed for such use, which has caused multiple problems. Employees spend an inordinate amount of time tightly packing vehicles into these areas to achieve the indicated capacities. In turn, several thousand people utilizing the trail system in a given day increases impacts on the trails and creates a higher level of safety concern for the hiker. The current management strategy at Gilson Pond Area utilizes the fields for overflow parking once headquarters is full, rather than an initial destination trailhead. This puts a large number of people on the Birchtoft Trail, one of the longer routes to the summit, at a later time of day, increasing safety concerns.



The overall recommendation is to provide adequate parking capacities at the Headquarters and Gilson Pond Area that would, at a minimum, accommodate the numbers associated with the high use weekends. The overflow parking that is currently accommodated in the Headquarters picnic and campground areas during peak weekends would be eliminated. The option to use Gilson Pond Area fields for limited overflow parking would remain, but at reduced levels.

In total, the recommendations under the master plan will result in a reduction of approximately 260 vehicles that are currently accommodated on peak use weekends at both Headquarters and the Gilson Pond Area. Reduction could be compensated through a good hiker education program directed at encouraging park use during mid-week. These programs could also encourage use at other regional trail locations as an alternative to Mount Monadnock.

#### Parking – Headquarters Area

Under the recommendation outlined, the Headquarters Area would provide spaces for approximately 260 vehicles. An additional 30-vehicle parking lot is proposed to serve the picnic area. Between the two areas, there will be accommodations for approximately 290 passenger vehicles, pending engineering and survey work that will be a part of the final design step.

In order to provide for the desired capacity at Headquarters, two options were reviewed and evaluated. Option one included construction of a third parking lot to accommodate up to 100 cars. Option two centered on redesign of the two existing lots. Initial response from the partners and public indicated a significant desire not to build a third parking lot. Field evaluation indicates that through redesign and widening, the two existing lots could be made more efficient in their ability to accommodate a higher number of vehicles.

Other opportunities to improve on capacities for hiker parking at the two main Headquarters lots include elimination of parking related to other activities. These include parking of buses, vehicles associated with the group campground area (due to inadequate parking at that location), picnic ground use, and employee parking. Adequate parking for these uses will be provided at appropriate locations.

#### Parking – Gilson Pond Area

At the Gilson Pond Area, the lower hiker parking lot can be easily enlarged by approximately 15 spaces to accommodate 30 vehicles, bringing the total designated vehicle capacity to 64. The fields will be managed to accommodate additional parking for: 1) special events such as weddings or other gatherings allowed under a permit system; and 2) the need to park additional vehicles for peak use weekends. One type of use would utilize the trail system and mountain itself, while the other would only have effects related to the immediate site. Maximum capacity for the Gilson Pond area will be set by the Monadnock Advisory Commission after phase one and two are completed.



The Headquarters Picnic Area is utilized for overflow on a consistent basis. The plan proposes improved parking capacity at Headquarters Area and elimination of overflow parking at the picnic ground.



The field at Gilson Pond Area provides open views of Mount Monadnock. This area is used for overflow parking during fall peak use weekends. Proposed action will set limits and develop guidelines for use.

**Fig. 3.1** Current parking limitations often create overflow into areas not designed for such use.



Further work needs to be completed to develop management guidelines for use of the fields for special events and weekend parking. Key management considerations relate to the time of day in which vehicles should be parked at this location and whether a shut-off time should be established.

### Parking – Trailheads

In combination with the Headquarters and Gilson Pond Area parking lot capacity analysis, thought was given to increased capacities at the outlying trailhead parking areas. Even though these facilities are within administrative park boundaries and there is the opportunity to increase capacities, the primary landowner (SPNHF) is concerned about any substantial increase. Table 3.2 details parking capacity data for trailheads. Along with trailhead improvements is the recommendation to eliminate parking along the access roads. Specific enhancement opportunities for trailheads include:

#### Old Toll Road

Although this trailhead was upgraded in the early 1990s, the recommendation is to redesign and increase capacity to a maximum of 75 vehicles. The redesign will also evaluate the opportunity to provide for a single-point entrance. Other considerations for this trailhead are the construction of a toll-booth, provision for permanent toilet facilities and a well for drinking water.

#### Marlboro

This lot was recently improved by the Forest Society to accommodate approximately 20 vehicles. On-going enhancements will consider additional rehabilitation measures, final grading and surfacing of the lot, and toilet facilities.

#### Dublin

The Forest Society recently purchased the Cooley Lot where it plans to construct a new off-road parking area to serve the Dublin Trail. This will replace the existing 10-car lot and parking that currently occurs along the road. Discussions between the Forest Society and the Town of Dublin recommend the construction of a twenty-car parking lot. Other implementation considerations include relocation of the Dublin Trail to tie in with the new parking location, closing and rehabilitation of the existing lot, and provision of toilet facilities.

#### Pumpelly

Accessed through private lands, this trail does not have designated parking, and users currently park along the road. With limited shoulder space for parking, there are concerns about blocking the road to safety vehicles. Any attempt to provide for off-road parking to accommodate use at the Pumpelly Trailhead has historically been problematic. A concentrated effort needs to be made to work with area residents, landowners, selectmen of the Town of Dublin, and SPNHF for solutions to the parking problem. The desired solution is an alternate trailhead location that accommodates up to 20 vehicles and construction of a trail connector to the new trailhead.



No designated parking exist for Pumpelly Trailhead. The proposed action calls for working with area landowners, the Town of Dublin and the Forest Society to identify an alternate location to accommodate up to 20 vehicles.



The Marlboro Trailhead has recently been upgraded. Working with town officials, parking along the access road will be eliminated.

**Fig 3.2** Most designated trailhead parking lots have limitations and problems with parking along access roads.



### Bus Parking

Bus parking is currently provided for within the main parking lots at Headquarters or near the entrance gate to the picnic ground service road. Usually, bus parking demands range from one to five buses. During peak periods, the demand has reached as high as 20 or more buses in a single day. Although the 1992 plan outlined parking for up to 20 buses, current recommendations are to limit maximum capacity to six. Since bus use is related to group use of the mountain, greater control in scheduling and accommodating buses using a reservation process will have a positive effect on trail use and the experience of hikers.

Other considerations address the separation of passenger vehicles and bus traffic. Attention to this factor will improve safety and the overall efficiency of parking at the park. Alternatives evaluated ranged from utilizing off-site parking locations with a drop-off area only at the Headquarters Area to identifying and developing specific areas within the park for bus parking. The site across from the ranger's residence was identified as an appropriate location to provide for bus parking, loading and unloading. This area is a large, level wooded area owned by the Forest Society and is designated in their records as the Poole Tract.

Designation of the Poole Tract for a bus parking lot will require the construction of a feeder trail to the White Dot Trail. Other related needs include a central pavilion for assembly and as a ranger contact and welcome point for groups. Vault or composting toilets will also be an important component of the bus parking facility.

### Campground Redevelopment

In keeping with the overall theme of providing a quality, but less developed, experience, the design and placement of the family campground is an important consideration. Although Monadnock might not be considered a destination campground when compared to other locations in southwestern New Hampshire, it can provide a very unique experience not found elsewhere.

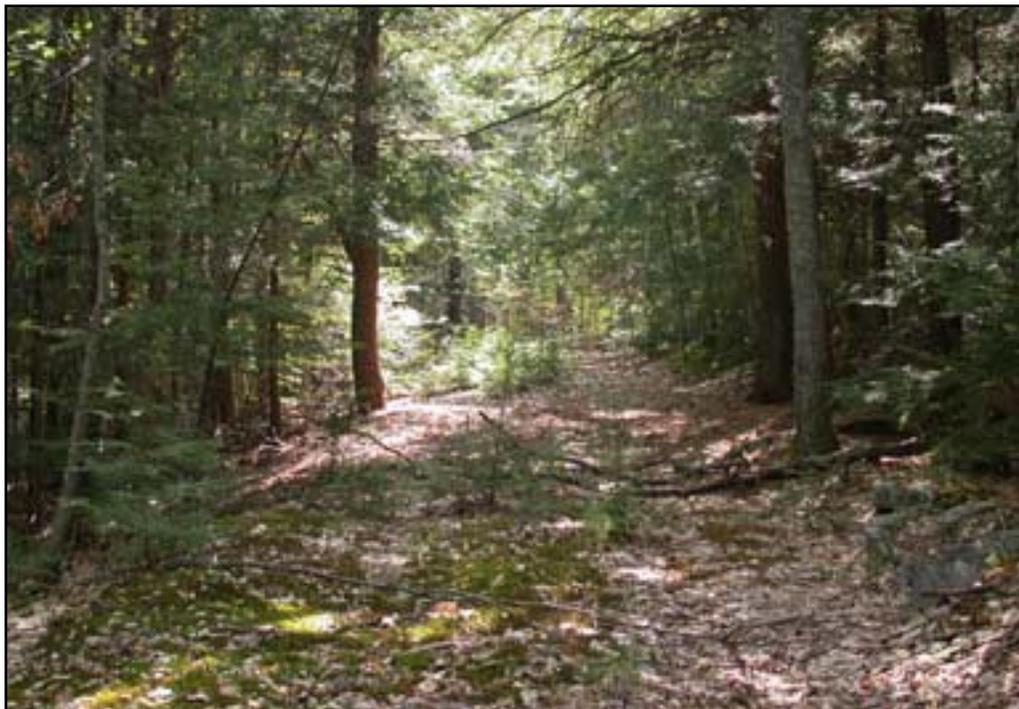
The existing campground, built in the late 1930s, contains 21 family sites and 7 youth group sites. Current capacity for the youth group camp area is approximately 110 campers, including adults. A toilet building services both the campground and the day use activities of the park. Showers have been added since the completion of the 1992 plan.

The campground typically does not reach capacity during the week through most of the camping season. However, it is frequently at capacity during good weather, especially during fall weekends. Camping is permitted in the winter, although only pit toilets (low quality) are available. Total campground attendance has averaged 7,975 campers per year over the last three years.

The proximity of family camping to the youth camping area is not desirable. Youth groups, even well supervised, tend by their nature and numbers to be noisy and sometimes disruptive to other campers. In consideration of these factors, the goal is to separate youth group camping and family camping areas.



The existing campground at Headquarters will be redesigned to better accommodate youth groups. Existing heavily impacted sites will be rehabilitated.



Family camping will be relocated to the Gilson Pond Area. The newly designed campground will utilize old road alignments and useable sites from the original private campground that existed in this area.

**Fig. 3.3** The plan calls for separating family camping from the youth group camping area.



The recommended course of action is to retain the youth group sites at their present location and move the family camping to another setting. Alternative locations evaluated included the Poole Tract and the area north and west of the upper parking lot at Gilson Pond. Of these locations, the Gilson Pond Area is preferred. This is in line with the desire to disperse use out of the Headquarters and to provide for a unique and quality family experience. The Gilson Pond Area can also incorporate walk-in sites, adding to the unique experience that can be offered at the park. The recommendation is for a range of 24-30 traditional family sites and a range of 5-15 walk-in, not to exceed 40 altogether. Campsites would not be constructed in the vicinity of the pond itself.

Amenities at the new Gilson Pond campground will include septic and water, a central toilet and bathhouse facility, and the appropriate number of vault or composting toilets. The entrance to the Gilson Pond Area will be redesigned to incorporate a tollbooth both for campers and for hiker parking. Tolls will be collected from mid-May to mid-October, the period when the campground will be open. During the winter, family campers will be accommodated at the Headquarters campsites.

The existing campground at the Headquarters Area will remain as the youth camping area. The overall capacity will remain the same, but the area will be redesigned to better accommodate youth groups. Along with major site rehabilitation, a more centralized parking concept will be incorporated. The existing flush toilets will continue to service this area, but vault or composting toilets within the camping area will be included in the redesign.

### Picnic Grounds

Although there is opportunity for picnic use at Headquarters and Gilson Pond, this activity only receives moderate use within the park. At the Headquarters location users tend to pull tables together, indicating a desire for more group use. There is no specific parking for picnic ground users at this location. When groups request reservations or group use of the picnic area, they compete for spaces within the main parking lots and are required to carry their picnic supplies a significant distance. The recommendation is to rehabilitate the Headquarters picnic area to provide various-sized picnic sites that permit the grouping of tables and grills for family outings. The picnic sites will be available for reservation by families and groups. The existing picnic pavilion is adequate to serve current sheltered picnic use; the need for additional sheltered picnic sites will be evaluated.

Picnic use at Gilson Pond is also moderate. With consideration given to relocation of the family campground to this area and the continued use of the existing parking lots by hikers, the recommendation is to not highlight and develop this site as a destination picnic area but to make it available for larger group events. Tables will be provided for occasional use by hikers or others who wish to stop and enjoy the outstanding open view of Mount Monadnock.

### Building Facilities

In general, the recommendations concerning building maintenance identified by DRED's Division of Design Development and Maintenance should be implemented. The key would be prioritizing building maintenance activity.



- Visitor Center / Warden's Cabin / Hikers' Cabin – Two of these buildings were constructed by the Civilian Conservation Corps and will remain as historic structures at the Headquarters Area. The discussion under Visitor Services / Public Education outlines a recommendation to relocate the park administrative office (warden's cabin) and visitor center to a new facility at the Poole Tract. Under this recommendation, new uses will need to be determined for the existing structures. Recommended use of the current park administrative office is to expand space for the mountain patrol staff and for search and rescue equipment.
- Park Store - The appropriate location and size of the park store is a vital consideration, since it serves an important role as a contact point, especially during the winter. It also serves as the point of sale for trail passes during low use periods when the tollbooth is not staffed. Discussions on this facility centered on its intimate, rustic atmosphere and its unique interior architecture, which needs to be retained. The sale of park merchandise is also important, with the potential to build a higher level of receipts for the park.
- Tollbooth - The location of the tollbooth involves a number of factors, including size, which limits its function. The road placement around the structure does not allow for good traffic flow and does not provide a bypass lane. The entrance road profile lends itself to relocation of the tollbooth before vehicles reach the ranger's residence. This location will also work well for bus parking at the Poole Tract and the other associated group facilities evaluated for this location. From a park administrative standpoint, it is important that this facility be in close proximity to the area where bus parking will be provided.
- Toilet Building / Bath House – Operational improvements need to be made.

### Poole Reservoir

Poole Reservoir is a small body of water, approximately four acres in size; located adjacent to the picnic grounds at the Headquarters Area. It is primarily under the jurisdiction of the Town of Jaffrey and once served as a water supply for the west section of the town. The northern part of the reservoir is located within the state park property but is completely fenced from the park and is not accessible for park users. The dam is in need of some repair work, which is the responsibility of the Town of Jaffrey.

### Gilson Pond Dam

An assessment completed by the Department of Environmental Services (DES) in June 2001 found that the dam impounding Gilson Pond is in very poor shape and in danger of failing. The DES proposal is to replace the existing stoned faced, earth embankment dam with a concrete structure. They have indicated a desire to work with the Division of Parks and Recreation on the final appearance of the dam. The pond is considered an important asset to Monadnock State Park and the replacement of the dam is considered a high priority.



Construction of a new tollbooth with bypass lane will help in the area of visitor services and improving the efficiency of traffic flow.



The park store is an important visitor contact point throughout the year and will be evaluated for appropriate location and improvements.

**Fig. 3.4** Facility improvements will range from maintenance on existing buildings to new construction.



## Management Direction

Development and management direction in this category represent the most extensive changes proposed for Monadnock State Park and surrounding reservation lands. Proposals outlined here will result in a substantial physical change, as well as affecting how the park is used in comparison to its existing and historical use patterns. This section outlines the proposed direction for the facilities related to the park Headquarters Area, the Gilson Pond Area, and the outlying trailhead parking facilities.

### Concept Proposals for Headquarters Area

(See Appendix I – Concept Plan for Monadnock State Park / Headquarters Area.)

#### Tollbooth

- Construct new tollbooth at the Poole Tract in coordination with a visitor information center and park office.
- Provide for one-way traffic each direction around new complex.
- Design bypass lane to be used by entering vehicles that already have park passes, etc.
- Design for short-term visitor parking in both directions, with capacity for approximately 15 vehicles.

#### Bus Parking Lot

- Construct parking lot for six buses with one-way turnaround loop at the Poole Tract. Entrance for bus parking will be across from the ranger's residence just beyond the entrance tollbooth.
- Construct pavilion for group gathering and orientation.
- Construct toilets (vault or composting).
- Construct trail connector to the White Dot Trail.
- Provide picnic tables.

#### Employee Parking Facilities

- Design the bus parking lot to incorporate parking for park employees.

#### Visitor Contact Center / Park Office

- Design and construct a moderately sized visitor contact center and park office in conjunction with the tollbooth at the Poole Tract. Design of interior of the visitor center will be based on needs identified in an education / interpretative plan.



### Main Parking Lots

- Redesign the two existing main parking lots to improve capacity and efficiency, utilizing footprint of existing parking areas. Proposed capacities are approximately 260+/- vehicles between the two parking lots. (See Table 3.1.)
- Pave lower lot to better allow for winter snowplowing. Keep upper lot as a graveled parking area.
- Install wooden gate between upper and lower parking areas.

### Headquarter Picnic Ground

- Eliminate all overflow parking from the existing picnic ground area.
- Construct a 30-car parking lot for picnic use at the terminus of Poole Memorial Road in the vicinity of the existing picnic pavilion.
- Construct clustered picnic sites.
- Rehabilitate the heavily impacted areas throughout the picnic ground through re-vegetation efforts, removing old stone fire rings and site elements no longer used.
- Upgrade flush toilets as identified in the DRED Building Condition Survey.
- Replace existing pit toilets behind the park store with vault/composting toilets.
- Repair existing picnic pavilion as identified in the DRED Building Condition Survey.
- Provide a wooden gate to control access to picnic area parking lot, primarily to control parking when area is reserved for group use.

### Building Facilities / Utilities

- Evaluate the best location and the space needs for the park store. Any redesign / reconstruction proposals will take into account the desire to retain the current rustic interior character of the building.
- Complete all identified maintenance / rehabilitation needs identified for all park buildings. (See Appendix C - Building Condition Survey and Assessment Report completed for park structures.)
- Utilize existing park office structure as the mountain patrol office and as location for safety equipment and supplies.
- Implement the following utility upgrades:
  - Redesign and replace the park water system to meet current and future needs of park.
  - Improve the electrical and telephone systems to modernize the office and provide for computers at headquarters.



### Park Access Road

- Complete pavement reconstruction of Poole Memorial Road in cooperation with the NH Department of Transportation. Protect the large trees lining the road.
- Rehabilitate current terminus of Poole Memorial Road and extend road into new picnic area parking lot. Provide administrative parking for approximately four vehicles near current park office to serve maintenance and mountain patrol needs.

### Trail Access

- Rehabilitate park Headquarters access trails, reconstructing steps for proper riser/tread ratio and providing adequate trail surfacing.
- Provide controls for areas where use tends to spread out, i.e., install split rail fence and plantings to keep visitors on the trails around bathroom area and within picnic grounds.
- Link trail from bus parking lot with White Dot Trail.

### Poole Reservoir

- Continue to monitor the Town of Jaffrey's plans for Poole Reservoir.

### Campground

- Eliminate all overflow parking from the campground area.
- Separate family camping from youth camping.
- Relocate family camping to the Gilson Pond Area
- Redesign / reconstruct existing youth campground area, including extensive rehabilitation of heavily used and impacted areas. New design will include parts of the existing family camping area.
- Emphasize centralized parking in the redesign of the youth camping area. Provide adequate parking capacity.
- Redesign youth camping area to include a mix of campsite sizes, retaining a total capacity of 110 campers.
- Facilities for youth camping area will include a central gathering area for cooking and campfire; defined areas for tents utilizing tent platforms or cribbed areas with appropriate surfacing; possibly a shelter; and picnic tables.
- Vault or composting toilets will be provided in the youth camping area.

### Other

- Evaluate all signs on and off site for appropriate location, message, uniformity and replacement needs.
- Complete vegetation management plans for campground, picnic ground and other heavy use areas to assure continued stands of healthy vegetation.



## Concept Proposals for Gilson Pond Area

(See Appendix J – Concept Plan for Gilson Pond Area.)

### Tollbooth

- Construct new tollbooth at entrance to Gilson Pond Area for fee collection for trail access, picnicking, and campground use.
- Realign access road and entrance to lower parking lot to accommodate the appropriate location for the tollbooth.

### Parking Facilities

- Use the open fields at the Gilson Pond Area for managed parking for special events and administrative purposes.
- Upper parking lot will remain in its current state, providing parking for hiking and occasional picnicking use.
- Increase parking spaces in lower lot by 15 spaces to provide a capacity of 30 vehicles.

### Picnic Ground / Open Field

- Provide picnic tables for occasional use, not as a primary picnic facility.

### Family Campground

- Construct new family camping area. Locate camping sites north / northwest of upper parking lot and away from pond shoreline.
- Maintain primitive and rustic character, with family sites designed primarily for tent and pop-up campers.
- Utilize old road clearing and original campground sites where environmentally and physically appropriate.
- Maximum number of sites that will be constructed is 40, with adequate spacing to maintain good screening and the wooded character of the site. A blend of traditional family campsites and walk-in sites will be provided. The recommended target mix is:
  - 24-30 traditional sites (vehicle access)
  - 5-15 walk-in sites
- Central parking lot(s) will be provided off the campground access road to service the walk-in sites.
- Install electricity, water, and septic system for a flush toilet and shower facility, and construct an appropriate number of vault or composting toilets within the campground.



### Gilson Pond Dam

- Reconstruct dam. Work with the Department of Environmental Services on the final appearance of the structure.

### Trailhead Parking Facilities

#### Old Toll Road

- Redesign parking lot to provide capacity for 75 cars. Redesign for single point access.
- Construct new tollbooth.
- Evaluate appropriate design for toilet facilities that take into account potable water source for private landowner adjacent to site. Work with and coordinate effort with private landowner.
- Provide drinking water supply.
- Implement fee collection system (attendant / "Iron Ranger" / permit system).

#### Marlboro

- Maintain the recently improved parking capacity of approximately 20 vehicles.
- Finish additional site rehabilitation measures and detail work to complete construction of parking lot undertaken by the Forest Society in 2002.
- Implement a fee collection system ("Iron Ranger" / permit system).
- Post the road for no parking. Work with local law enforcement to eliminate parking along the access roads.
- Construct vault or composting toilets.

#### Dublin

- Work with Forest Society and Dublin Selectman in the design of a new off-road, 20-car parking lot located on the recently purchased Cooley lot.
- Relocate the Dublin Trail to feed into the new parking lot and eliminate use of the road as part of the trail.
- Post the road for no parking. Work with local law enforcement to eliminate parking along the access roads.
- Construct vault or composting toilets.
- Implement a fee collection station ("Iron Ranger" / permit system).
- Work with New England Forestry Foundation to close and rehabilitate the existing parking area.



### Pumpelly

- Work with the Town of Dublin, Forest Society and local landowners to identify an appropriate location for an off-road parking lot with a capacity of up to 20 vehicles.
- Relocate a section of the trail if necessary.
- Once new location is identified, designed and constructed, post the road for no parking. Utilize a permit system and work with local law enforcement to eliminate parking along the access roads.
- Consider needs for toilet facilities (vault / composting) and fee collection station (“Iron Ranger”).



**Table 3.1 –Day Use Visitor Parking: Headquarters / Gilson Pond Area**

Facility	Current Max. Parking Capacity	Vehicles Accommodated		Recommended Capacity	Management Recommendations
		High Use Weekend	Peak Use Weekend		
Main Lot 1	70	70	70	114	Reconstruct and expand existing parking lot.
Main Lot 2	130	130	130	146	Reconstruct and expand existing parking lot.
Bus Parking	No Designated Parking Lot	4	7	6	Construct separate bus parking lot w/ employee parking.
Picnic Ground	No Designated Parking Lot	60	200	30	Construct small, 30-car parking lot for picnic ground use / peak weekends.
Campground			60 (+)	0	Eliminate all overflow parking.
Gilson Pond - Lower Lot - Upper Lot	15 34	15 34	20 (+) 34	30 34	Expand lower lot by 15 spaces.
<b>Total</b>	249 Vehicles  0 Buses	309 Vehicles  4 Buses	514 (+) Vehicles  7 Buses	354 Vehicles  6 Buses	
Gilson Pond Fields			500 (+)		Permitted for special events and administrative needs.



**Table 3.2 – Day Use Visitor Parking: Trailheads**

Facility	Design Capacity	Vehicles Accommodated		Recommended Capacity	Management Recommendations
		High Use Weekend	Peak Use Weekend		
Old Toll Road	45	60	75	75 (+)	Redesign to accommodate recommended capacity.
Marlboro	20	20	30 With Parking Along Road	20	Maintain current size and capacity. No parking along road.
Dublin	10	20 With Parking Along Road	40 With Parking Along Road	20	Relocate and construct new parking lot on Cooley Tract. No parking along road.
Pumpelly	No Designated Parking Area	20 (Along road)	30 (Along road)	20	Work with town and area residents to identify location for parking lot. No parking along road.
<b>Total</b>	75 (+/-)	120	175	135	



## CHAPTER 4 - TRAILS

Historically, Grand Monadnock has been a magnet for those seeking the outdoors, and the mountain stands out as a major destination for thousands of hikers throughout the year. Even within New Hampshire, Monadnock is unique as a state park. It is a highly recognized landmark encompassing a large land base, yet its primary focus is oriented to the activity of hiking.

To support this recreational pursuit, the state Division of Parks and Recreation presently manages all trailheads that access Monadnock’s trail system, as well as the trail system itself. There are approximately 32 miles of clearly marked foot trails. (See Figure 4.2.) Some of these same trails at the lower elevations, along with additional routes, provide approximately 14 miles of trails for ski touring. The park’s cross-section of trails offer a wide range of difficulties and challenges, resulting in opportunities for hikers of all abilities. Motorized vehicle use and mountain biking are not allowed on the trails within the park.

Hiking is heaviest during the non-winter months, especially during the fall foliage season. However, access to the mountain is provided year round, and there are very few days that a hiker cannot be found on the mountain or the summit. Numerous trail guides and maps are available to provide the user with good information on hiking and access to the trails.

As with many trails in New Hampshire’s mountainous environments, those on Monadnock evolved out of traditional, but informal, routes laid out to access higher elevations. They were not necessarily designed with an awareness and concern for potential erosion or other environmental impacts. As a result, many trails tend to traverse mountain slopes in a way that allows for severe deterioration. With steep elevations and high levels of use, some trails on the mountain are in significant need of maintenance. Even though the Division of Parks and Recreation provides for an on-going maintenance program, budgets, staffing and volunteer recruitment have not been adequate to keep up with the needs.

The level of trail maintenance, combined with the high numbers of hikers on some of the main routes to the summit, has an effect on the hiking experience. Together, they contribute to the major issue being addressed in the master plan: managing the intensity of visitor use. There is a substantial contrast in the hiking experience provided on trails such as White Dot and White Cross, which receive the highest level of use, compared to the Marlboro or Dublin trails, which receive a much lower amount of use during any season of the year. It is estimated that over 65% of hikers on the mountain leave from the Headquarters Area. White Dot is the most hiked trail on the mountain. The desire to lower the number of hikers on some trails has become an important consideration in making decisions on the appropriate capacities and management of the outlying trailhead parking areas.



Fig. 4.1 Many trails or sections of trails have severe erosion and deterioration. The plan strives to improve on maintenance needs.





## Management Analysis and Discussion

In preparation for evaluation and discussion of park trails, a broad-based trails assessment survey was completed through the efforts of volunteer trail assessors. Information collected included a general indication of conditions based on trail markings, bootleg trails, erosion, and loose rocks or exposed roots; level of hiking difficulty; suitability for novice hikers, families traveling with small children, or the elderly; any unsafe or dangerous sections; and the need for further assessment. Appendix E provides a summary of the survey findings. Specific data has been added regarding maintenance needs.

Overall, the trails within the park were determined to be in reasonable condition. Approximately 12 % were found to be in fair condition, 64% in good condition, 15% in very good condition, and 3% in excellent condition. Two trails, Hedge Hog and Marlboro, were assessed as being in poor condition.

Also completed were detailed trail condition surveys for the White Dot, White Cross, and White Arrow Trails. These were done under the guidance of the New Hampshire Trails Bureau to provide specific maintenance needs data as well as to demonstrate the type of surveys recommended for the other trails in order to develop quality trail management programs and budgets.

The suggested priority for completing these detailed surveys is based on the overall condition, as outlined in the broad-based trails assessment discussed above. Those trails with a poor to fair rating should be schedule first. Safety needs and high use are also significant factors in setting priorities for completing detailed surveys. Involvement of park staff knowledgeable in trail use patterns and the seasonal characteristics of the trails are vital in the proper completion of this task. Such knowledge is important in making the appropriate interpretations for corrective actions.

The Master Plan Steering Committee generated a list of specific issues and concerns during the overall discussion and evaluation of trails (See Appendix D). This list led to some of the recommendations outlined in the master plan. It links trail management to other needs.

The use of volunteer and other partnerships is also recognized as critical to achieving a higher level of maintenance for park trails. Participation in the Volunteer NH Program and with community partners is recommended to recruit volunteers. An important need identified by the Master Plan Steering Committee is the establishment of a Volunteer Coordinator position to help promote, coordinate and locate funding for trail maintenance. A good record of trail maintenance needs, developed through the efforts outlined earlier, can help park managers make the best use of volunteers. Important to trail maintenance in the last seven years has been the participation of AmeriCorps. Opportunities for volunteer help are abundant, including the use of organized trail clubs and the Adopt-A-Trail program.

Discussions and recommendations also emphasized the importance of:

- Developing a long-range plan for trail improvements.
- Prioritizing maintenance and reconstruction needs.
- Re-evaluating the plan annually, incorporating specific projects into yearly operating budgets, developing a capital improvements budget, and developing work plans for volunteers and AmeriCorps proposals.
- Monitoring trail conditions closely on a routine basis.



## MANAGEMENT DIRECTION

- Continue with in-depth trail condition surveys for all trails within the park.
  - Establish and keep current a five-year survey implementation schedule with priorities based on broad-based trail condition assessments outlined in Appendix E. Trails with poor to fair rating and/or those with significant safety concerns to be scheduled first.
  - Identify specific maintenance needs, their location, and establish / maintain trail log for each trail surveyed.
  - Estimate maintenance costs.
- Increase level of trail maintenance on existing trail system. Establish a long-range capital improvements plan for trails. Maintain a current five-year rehabilitation / maintenance priority list and implementation schedule.
- Incorporate trail rehabilitation / maintenance project needs into budget process and annual operating budget.
- Provide timely maintenance. Establish adequate levels of staffing and volunteer efforts to keep abreast of trail maintenance and rehabilitation needs. (See staffing and volunteerism under Park Administration / Operations.)
- Consider closing trails temporarily as seasonal, environmental, and safety conditions warrant.
- Monitor trails on regular basis for safety, litter control, compliance with rules and regulations, and resource protection.



## CHAPTER 5 – NATURAL AND CULTURAL RESOURCES

The richness and diversity of the natural resources associated with Mount Monadnock defines the landscape character of the mountain. The National Natural Landmark status given to Mount Monadnock is just one indication of the importance of this mountain and its natural and biological resources. It is one of 13 such sites currently designated in New Hampshire. Along with its biological diversity, the area is rich in a cultural history that tells a story all its own and is the source of countless hours of pleasure for those interested in looking for the many historical landmarks on the mountain. Thoreau’s campsites, the many cellar holes of abandoned farms, and the Shaker colony that was located near the Marlboro Trail offer some of those opportunities. Geological landmarks on the mountain also provide points of interest and enjoyment for those who seek them out.

Monadnock’s scenic qualities are unparalleled in the region and are a highlight during the fall, when thousands of visitors converge on the area. Unfortunately, this is also a contributing factor to the primary concern of overuse that is being addressed in the master plan. Because of its unique position as a mountain that stands alone, Monadnock serves as a backdrop to countless views throughout the region, particularly across the numerous lakes and ponds that are located near its base, or the occasional agricultural and open fields that dot the area. Visitors are drawn to the views of the surrounding natural and rural landscape from the rocky open ledges on the mountain itself.



**Fig. 5.1** Mount Monadnock is appreciated for its outstanding views of the surrounding wooded and rural landscape.



While Grand Monadnock is the landmark mountain in the region, there are other rocky peaks that mark the landscape within a 20-mile radius. Although Monadnock stands by itself, it is part of a much larger picture that includes small monadnocks such as Gap, Little Monadnock, Pitcher, Pack Monadnock, Temple and North Pack. The views from each of these mountains, though not as breathtaking as from Monadnock's summit, are pleasant, and the hikes to the top less crowded. Many of the views from these peaks look back toward Grand Monadnock, offering yet another perspective of the mountain and its ridgeline. These views are relatively free of communication or other noticeable facilities found on other prominent peaks in the state.

The surrounding rural landscape encompasses many forest parcels designated as town or state forests, wildlife preserves or other conservation land. These parcels, along with many others in southwest New Hampshire, offer a mosaic of protected land that plays a significant role in open space benefits to wildlife, recreation, and scenic values. The map in Figure 5.2 illustrates the distribution of these parcels and their potential relationship for valuable greenway linkages. Already, Mount Monadnock serves as an important link for two established greenways.

The Monadnock-Sunapee greenway is a 49-mile hiking trail that links Mount Monadnock with Mount Sunapee. It travels over mostly private lands, with more than 80 private landowners giving permission for use through agreements and easements. Although a complete trail system has been established, most of the agreements are revocable and could be lost if the greenway were not treated with respect, or if problems occur with parking congestion, litter, and vandalism. The trail also passes through Leighton State Forest, Pillsbury State Park, and other public properties. A few primitive campsites are provided along the greenway. Monadnock is also the northern terminus of the 160-mile long Metacomet Trail, running from the Hanging Hills in Meriden, Connecticut, across Massachusetts to the summit of Monadnock. The section of the Metacomet connecting Monadnock to Gap Mountain is known as the Royce Trail. The trail also crosses over the summit of Little Monadnock.

Mount Monadnock and adjacent lands fall within the boundaries of four communities, Dublin, Jaffrey, Marlborough, and Troy. These communities have a special admiration, and are very protective of, the 3,165-foot high mountain that serves as a backdrop to their communities. Upon the encouragement of the Monadnock Advisory Commission, each of these communities has adopted "mountain zoning" as part of their land use regulations. The purpose of this special zone is "to protect and preserve the rural scenic beauty of Mount Monadnock and its associated highlands." This special zone is not a recent initiative but has been in their land use regulations for the last 10 years. There continues to be a concern for the potential over development and degradation of the visual beauty of the mountainscape, and its impact both to the mountain itself and to the region as a whole.

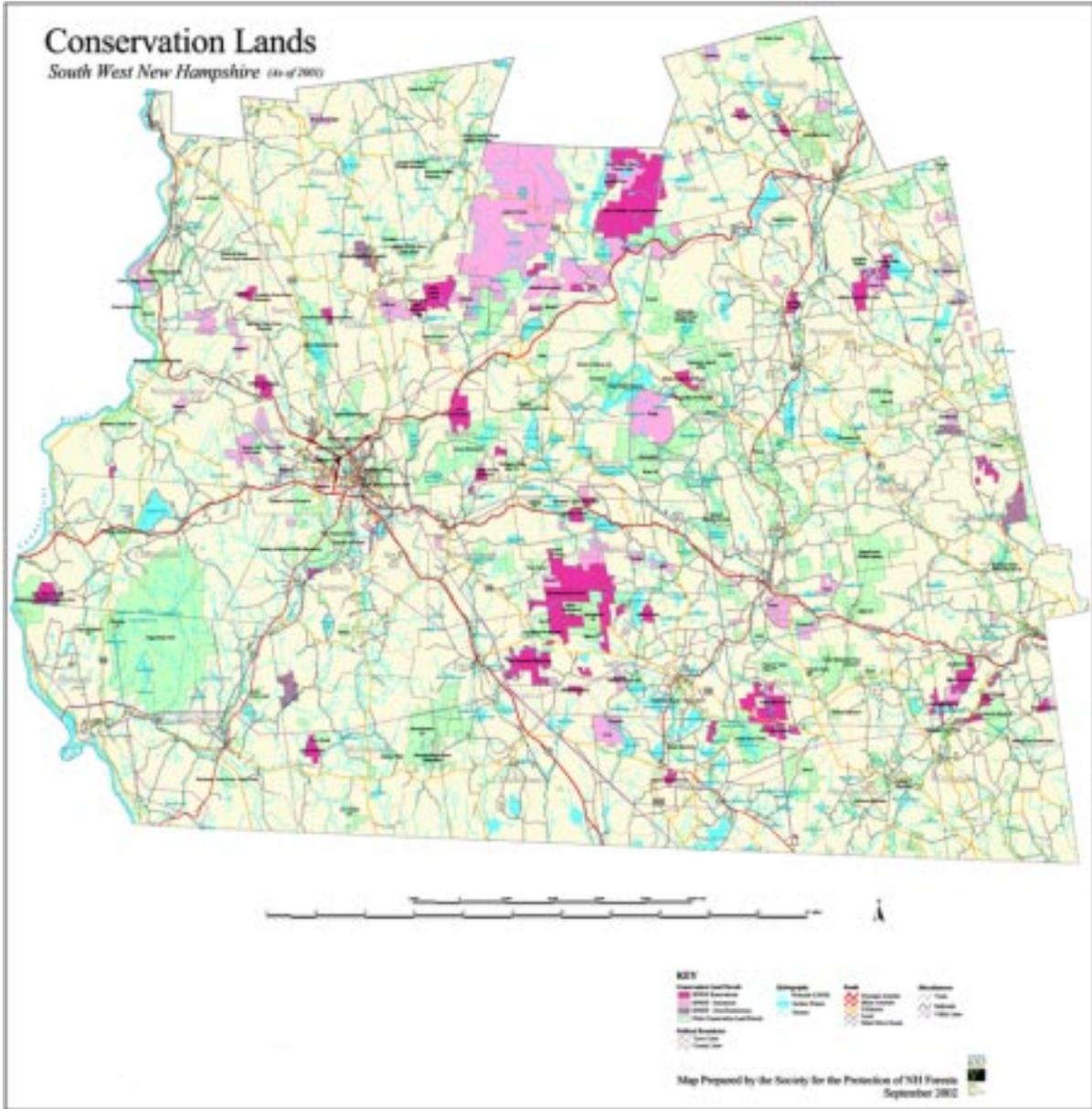


Figure. 5.2 - Conservation Lands in Southwest New Hampshire



This region recognizes the importance of these protected lands, along with the quality of life they inspire and to the tourism industry. The Monadnock region is known for its rural character, picturesque New England villages, county fairs, antique shops and seemingly quiet way of life. Visitors are drawn to this area for its beauty and inspiration. Efforts continue today to preserve the lands surrounding Grand Monadnock. Just this year, the Forest Society acquired two additional properties - the 220-acre Eaves Tract and the 60-acre Cooley Tract, both in Dublin. In addition, the Forest Society has worked tirelessly to acquire conservation easements on dozens of privately owned properties near or within the viewshed of the mountain. The Monadnock Conservancy also holds conservation easements on 54 properties adjacent to Mount Monadnock.

#### Forest Management (NH Division of Forest and Lands)

Forest management is an important resource component of the park. It is important to recognize that the NH Division of Forest and Lands has the responsibility for the management of all state owned forestlands, and to cooperate with the Division of Parks and Recreation in promoting recreational use of these lands. This includes the 1,011 acres of state land associated with Monadnock State Park. At the same time, the Division of Parks and Recreation has the responsibility for recreation development and management of state owned parks and forest, and to cooperate with the Division of Forest and Lands in the joint promotion of forest recreation and forest management of these same lands.

Lands are classified into four major categories based on general land use. These are agricultural lands, conservation easements, recreation lands, and forestry lands. The two important to Monadnock State Park are recreation and forestry lands. Recreation lands are lands that have or plan to have developed recreation and/or administrative facilities, or provide moderate to high tourist attraction and include those lands adjoining areas that have high recreation attributes. Forestry lands are lands not a part of developed recreation / administrative areas, and that support multiple uses not associated with developed recreation.

Forestry lands can be actively managed for scenic, forest recreation, wildlife and other resource values, including timber. Other classified areas, although less frequent, can be managed for timber as part of a multiple use program where harvesting has benefits to other resources. Currently Monadnock State Park is classified as 938 acres of recreation lands and 73 acres of forestry lands.

#### Forest Management (Society for the Protection of New Hampshire Forests)

Although the Forest Society has entered into a lease agreement with DRED for the overall management of its properties within the park, it retained the right to actively manage the forest. The Forest Society manages its lands for multiple uses and advocates growing, harvesting, and selling forest products from lands that are capable of supporting forest management. Maintaining healthy and diverse habitat for populations of wildlife is also a very important objective. In addition, all Forest Society lands are managed to protect the quality of their surface and subsurface waters. "Best Management Practices" are observed on all forestry projects, including protecting the aesthetic and recreation values of the land.



Fig. 5.3 The variety in the natural vegetation communities adds to the unique landscapes associated with Monadnock State Park.

## Management Analysis and Discussion

Discussions concerning the appropriate management of natural and cultural needs center around five topics:

- The significance of Mount Monadnock’s cultural and natural resources and the importance of integrating resource concerns into management decisions.
- The importance of an inventory of biological resources within the park to identify important or rare plants and exemplary natural communities.
- Identifying and protecting important wildlife habitat.
- The importance of the park and reservation lands as an integral component of open space protection for the region.
- The need to inventory, identify and protect important cultural resources.

In terms of biological resources, the Division of Parks and Recreation and the Town of Jaffrey entered into an agreement with the New Hampshire Natural Heritage Inventory to conduct a complete study of the natural communities and rare and endangered species on their respective properties within the boundaries of Monadnock State Park. At the same time, the Forest Society conducted a similar study on its holdings as part of its bio-timber inventory work. Both studies were completed in the winter of 2003.



In addition to these inventories, GIS map layers were obtained from GRANIT to supplement the project database and provide valuable information for completing resource assessments. These layers included topography, surface water features, vegetation, and hydric soils.

Along with these studies and data collection, the NH Fish and Game Department has indicated a willingness to work with the Division of Forest and Lands and Parks and Recreation to complete a more thorough wildlife assessment of park lands. This would be of value in identifying important wildlife habitat within or adjacent to the park and to provide direction regarding future projects. This is in line with the Division of Forest and Land's thoughts that the timing is appropriate to reevaluate and update the classification between forest and recreation lands. This reevaluation needs to be based on on-the-ground natural resource values identified through a forest inventory. The last forest inventory completed for state lands at the park was 1980.

The continued identification of parcels significant in conserving the values of Mount Monadnock and linking it to other conservation lands remains an important focus of park management. Emphasis for support should be directed toward those efforts already in place. These include the Linking Lands program of the Forest Society and the Super-sanctuary project of the Harris Center for Conservation Education.

There is a strong recognition of the cultural heritage surrounding Monadnock. As stated in the 1992 plan, Monadnock's human and natural history are clearly intertwined in a manner that defines the unique character of the mountain. Unfortunately for this region, there is not yet a lot of archaeological documentation.



Fig. 5.4 Old cellar holes are located throughout the area. Proposed action calls for an inventory to be completed of historic and cultural resources.



The Division of Historic Resources administers the State Conservation and Rescue Archaeology Program (SCRAP) that provides training for volunteers in the field by professional archaeologists. This program is funded through state and federal grants and donations of private monies. Under consideration is a training project as a joint effort between the state and the Forest Society, utilizing volunteers from the Forest Society's Land Stewardship program.

## Management Direction

- Work with Division of Forest and Lands to complete a forest inventory of state lands and reevaluate the classification of forest and recreation lands. Classification will be updated to provide multiple use opportunities that will enhance the values of Monadnock State Park.
- Work with NH Fish and Game Department and Division of Forest and Lands to complete a wildlife habitat inventory assessment of park lands.
- Continue forest vegetation management activities that promote innovative and sound multiple-use principles.
- Coordinate land management activities with goals of the Society for the Protection of New Hampshire Forests, the state, the towns of Jaffrey and Dublin, and interested landowners that have abutting protected land in order to maximize wildlife habitat and bio-diversity objectives.
- Incorporate results of natural heritage inventories and bio-inventories into the management of the park, as appropriate. Identify and designate natural and/or old growth areas and exemplary communities.
- Contract with a Historic Preservation Consultant to conduct an inventory of historic and cultural resources of the park. Provide for the protection of identified, important cultural resources.
- Coordinate management of Monadnock State Park with Society for the Protection of New Hampshire Forests' Linking Lands Program and with the Harris Center for Conservation Education's Super-sanctuary Program.
- In all management activities, protect scenic views, vistas and areas of high aesthetic quality.

### Linkages and Greenways

- Continue to recognize and manage Monadnock State Park and leased reservation lands as a critical component of unfragmented and protected lands in southwest New Hampshire for wildlife, recreation and scenic resources. Identify and protect important greenway linkages and opportunities for conservation.



- Continue to recognize the park as a critical component of the Metacomet and Monadnock – Sunapee Greenways. Coordinate management of the associated trails with the goals established for the greenways.
- Identify sensitive and unique lands to be protected through natural resource inventories and studies, including the Natural Heritage Inventory and Society for the Protection of New Hampshire Forests' bio-inventory. Prioritize adjacent lands for acquisition or other protective measures.
- Develop interpretive and educational program objectives to help the public and neighboring landowners recognize Monadnock's open space and conservation needs regarding wildlife, recreation and scenic resources.



## CHAPTER 6 – VISITOR SERVICES / PUBLIC EDUCATION

There is a small, unstaffed visitor center located at the base of the White Dot Trail. This facility was originally developed in the 1970s through a cooperative effort between the Division of Parks and Recreation and the Forest Society. Initially referred to as the Ecocenter, its interpretive displays are centered on the mountain environment. The purpose of the facility was, and still is, “to orient the hiking public to take better care of the mountain and to make people more aware of the importance of the natural environment for quality recreation.” Although conveniently placed for attracting hikers as they start up the mountain, the visitor center does not allow for enough contact with people seeking important information when first entering the park.

One of the major problems identified regarding hiking is that hikers have little, if any, idea about their impact on the trails and the environment. There are also problems related to litter, hiker etiquette, and attitudes toward other hikers. Although there is literature available on these subjects, the most successful tool for educating park users is through contact with park staff and through educational programs.



**Fig. 6.1** The current Visitor Center was built in the 1970s. A new facility is proposed that will better serve the visitor.

During the school year, the park staff sends packets of limited information to schools planning to visit the park and meets with students regarding state park rules and trail safety. In the 1990s a program called “Classroom in the Parks” provided fact sheets, local resource materials and a curriculum on certain parks, including Monadnock State Park. At present there is no formalized program with the schools.



During the summer of 2002, AmeriCorps personnel staffed an Interpretative Ranger position. Their main focus was on hiker education, trail safety, etiquette, and proper trail use. Working out of the visitor center, they also provided a presence on the mountain.

The public's first contact with park staff occurs at the tollbooth. Much can be accomplished at this initial meeting, since there currently is no formal visitor / welcome center for dispersing information. As visitors pay their fee, they often ask questions concerning trails, weather conditions, and other information important to the hiker. Unfortunately, this can cause a backup of vehicles.

Another important point of contact occurs at the park store. Besides providing a service through the sale of food and drinks, the store serves as a significant point of disseminating information concerning park use. In the winter, visitors are required to stop in here to pay entrance fees, and often they obtain important information about the mountain. Other visitor contact occurs through informal encounters while staff are patrolling trails or taking care of maintenance within the park.

## **Management Analysis and Discussion**

In the assets and liabilities analysis conducted by the Master Plan Steering Committee, several key responses ranging from the user-friendly atmosphere to the lack of a staffed welcome center, aided the committee in discussions related to visitor services and public education.

The committee wanted to conduct a visitor survey to gain a better understanding of the public's perception of the mountain experience, visitor needs and priorities related to park management. The committee completed much of the groundwork for this endeavor. Unfortunately, due in large part to the magnitude of the project and funding, the survey was not undertaken for this specific planning phase.

As a guide for continued planning and management of the recreation resources of the park and in the development of an education and interpretative plan, the information and conclusions resulting from a visitor survey would be invaluable. The effort to implement a visitor survey will remain a high priority to help develop an in-depth visitors services and interpretative plan for Monadnock State Park. The discussion regarding the development of an overall education and interpretative plan included the following components:

- On-site education programs and interpretation
- Off-site education programs and interpretation
- Written material for distribution
- Audio visual and web-based media



The development of such a plan would also be instrumental in determining the needs for a new visitor center for the park. Opportunities also exist for partnering with other agencies and organizations to ensure that programming include the highest level of expertise. Potential partners are:

- Antioch College
- Audubon Society of New Hampshire
- Franklin Pierce College
- Harris Center for Conservation Education
- Southwest Region Planning Commission

The Master Plan Steering Committee members did complete an appropriate use survey. Results centered on continuing to provide various hiking and recreational experiences for people of all ages, including persons with disabilities, families, and hikers in search of solitude. As management directives are put into place, particularly for facility improvements and programming, highest priority for recreation will be given to the following activities:

- Day hiking
- Picnicking
- Organized day outings
- Cross-country skiing
- Snow-shoeing
- Camping
- Birding and wildlife observation
- Flora and fauna observation
- Photography
- Painting
- Berry picking
- Volunteer projects

Other results of the survey outlined the significance of untouched natural areas, forestry management for wildlife protection, and protection of periphery lands as important to area management.

## **Management Direction**

- Conduct a visitor survey to aid in continued planning and management of the recreation resources of the park and to aid in the development of an education and interpretative plan.
- Develop an overall education and interpretative plan for the park that addresses and coordinates:
  - Visitor center enhancement and upgrade
  - On-site education programs and interpretation
  - Off-site education programs and interpretation
  - Written material
  - Audio visual and web-based media



- Coordinate an education and interpretative plan with potential partners, such as:
  - NH Division of Parks and Recreation
  - Society for the Protection of New Hampshire Forests
  - Audubon Society of New Hampshire
  - Harris Center for Conservation Education
- Focus program emphasis on hiker education and dispersal of park visitors.
- Use education and interpretative programs and the media to encourage park use during non-peak periods.
- Coordinate with travel writers, chambers of commerce, regional travel council, state travel literature, etc., regarding public information on trail conditions and use to encourage use during non-peak periods rather than peak weekends. Incorporate information on other regional opportunities and suggest alternative parks and trails for hiking.
- Provide information to hikers about trail safety, etiquette, proper trail use, and hiker responsibilities. Format for distribution could include a one-page sheet provided to hikers entering park; information at kiosk, visitor center or other central location; outreach to schools, youth groups or evening campground program; and web-based information.
- Encourage dispersal of trail use. Provide written materials to the public on a variety of trail opportunities available at Monadnock State Park to encourage use of trails other than the heavily traveled trails.

See Administration / Operation – Volunteerism for volunteer efforts and programs oriented toward visitor contact and education.



## CHAPTER 7 – PARK ADMINISTRATION AND OPERATION

### Staffing

Currently, Monadnock State Park has one full-time permanent park employee, the park manager. The assistant manager position is a temporary full-time position spanning eleven and a half months. Between the months of April and November there is a temporary full-time employee who serves as a toll collector. From mid-November until early April, these three employees provide visitor services and run the park store on weekends and holidays. Seasonal staff is integrated into park operations starting Memorial Day weekend and are scheduled as needed until fall foliage weekends. The park is not staffed for visitor services on the weekdays in the winter, but the manager is available on an on-call basis to respond to emergencies. During the winter months there is no paid mountain patrol. During this period, the park manager relies on a volunteer mountain patrol, often made up of off-duty employees.

In late April, part-time staff returns to the park, and service hours are lengthened when the park opens for full visitor services in mid-June. A full crew of approximately 12 part-time employees with hours ranging from 16-40 hours per week is available until the end of August. Available hours diminish slightly at the end of August and through September, and balloon significantly during peak use from the end of September to the end of October. Currently, a large number of extra employees, as many as eight, are brought in to help during the fall foliage weekends. Since heavy park use can continue through the midweek period, seasonal and permanent employees from other state parks often are utilized.

During the summer months, the park manager also utilizes the skills and services of AmeriCorps. During the summer of 2002, two 10-day crews of six members and one 5-day crew of five members worked on trail maintenance. Another AmeriCorps employee worked as an Interpretative Ranger, interacting with park visitors and providing educational programming.

There is heavy reliance on volunteers at this park. They primarily work in the areas of trail maintenance, mountain patrol and rescue, and are an invaluable resource.



**Fig. 7.1** The AmeriCorps Program is important to completing trail maintenance needs.



### Leases

Since 1978 the Division of Parks and Recreation has been managing the Forest Society lands on the Monadnock Reservation for recreational purposes. Renewal of this lease will be pending in three years. The Division also has a lease with the Town of Jaffrey for the parcel that includes the summit of Mount Monadnock. This lease is due for renewal in 2013.

### Funding

Rarely does a day go by when someone does not visit Monadnock State Park. In good weather, people flock to the mountain for the fresh air and scenic views. User fees are collected approximately 250 days per year, with the Headquarters Area and the Old Toll Road Trailhead serving as the collection points. Fee collection systems such as "Iron Rangers" will be evaluated to maximize revenue collection at unstaffed locations and times. The reservation system currently in place for large groups and the campground will be continued.

For the last eleven years, the Division of Parks and Recreation has been a self-funded agency. In 1991, the Legislature passed Chapter 40:2, establishing a non-lapsing State Park Fund to ensure the provision of an adequate level of operation in the state park system. Revenues generated from entrance fees, fines, group and camping reservations, leases, retail sales, season passes and special use permits capitalize this fund. Any surplus income realized after budgeted expenses are met may be allocated to any park program or capital project upon approval of the legislative Fiscal Committee and Governor and Executive Council. Over the years, this surplus income has allowed the Division to complete a number of projects for the improvement and expansion of the state park system and to address maintenance and rehabilitation at many parks. Recent improvements at Monadnock State Park include the installation of showers at the campground and maintenance on the manager's residence.

## **Management Analysis and Discussion**

### Staffing

Understanding the ins and outs of Monadnock State Park is not an easy task. Park employees must learn state park procedures and fulfill the role of "tourism ambassadors." They also need some knowledge of the many trails on the mountain, the local area and the ever-changing weather conditions to ensure the safety of the visitors in their care. The smaller staff size currently in place has affected the ability to implement needed trail and other maintenance around the park, as well as provide a presence on the mountain for safety and trail education for the hiker.

Over the past 10 years, there has been an increase in winter park use. In the past, winter hikers came in two distinct groups: very well equipped and knowledgeable, or very poorly equipped and lacking proper knowledge to ensure their own safety. Today, a large number of well-equipped, well-intentioned hikers with limited winter hiking experience visit the park. The need to monitor trail conditions, keep hikers on the marked trails and "sweep" the mountain at the end of the day have become important tasks. Currently, off-duty rangers volunteer to fill this role. The park manager could not operate without these dedicated volunteers. The



staffing management directive should include funding for at least one part-time temporary patroller position, for winter weekends from November to April.

Staffing patterns at the park should be evaluated to determine the duties and the responsibilities of positions according to the needs of each season. Because of the seasonal nature of park use, staffing may include long-term employees and those that cover shorter time periods of intense visitor concentration. There is a strong argument that can be made for the expansion of early season part-time staffing prior to the start of each new fiscal year on July 1<sup>st</sup>. Not only is this the second busiest period for visitor use, but it's also the time for spring clean-up and routine trail maintenance.

The campground at Gilson Pond Area will require staff to check-in campers, collect fees, and maintain the grounds. This staff can operate as a self-contained unit within the park or can be part of the regular park staff. With the potential for fee collection at outlying trailheads, the campground staff could possibly split their duties to include time as roving rangers. Monadnock State Park relies heavily upon volunteers to close the gap between what can be provided by paid staff and what services are required, including, but not limited to, trail maintenance and winter safety patrol. To effectively recruit, train and organize volunteers, it would be of high benefit to have on staff within the Division a volunteer coordinator position. This was recognized in the 1992 Monadnock Management Plan, and the need is even more relevant today. The current plan recognized several organized ways to enhance and encourage the use of volunteers, such as Adopt-A-Trail programs, use of specific trail clubs such as the Monadnock-Sunapee Greenway Trail Club, and use of organizations such as the Trailwrights and Volunteer NH.

Participation in the AmeriCorps Program has been extremely successful for trail maintenance and education and interpretative program goals. The partnership should continue. Starting in the fall of 2002, a Forest Society Volunteer Stewardship Program was initiated at Monadnock State Park. The program is designed to train volunteer stewards in trail maintenance and in the skill of sharing information with the public about low-impact hiking.

Since its first mention in the 1992 Management Plan, the establishment of a "Friends of Monadnock State Park" has been an on-going consideration. The Master Plan Steering Committee expressed high interest in the formation of such a group. It was also acknowledged that the role of the "Friends of Monadnock" needs to be better defined prior to implementation of the formal process to designate such a group under 501 3:C application process with IRS. With the utilization of organized trail clubs and individual volunteer efforts in the area of trail maintenance, a "Friends of Monadnock" group could focus on fund-raising efforts for specific park improvements and/or educational and interpretative programming initiatives.

### Leases

Critical to the park's future direction is the on-going land management partnership with both the Forest Society and the Town of Jaffrey. Dialogue regarding the lease renewal needs to move forward with the Forest Society, with the formalization of an extension by 2006. Negotiations should begin with the Town of Jaffrey by 2011 for renewal of the current lease that expires in 2013.



## Funding

Potential sources for project funding outside the Division of Parks and Recreation budgeting process include:

- Conservation License Plate Program
- Environmental Planning Grant Program, DES
- Forest Legacy Program
- Habitat Enhancement Program (for Gilson Pond Dam)
- Land and Community Heritage Investment Program (to work with a non-profit group)
- Land and Water Conservation Fund (state park land only)
- Scenic and Cultural By-ways Program
- Transportation Enhancement Funds
- Foundations, corporate and private sponsors

With increased use at outlying trailheads and increasing “off-season” use, the institution of some form of fee collection was explored. The use of self-serve fee stations or “Iron Rangers”, while not perfect, appears to be the most reasonable solution. The use of a permit parking system at the outlying trailheads will also be considered.

There is a concern by the Division and the Monadnock Advisory Commission with the loss of revenue that would occur as a result of limiting parking and overflow parking. Although this will most likely have the effect of reducing income from day-use fees, there are many opportunities that will be in place to help offset that loss. These include the collection of fees at Gilson Pond; use of “Iron Rangers” at trailheads; better efficiency in the use of park employees; more efficient parking lots; and distribution of some use to weekdays. There are also opportunities through the increased sales of merchandise at the park store. Limited and controlled parking for buses may decrease group revenue, but a better distribution of groups through a permit system during the week will even out use and staff resources.

## **Management Direction**

### Use

- Continue to provide a variety of opportunities for various hiking and recreational experiences for people of all ages, including persons with disabilities, families, and hikers in search of solitude.
- Continue to manage the park to maintain open space.
- Highest priority for recreation use will be given to activities that include:
  - Day hiking, picnicking, organized day outings, birding and wildlife observation, snow-shoeing, flora and fauna observation, camping, cross-country skiing, volunteer projects, photography / painting, and berry picking.



### Lease Renewal

- Begin negotiating lease renewal with the Society for the Protection of New Hampshire Forests in 2004. (Current Lease Expires 2006.)
- Begin negotiating lease renewal with Town of Jaffrey in 2011. (Current Lease Expires 2013.)

### Staffing

- Create and fill a Volunteer Coordinator position for the purpose of recruiting, organizing and training volunteers for a variety of State Park needs, especially those related to visitor contact and education, and for trail projects.

### Volunteerism

- Continue to participate in the AmeriCorps Program to accomplish trail maintenance and provide internships that achieve education and interpretative program goals.
- Utilize various volunteer efforts and methods to accomplish park program needs.
  - Adopt-A-Trail
  - Trail Clubs
  - Trailwrights
- Work cooperatively with the Society for the Protection of New Hampshire Forests in a joint “Volunteer Monadnock Stewardship” program to train Volunteer Stewards in trail maintenance and public education about the fragile mountain environments and low-impact hiking.
- Initiate action to form a “Friends of Monadnock State Park, Inc.” including registering with the Secretary of State’s Office, preparing and adopting articles of incorporation and by-laws, and filing for IRS 501-3:C status.

### Funding

- Research and apply for funding from sources that would allow for enhancement of facilities, programming and conservation needs in concert with the vision statement and the goals and objectives, as outlined in the master plan.



Potential sources include:

- Conservation License Plate Program
  - Environmental Planning Grant Program, DES
  - Forest Legacy Program
  - Habitat Enhancement Program (for Gilson Pond Dam)
  - Land and Community Heritage Investment Program (to work with a non-profit group)
  - Land and Water Conservation Fund
  - Scenic and Cultural By-Ways Program
  - Transportation Enhancement Funds
  - Foundations, corporate, and private sponsors
- Develop, or expand, relationships with other agencies and organizations to enhance educational and interpretative programming. These include:
    - Antioch College
    - Audubon Society of New Hampshire
    - Franklin Pierce College
    - Harris Center for Environmental Education
    - Monadnock Regional Heritage Alliance
    - Southwest Region Planning Commission
  - Institute fee collection system at Marlboro, Dublin, and future trailhead parking lots (Pumpelly).



## CHAPTER 8 - IMPLEMENTATION

Table 8.1 outlines a phased approach and cost estimate for completing the facility needs outlined in the master plan. Phase I is structured to address the facilities associated with the Gilson Pond Area. It is also structured to put facilities in place that will allow for continued use of Monadnock State Park as renovations and improvements are undertaken at other locations, primarily at the Headquarters Area. Construction of the tollbooth will provide the ability to manage and collect fees for parking, as well as camping activities. Initial construction of the campground is planned for approximately 12 family sites and 12 walk-in sites. Future expansion considerations and the mix of sites will be based on use patterns and user preferences.

Implementation of Phase II includes consideration for closing the Headquarters Area to the public during the renovation and construction period. Although this may have a significant impact on park revenue and on the public who desire to visit the park during this time, there are several benefits to closing.

Important to this approach is that all facilities within the Headquarters Area will be constructed / reconstructed at the same time, allowing the park to reopen with a new image and with no further disruption to the public. In coordination with the closure period, an aggressive outreach and public education program will be undertaken to inform park users of the physical improvements, changes in management, and limits that will be put on vehicle parking during high and peak use periods.

Phasing of the improvements as outlined under Phase II will allow for the Gilson Pond Area and other trailheads around the park to remain active while the Headquarters Area is closed and permit most of the basic park functions to continue. It is recognized that this could put additional demands on these other areas during the renovation period. As a result, special parking accommodations or temporary management considerations for these sites may need to be put in place as part of the implementation plan. Shuttle services from Gilson Pond to access trails from the Headquarters Area will also be considered during this construction phase.

Phase III finishes the major facility improvements for Monadnock State Park. Potentially, this phase could occur during Phase II work at the Headquarters Area. By identifying this work as a separate phase, it allows for flexibility in funding. The store and group camp area can continue to function until they undergo renovation. They can also be renovated without impact on other facilities and functions at the Headquarters Area.



**Table 8.1 Monadnock Master Plan – Implementation and Cost Estimates**

**Phase I** - Gilson Pond = \$832,500

Bathhouse		
Traditional	=	\$350,000 (includes water and septic work)
Clivus	=	\$175,000
Pit Toilet	=	\$ 3,500 each (for walk in sites)
Road upgrades	=	\$150,000 (campground road and entrance)
Family Campsites	=	\$ 30,000 (\$1,000/site-30 sites for picnic table, fire ring, gravel)
Walk in campsites	=	\$ 7,500 (\$750/site-10 sites for fire ring, tent platform, gravel)
Hiker parking lot	=	\$ 21,500
Toll Booth	=	\$ 10,000 (with electricity)
Dam Repair	=	\$260,000 (Identified in separate DES Survey)

**Phase II** - Headquarters =\$ 529,000

Visitor Contact Center		
Building	=	\$150,000
Road upgrade	=	\$150,000
Bus area		
Construction	=	\$50,000
Pavilion	=	\$40,000
Pit toilets (2)	=	\$ 7,000
Parking lots		
Lot 1	=	\$72,000 (paved)
Lot 2	=	\$60,000 (gravel)

**Phase III** – Headquarters = \$420,000+

Store/bathroom	=	\$ 300,000
Youth Campground		
Pavilions (3)	=	\$120,000 (with communal food prep area and picnic tables)
Site rehab	=	
Parking lot	=	

**TOTAL: \$1, 781,500**



## Prerequisites to Implementation

Prior to implementation of the key actions of the master plan, several important steps will need to be completed. These include

1. Detailed site and topography survey. This step will be required to complete the final design plans and fine tune the placement of facilities and components called for in the plan.
2. Final design and construction drawings / specifications. This step, completed with detailed site information obtained through the site survey, will provide the opportunity for final assessment of facility design, layout and placement on the site. It will also allow for the completion of detailed cost estimates for the work.
3. Funding to complete the renovations and improvements. The primary source of funds to implement improvements will come from special appropriations obtained through the State Capital Budget process. Other options include the general State Park Funds, Land and Water Conservation Funds (LWCF) or other grant opportunities that might be available. Special partnerships and other private support could also be a consideration.
4. Possible land exchange with the Society for the Protection of New Hampshire Forest. In order to facilitate the full use of state and federal funds for capital improvements as proposed, it may be necessary for the state to obtain ownership of the Poole Tract identified for the location of the park entrance, visitor center, and bus parking. Options will be explored with the SPNH for a like-value land exchange or possible outright gift, with appropriate deed restrictions, to enable the state to use federal LWCF matching funds more effectively for capital improvements.
5. Develop Closure / Construction Plan for the Headquarters Area. This effort will outline the special considerations that need to be taken into account during the closure of the park's primary facilities. It will look at the logistics of utilizing the Gilson Pond Area for special parking accommodations and for temporarily providing basic park services. This plan will also outline the opportunities and means to undertake a public relations campaign to inform people of the closing, planned improvements and changes.

## Other Considerations

The implementation of the Monadnock Master Plan will occur across several fronts and through the efforts of its management partners and the many volunteers who dedicate their time to maintenance and improvement of the park. In addition to the facility improvements that are highlighted in this chapter, there are many other actions dealing with a variety of management requirements that need to be addressed. The master plan will be an important vehicle in outlining current needs and opportunities, along with priorities, to help coordinate and make the most effective use of partnerships and volunteer efforts.

# APPENDIX A

## Monadnock State Park Master Plan Steering Committee

### Goals and Objectives

#### Overall Goal

**“Balance the needs for recreation, conservation, education and financial stability in developing and implementing a Master Plan for Monadnock State Park and environs.”**

#### Outdoor Recreation

- Provide quality outdoor recreation experiences for the public consistent with the natural mountain environment and national natural landmark status.
- Provide a variety of opportunities for various hiking and recreational experiences for people of all ages, including persons with disabilities, families, as well as hikers in search of solitude.
- Upgrade and continue to maintain existing recreation facilities and build new facilities and expand operations to meet existing and future needs.
- Ensure adequate funding and staffing for timely and routine maintenance of trails and buildings, and for effective implementation of the recommendations of the Master Plan.
- Provide adequate, safe, and sanitary infrastructure and support facilities (parking, restroom facilities, and access roads) for current and future mountain users and park visitors.
- Continue to monitor trails on a regular basis for safety, litter control, compliance with rules and regulations, and resource protection.
- Develop a trail maintenance and monitoring plan for Monadnock lands.

#### Conservation

- Protect the natural and cultural resources of Mount Monadnock.
- Inventory and assess natural and cultural resources of the mountain.
- Promote use of these resources that is appropriate, compatible, and ecological sound.

- Improve and better manage access to the mountain.
- Protect scenic views, vistas and areas of high aesthetic quality.
- Create open space corridors to link Monadnock lands with the other state parks and local open space and conservation lands for trail use and wildlife.
- Identify sensitive and unique lands in need of protection.
- Prioritize lands for acquisition.
- Implement management measures to protecting significant natural and cultural features.

## Education

- Foster a greater public awareness and understanding of conservation, cultural and environmental values, through interpretative and educational programs.
- Enhance the quality of educational and interpretative programs.
- Promote stewardship of natural and cultural resources through policies and practices.

## Financial

- Locate appropriate funding to implement the Monadnock Master Plan.
- Identify appropriate jurisdictions to take responsibility for implementing various aspects of Master Plan.
- Recognize Monadnock's importance to regional tourism and build the necessary infrastructure to support it.
- Encourage the formation of partnerships to maximize funding opportunities in efforts to improve the quality of outdoor recreational services of Monadnock and promote conservation objectives of this Master Plan.
- Build capacity for increased volunteerism.

## APPENDIX B

### The Society for the Protection of New Hampshire Forests

#### Principles Toward a Guiding Vision for Mount Monadnock and Gap Reservations

As the principal landowner on Mount Monadnock and the sole owner of Gap Mountain, the Society for the Protection of New Hampshire Forests has the ultimate obligation for the well being of these priceless conservation areas (referred to collectively below as “the reservations”). We agree an important step in writing a credible master plan is for all stakeholders to develop a common vision for these lands. Toward that end, we think it is useful to share the principles that will guide our participation in, and ultimate support for, the master plan.

Principle 1: A primary goal of the plan should be to permanently protect the reservations from “the ravages of over use,” as stated in the lease between SPNHF and the State. This will require scientific assessments of the reservations’ current condition; independent trail assessments; annual surveys of users to determine when the “social carrying capacity” is exceeded; and possible restrictions on the numbers of visitors allowed on the reservations.

Principle 2: The master plan should ensure that the reservations serve as models for balancing recreation, ecosystem-based forest management, strategic land protection, and scientific research. The management plan should not favor any one of these goals over the others.

Principle 3: A consistent standard should be used for conducting baseline natural and cultural resource inventories; writing forest and recreation management plans; and for regularly updating those inventories and plans.

Principle 4: The master plan should reflect and incorporate, as appropriate, the goals of other regional planning and conservation efforts. These include the Harris Center’s “Super Sanctuary” project, SPNHF’s “Linking Lands” project, and ongoing efforts by area towns and the Southwest Regional Planning Commission.

Principle 5: A significant portion of the admissions and sales revenue generated at the reservations (including timber sale income) should be re-invested in the reservations. The master plan should be accompanied by a broadly endorsed financial plan that forecasts the costs associated with meeting the objectives of the plan; and predicted revenue streams.

## APPENDIX C

### BUILDING CONDITION SURVEY AND ASSESSMENT

On May 16, 2001 I conducted a Fixed Asset Resource Management Systems (FARMS) evaluation of Monadnock State Park. Park Planner, Diane Hardy and Monadnock State Park Manager, Andrew Zboray were present. Below is a summary of items that should be addressed by DD&M and/or the park staff as noted.

**MOD01 (Managers Residence)** The building requires moderate repairs to be suitable for use as a year around manager's residence. The foundation sill is in need of repair. The plumbing system needs to be redone and a larger size water filtration device should be installed at the building entrance to help reduce the amount of iron in the water. The kitchen ceiling is in need of repair in several areas. Mice and or other rodents appear to be a problem in the building. The porch and stairs at the back of the building should be replaced and brought up to code.

**MOD02 (Wardens Cabin)** The building requires some minor repairs to the electrical heating system. The Park Manager indicated the electric baseboard heating element in the center room was not working correctly at times, this may be due to a water/moisture problem.

**MOD03 (Hiker's Cabin)** The windows need to be puttied and painted, a few of the windows need the interior framework replaced. Water infiltration along the chimney / wall interface is still an ongoing problem during rainstorms; this area should be heavily sealed with silicone caulk or another water sealant. Ideally, the roof should be extended approximately 3 feet to project beyond the stone chimney and be re-flashed. Two wooden trash storage bins for use by AmeriCorps are located next to the building, these should be removed. The building was last painted in 1981 and should be repainted. Areas of the firebrick in the fireplace are falling out, the **fireplace should not be used until corrected.** The chimney cap also needs to be rebuilt.

**MOD04 (Visitor Center)** A section of screen is ripped in the back of the building, the park staff should repair this.

**MOD05 (Park Store)** The Park Store is in need of minor repair. The flooring in the storage/utility closet has a large hole in it. Material required for repair is a 1" x 10" x 10" pine tongue and groove floorboard. The ramp in front of the park store is not to ADA code. The ramp should be rebuilt and extended into the parking lot area. Handrails should also be added on both sides of the ramp. The interior flooring should be painted using a paint that will hold up to heavy foot traffic. The building should be insulated for winter use, as this is a year around park open to the public. The wood stove in the center of the building is a potential safety hazard to the public, this should be removed and a sealed heating unit installed such as a monitor heating system. Effluent from the septic system previously flooded the store in March 2001 and as a stop gap measure a 1 ½" sanitary T was installed at the exterior of the

building on the vent pipe to divert the back flow of effluent from entering the sink drains in the store when the sewer pipes freeze in the winter. The septic system should be repaired/ replaced as soon as possible.

**MOD06 (Garage)** The cedar shake drip edge is rotting and this area should be replaced. The asphalt shingles themselves seem to be in good condition and do not require replacement at this time except at the drip edge area.

**MOD07 (Toll Booth HQ)** This building is in poor shape; it should be removed and replaced with a new design. The standard octagonal toll booth design is not adequate for this location. A modified octagonal design with an elongated center section would work well for this location.

**MOD08 (Picnic Shelter)** The wood shingle roofing needs to be replaced, it is rotting in several areas. The roof planking is in need of replacement in several areas as well. The 8" diameter piles that support the building are thoroughly rotted where in contact with ground. The rest of the structure seems to be structurally sound.

**MOD09 (Pump House)** The wood shingle roofing on the pump house should be replaced. This should also be cleaned off of pine needles, moss and other debris.

**MOD10 (Old Tool Shed)** The tool shed is in fair condition, electrical service needs to be restored to this building from the warden's cabin. Incandescent lighting should be upgraded and two new grounded duplex outlets installed.

**MOD11 (Main Toilet Building)** The vinyl cove base in the men's room and women's room needs to be reset and or replaced in areas. The water system should have a water filter installed at the building entrance to help reduce the problem of high iron concentrations in the water. **The Manager indicated that people receive electrical shocks when using the showers; I recommend that the showers remain closed until this problem is corrected.** I spoke with the manufacturer of the instant hot water heaters and electric current flows nowhere near the water supply or outlet to this device. The electrical problem appears to be associated with an insufficient building ground or other improperly grounded device(s); this should be corrected immediately. The roofing over the entrance to the utility room door is built so that if the windows to the building are open during a rainstorm rainwater can enter the building. The exterior wall of the camping sinks adjacent to the utility room door where it connects to the side of the building should be sealed thoroughly with silicone water seal. The area around the shower addition needs to be re-graded. The exposed storm water culvert needs to be covered over and sand and gravel and re-graded with stone dust for ADA requirements.

**MOD12 (Old Toilet Building)** The water service line to this building is significantly corroded and should be completely replaced. The plumbing chase floor is a safety hazard and needs to be rebuilt. The toilets at these parks are an early type of a low volume flush toilet; the Park Manager requests that these toilets be replaced with new toilets using low volume flushometers. Plexiglass window inserts should be constructed by the park staff to use in place of the screens presently used, for use during the fall.

**MOD13A (Pit Toilets – Site A)** No maintenance needs at this time.

**MOD13B (Pit Toilets – Site B)** No maintenance needs at this time.

**MOD13C (Pit Toilets – Site G)** Building was not assessed.

**MOD13D (ADA Pit Toilet near Main Toilet Building)** No maintenance needs at this time.

**MOD13E (ADA Pit Toilet near Main Toilet Building)** No maintenance needs at this time.

**MOD14 (Pit Toilets Gilson Pond)** The two seepage type pit toilets at this location have never been pumped of waste material. I recommend that these toilets be pumped out and replaced with two ADA style pit toilets.

**MOD15 (Toll Booth Toll Road)** Building was not assessed.

**MOD16 (Recycling Shed)** Building was not assessed on this visit. No maintenance issues at this time.

**MOD17 (Wood Shed)** Building was not assessed on this visit. No maintenance issues at this time.

**MOD18 (Pit Toilet Behind Park Store)** This building is only open to park staff, it should be removed and replaced with a vault type pit toilet to be open to the public, and should be pumped out periodically. The current pit toilet contains a 35-50 gallon trash can for human waste collection; this is removed by hand and then poured on a brush pile and set ablaze periodically.

**MODPK (Park Water System)** The park water system is fed by a 140' deep drilled well with a draw down capacity of 24 GPM. The water is pumped to a 100 +/- gallon galvanized steel storage tank located at the pump house. The park water system is gravity fed from the water tank. I recommend that an automatic chlorinator system similar to the system installed at Miller and Kingston State Parks be installed at the well head if it is feasible to do so. The park water is heavy in dissolved iron; this causes a problem of iron staining in plumbing fixtures and tubercular water pipes due to iron sedimentation. A water filtration system should be installed at the pump house and the filters changed by the park staff on a monthly basis, or whenever it becomes necessary. The existing park water distribution system is believed to be the original installed in 1937. The whole system should be removed and replaced with a newly engineered design to meet the current and future needs of the park. DD&M or an outside contractor should do the water distribution work listed above.

**Additional Notes:** The park sewer system failed in March of this year (2001) resulting in effluent entering and overflowing the store sink. The sewer system is in need of repair and or redesign before snowfall of this year.

Ed Mussey  
Engineering Tech. II  
DRED DD&M  
CC: Brent Edmonds  
Diane Hardy

## APPENDIX D

### MONADNOCK MASTER PLAN STEERING COMMITTEE TRAIL ISSUES

TRAILS WORKSHOP – MAY 8, 2001

**Guests:** Bob Spoerl, NH Trails Bureau and Antoine Chesaux, NH Division of Parks and Recreation (formerly with AmeriCorps program)

#### **Trail Issues Identified by the Master Plan Committee:**

- Overused, worn out trails.
- Crowds, the loss of mountain solitude.
- Poorly prepared hikers.
- Alternative trail for pets.
- Better trail maintenance.
- More consideration to safety.
- More staffing for trail maintenance work.
- Trail erosion.
- Trash on the trails, keeping the summit clean.
- Better signage in places so people don't lose their way.
- Too much exposed rock and soil compaction.
- Limited trailhead parking at alternative trailheads (Dublin, Pumpelly, and Marlboro trails).
- No potable water for hikers in Toll Road area.
- Trail widening in many locations on the mountain caused by people traveling in groups and avoiding mud puddles causing further widening.
- Lack of trail markers above the tree line, confusing to newcomers.
- The need for increased monitoring and maintenance of trails.
- Trails are confusing in places, better signage needed.
- Need for management strategies for trail use such as directing hikers to less used trails during high peak demand periods.
- Need for universally accessible trail in the vicinity of the Poole Reservoir.
- Many water bars on the mountain are not functioning well.
- More use of the Parker Trail (by the dam and waterfall).
- Support facilities (restrooms with running water and flush toilets) at Old Toll Road.
- Identify alternative trails for users such as equestrians, ATV trail users, and mountain bikers.
- Traffic / Safety concerns where the Royce Trail crosses Route 124 and in the vicinity of the Old Toll Road facility.
- Spreading trail use out over the four seasons and over the week.
- Provide a boardwalk and scenic viewing trail in the vicinity of Perkins Pond.

**Possible Approach:**

- Assess trail conditions and document what improvements are needed.
- Decide what can realistically be accomplished.
- Determine what can be deferred.
- Develop a long-range plan for improvements.
- Monitor trail conditions closely on a regular basis.
- Annually re-evaluate the plan and incorporate specific projects into yearly operating budgets, capital improvements budget, work plans for volunteers, and AmeriCorps proposals.

**Establish a System for Priorities:**

- Correct unsafe situation first.
- Correct trail conditions on trails receiving most use.
- Correct things making significant trail damage (erosion, sedimentation, on-site trampling).

APPENDIX E

**MONADNOCK STATE PARK TRAIL MAINTENANCE PRIORITIES  
AND RISK ASSESSMENT**

Hiking Trail	Use Level	Trail Condition/ Maintenance Needs
Amphitheater Trail	Low	Good. No major maintenance needed. Some light clipping and improved marking may be necessary.
Birchtoft Trail	Low/ Medium*	Very good. Replacement of approximately 12 log waterbars will be necessary in 5 years. 3 new log/ stone waterbars needed. Metal reflective blazes need replacement, and approximately 100 new blazes added.
Cart Path	Low	Good. 2 stream crossings west of junction with Royce Trail need built up stone treadway approaches. Blazing would improve trail. Routine clipping sufficient.
Cascade Link	Med/High	Fair. 4 stone waterbars needed below Poole Brook crossing. Built up stone treadway approaches needed at Poole Brook crossing. Rocks/ boulders need moving from treadway or repositioning as steps, between Poole Brook and Red Spot jct. 2 log/ stone waterbars needed at steep ledge transition at 2250' elevation. Log/ stone steps needed (~50') near stream crossing at 2600' elev. Improved blazing needed.
Cliff Walk	Med.	Fair. Section up the 1st ledges need stone steps or relocation. Wet section after 90 degree left turn at 1950' elev. needs drainage or relocation can avoid. Stone steps and waterbars needed on steep section between 2000'-2150' elev. below Hello Rock. Light clipping needed between Point Surprise and Bald Rock, this section would also benefit from a few stone steps to define soil treadway to ledge transitions. Entire trail needs improved blazing.
Do Drop Trail	Low/Med	Poor. Steep sections are washed out. Numerous waterbars and steps needed.
Dublin Trail	Med	Good. Stone waterbars with backsteps (~6) needed in upper steep sections below 1st ledge at 2400' elev. Move obstacle boulder in treadway and place in nearby washout below 1st ledge. Remove Spruce leaning across trail in same area.
Fairy Spring Trail	Low	Good. Needs additional marking in area by spring. Lower section near Fassett's ruins need approx. 2 waterbars w/ backsteps and 2 additional steps, log or stone.
Great Pasture Trail	Low	Good. Not capable of handling additional use without major upgrades to stabilize soil. If use is kept at current levels, minor drainage and stabilization just above Mossy Brook jct. (~3 waterbars w/ backsteps).
Harling Trail	Low/Med	Excellent. Culvert near Hinkley jct. needs re-setting and washout refilled with stone and aggregates (project currently pending).
Hedgehog Trail	Low/Med	Poor. Major step/ waterbar/ refilling washouts needed on entire trail, especially bottom 1/3 of trail. Should consider closing trail, or eliminating bottom 1/3 of trail. To maintain this direct route to Bald Rock, a connector from upper 2/3 of trail to Noble Trail may be identified and cut.
Hello Rock Trail	Med.	Good. One small section prone to being bootlegged, corridor clarification and marking may be needed in this area.
Hinkley Trail	Low	Very good. Needs new blazing. Stone treadway build up needed where trail is next to stream at Harling Jct. (project pending).
Lost Farm Trail	Med.	Very good. Stepping stones needed in wet area by stone wall at ~1700' elev.
Marian Trail	Low	Good. Needs improved marking near both the jct. with Marlboro Trail and Mossy Brook.

Hiking Trail	Use Level	Trail Condition/ Maintenance Needs
Marlboro Trail	Med.	Fair. Restoration of clogged/ breached waterbars in lower sections below 1700' elev. Bootlegged areas in this section need brushing in. Trail just above 1st ledge at 1700' needs treadway improvement including stone waterbars/ steps, major bootleg around this section needs closing. Stone drainage structures (-4) need to be established in soil sections between 1750' elev. and Marion jct.
Monte Rosa Trail	Med.	Good. Treadway stabilization needed at bottom of trail, approximately 2 waterbars with backsteps and 2 additional steps would suffice in this section.
Mossy Brook Trail	Low	Poor. Trail is washed out in middle section with many exposed roots. Treadway needs to be raised in this section with root pockets filled, also water needs to be diverted from the treadway. Entire trail needs reblazing.
Noble Trail	Low/Med.	Good. No major maintenance needed, routine only.
Old Halfwayhouse Trail	Med.	Very good. Minor drainage through ditching needed at ~.2mi. from beginning of trail. Stone step (1) needed at stonewall crossing at top of trail. Waterbar needs installation to divert water before flowing to stonewall crossing just below Cart Path jct. Stabilization of steep section near upper jct. with Old Toll Rd., ~ 3 log steps with 1 waterbar needed.
Parker Trail	Med.	Good. Four log waterbars needed before Lost Farm jct. Stone waterbar needed at top of slope above minor brook above same jct. Bridge needed (log, 16') to span brook ~1/4 mile above Lost Farm jct. Four log waterbars needed on section between Cliff Walk jct. and "Little Mt."
Point Surprise Trail	Low/Med.	Very good. A total of 2 log waterbars needed to stabilize slope just above junction with Hello Rock Tr.
Pond Loop	Low/Med.	Very good. Additional blazing needed. Corridor clarification and brushing in bootlegs needed in open forest near XC jct. 33.
Pumpelly Trail	Med.	Good/ very good. From Dublin Lake to SPNHF property boundary (1 1/2 mi.), trail needs no major maintenance but passes over private land with no maintenance agreement. A new location should be found so trail passes entirely on SPNHF/ State of NH land. At SPNH property boundary ~2150' elev., trail is washed out on steep slope with many exposed roots. Needs major stabilization with numerous waterbars and steps for this 1/4 mi. section. Some clipping for corridor clarification needed from SPNHF boundary up to jct. with Cascade Link. From this jct. to summit, routine maintenance only.
Red Spot Trail	Med.*	Fair. Wet sections just above Cascade Link need stepping stones and built-up stone treadway approaches at 2 stream crossings. Steep slope below "1st view" needs stone waterbar at top of existing stone stairs, additional stone steps needed at approach and top of steps. Treadway needs to be raised and channeling of water on uphill side needed where trail passes behind "1st view". Numerous treadway improvements needed from "1st view" to Old Ski Path (OSP) jct. Improvements needed include stone steps for ledge approaches, re-setting obstacle rocks as steps, and diverting seasonal water-seep from trail at top of steep section just below OSP jct. Immediately above OSP jct. treadway needs raising through wet area or relocation (project scheduled for 2003). At ~2600' elev. relocation needed through and off of boulder field, stone steps and some ledge splitting needed (project scheduled for 2003). The remaining section of trail from 2600' to ~2800' would benefit from limited repositioning of rocks and splitting of ledge in obvious difficult sections. From 2800' to Pumpelly jct. no major maintenance needed. From Cascade Link jct. to scrub zone, trail needs improved marking.
Ravine Trail	Low	Very good. Steps (3 telephone pole) needed between existing steps at pond (may be advisable to wait for outcome of expected Gilson Pond dam repairs). Wet area below 1st bridge could use ~3 flat stone steps through muddy area near brook. Muddy area before end of trail could use ~4 flat stone steps.

Hiking Trail	Use Level	Trail Condition/ Maintenance Needs
Side Foot Trail	Med.	Good. Some minor treadway stabilization needed just above jct. with Do Drop Tr., ~ 5 stone steps and 1 waterbar.
Smith Connector	Low/Med.	Good. Additional marking with cairns or improved blazing needed at Bald Rock and near junction with Red Spot Tr.
Smith Summit Trail	Low/Med.	Good. Entire trail needs corridor clarification with heavy clipping. Improved marking or stone cairns needed in upper ledges near Dublin Tr. jct. Same needed at switchback section at ledges near ~2900' elev. Improved signage at junction with Dublin Tr.
Spellman Trail	Med.	Good. Improved signage needed at Cascade Link jct. Numerous stone steps (~20) and waterbars (~ 5) needed in lower sections below main ledge. Corridor clarification with improved markings needed in forested area below main ledge.
Spruce Link	High	Good. Some treadway improvement needed immediately below stream (Falcon Brook) crossing, built up stone treadway through 20 foot muddy area. Log waterbar needed at top of log steps at 1996 relocation. 1 log step needed just above this proposed waterbar.
Thoreau Trail	Low/Med.	Good. Approximately 2 waterbars needed just above jct. with Point Surprise Tr.
White Cross Trail	High	Poor. Major treadway improvements needed between Spruce Link jct. and "Troop Rock" (1st ledge). These improvements include numerous stone waterbars and steps. Same section needs numerous obstacle rocks removed or re-setting as steps. Smooth 2nd ledge needs fixed stone steps on ledge or other strategy to negotiate dangerous ledge. No major maintenance needed above 2nd ledge (~2600' elev.).
White Dot Trail	High	Fair. Seasonal wet area in first .1-.2 mi. needs ~25' of raised stone/ aggregate treadway. Approximately 20 log waterbars and steps from base to Falcon Spring will need replacement in 3-5 years. From Falcon Spring to ~2650' elev. numerous re-setting and additional stone steps needed in soil sections. Easier route through "The Chute" (~2700' elev.) should be considered, affixed stone steps may be an option. No major maintenance needed in ledge sections above ~2750' elev. except for stone step (~3) approach to ledge just below this point.

\* Denotes high use due to fall foliage overflow to Gilson Pond Area.

#### X-C Ski Trails:

No major treadway improvements needed except for draining or corduroy placement south of XC jct. 22. Major clearing of windthrows and growth needed between XC junctions 14-21, 21-22, 22-24, 22-26, 23-27, 25-28, 28-29, 30-31, 29-38, 38-39 (40-39ok), 33-34.

A major reconstruction of bridge over Poole Brook needed between XC junctions 15-21 (near 15). This should be a 32 foot bridge with a center rock pier. Constructed from peeled Red Oak logs cut on site, and decked with 5 foot wide 2 inch thick pressure treated or recycled plastic lumber.

The remainder of bridge reconstruction/ repair can be considered minor. A total of approximately 480 feet of 2" x 6" pressure treated/ recycled plastic decking is needed.

A better system for blazing ski trails should be developed. Currently painted wood arrows are used at some confusing areas, trails are not blazed. Fixed blue plastic blazes or painting should be considered.

#### Gap Mountain Hiking Trails:

Trail from the Troy side needs major stone steps and drainage structures on steep section just below south summit. All other trails require routine maintenance only except for the need for improved blazing or signage where the Royce Trail crosses the Bullard/ Old County Road.

### **Risk Assessment Summary:**

With Master Plan goals leaning towards distribution of hiker use away from Park HQ to other areas, mainly improvements to the Gilson Pond Area, trail maintenance efforts should first focus on the Red Spot Trail, mainly for safety reasons.

Currently the trail which is considered to be the 'least difficult' trail from Park HQ, the White Cross, has many issues concerning safety. Due to the highest use being focused on this area, dangerous sections of this trail need to be improved, thus providing a safer trail to descend. The sections identified on the White Dot should also be given a high priority due to this high use.

The White Arrow Trail should receive a high priority for maintenance due to high use and the fact that the trail originates from a staffed fee area. Unchecked water flowing in the trail will eventually lead to irreversible erosion problems. The issues apparent on the Hedgehog Trail should be a high priority due to its popularity and potential hazards. Cliff Walk is a very popular trail accessed from two state park fee areas, it is not considered a beginners trail, but seems to attract less experienced hikers. Problem areas on this trail warrant a high priority for maintenance. Pumpelly Trails access issues should be addressed as soon as possible.

Work on the remaining trails can be addressed in a timely fashion. Many projects on these trails can be accomplished through volunteer efforts with major projects handled under the supervision and aid of professional supervision. Many major issues on the trails including construction is often handled by off-duty long time park employees. The efforts of these persons plays a major role in the upkeep of all trails on Monadnock and must be recognized. The historic use perspective, practical familiarity, and knowledge of seasonal influences on the trails held by these individuals is invaluable in directing maintenance. Formal trail surveys with detailed wheel readings are helpful, but may not be the best method for planning maintenance. A one time visit will not take into account seasonal variations and patterns of hiker use that greatly affect maintenance goals. Often maintenance issues are best planned and solved by the persons who hike these trails literally hundreds of times in all seasons. Monadnock is open year-round and receives its highest use 'off-season', which is not during the typical trail maintenance field seasons.

A total dollar cost for trail maintenance, including number of labor hours required, can be a very difficult figure to determine. Numerous variables present at the work area can greatly affect the amount of time required to accomplish a project. The New Hampshire Bureau of Trails uses the following labor requirement estimates:

One waterbar requires 6 labor hours.

One stone step requires 1 labor hour.

One mile of trail requires 8 labor hours for blazing or brush clearing.

The above information has been compiled for the Monadnock State Park Master Plan by the park manager, Andrew D. Zboray, with assistance from senior mountain patroller Edward J. Stark, October 2002.

APPENDIX F  
Title XIX  
NH REVISED STATUTES ANNOTATED  
PUBLIC RECREATION  
CHAPTER 227-D  
MONADNOCK ADVISORY COMMISSION

**227-D:1 Declaration of Policy and Purpose.** – The general court declares that Mount Monadnock located in the towns of Dublin, Jaffrey, and Marlborough, Gap Mountain in Troy, and Little Monadnock Mountain in Fitzwilliam constitute a unique geographical attraction which brings thousands of visitors to the state each year and requires supervision and planning by the state of New Hampshire. It has been established that there is a great need for the state to take jurisdiction over the lands of Mount Monadnock which are presently open to the public in order that these unique highlands can be preserved from the ravages of overuse.  
**Source.** 1975, 432:1. 1990, 258:2, eff. June 27, 1990.

**227-D:2 Agreements for Management and Supervision of Land.** – The department of resources and economic development is hereby authorized and directed to negotiate agreements with the Society for the Protection of New Hampshire Forests, the towns involved, and others, by which such lands shall be managed and supervised by department personnel. Such agreements shall include, but are not limited to, provisions for the exercise of enforcement powers vested in department personnel on such lands; timber cutting; trail location and maintenance; search and rescue operations; public liability; restrictive uses such as camping; and all other aspects of operating said lands for public recreational uses consistent with the natural environment.  
**Source.** 1975, 432:1. 1990, 258:3, eff. June 27, 1990.

**227-D:3 Tax Exemption.** – The land presently owned by the Society for the Protection of New Hampshire Forests on Gap mountain in Troy shall hereafter be exempt from local property taxes normally imposed by the town of Troy so long as the Society and the state of New Hampshire as lessee of the Society for the Protection of New Hampshire Forests shall use said lands for recreational, wildlife, open space and forestry purposes only. Any leases adopted under this section shall not preclude the department of resources and economic development from charging fees for the use of lands specified in this section.  
**Source.** 1975, 432:1, eff. July 1, 1975.

**227-D:4 Advisory Commission.** – There is established a Monadnock advisory commission which shall recommend policies affecting the recreational use of Mount Monadnock and Gap Mountain. Such commission shall consist of 2 members from each town of Dublin, Jaffrey, Marlborough, Fitzwilliam, and Troy, the director of the division of parks and recreation, the director of the division of forests and lands, and the president/forester of the Society for the Protection of New Hampshire Forests or their designees. The town members shall be selected by the towns, for a term of 3 years, either by appointment by the selectmen or by the annual town meeting, as determined by the commission. Vacancies shall be filled by the selectmen for the unexpired term. The director of the division of parks and recreation shall make available to the commission such support as shall be necessary for the commission to discharge its responsibilities.  
**Source.** 1975, 432:1. 1990, 258:4, eff. June 27, 1990.

**227-D:5 Powers of the Commission.** – The Monadnock advisory commission shall:

I. Guide the department of resources and economic development planning efforts to ensure that the growing popularity of Mount Monadnock not be allowed to compromise the integrity of this national natural landmark and its visitors' experiences.

II. Assist the department in the formulation and adoption of a long-range plan to ensure that the recreational and educational benefits of Mount Monadnock, Little Monadnock, and Gap Mountain will be developed so as to assure their perpetual availability.

III. Recommend specific management policies and practices to control use of the resources of Mount Monadnock, Little Monadnock, and Gap Mountain under the jurisdiction of the department.

IV. Assist the department in acquiring lands and rights in land, to ensure a consistent management over these lands and their connecting trail corridors.

V. Meet at least annually, with a quorum of at least 8 members, to conduct any business relevant to the purposes of this chapter.

VI. Meet at least annually with the commissioner of the department of resources and economic development and report annually to the commissioner on its activities in support of this chapter; its recommendations for acquisitions, easements, and landowner agreements; and any threats to the integrity of these lands and to their enjoyment by the public.

VII. Issue an annual report to the member communities.

**Source.** 1975, 432:1. 1990, 258:4, eff. June 27, 1990.

**227-D:5-a Acceptance of Gifts.** – The commission may accept any gifts, donations, or grants from any source whatsoever, provided said gifts, donations, or grants so received shall be used exclusively to further the purposes of this chapter.

**Source.** 1999, 8:1, eff. June 4, 1999.

**227-D:5-b District Legal Existence.** – In order to establish the tax exempt status of the Monadnock advisory commission established under this chapter, such advisory commission is deemed to be a governmental instrumentality having a distinct legal existence separate from the state and shall not be considered as a department of state government. The exercise by the advisory commission of any authority granted by this section shall be deemed to be the performance of public and essential governmental functions not otherwise fulfilled by state government.

**Source.** 1999, 8:1, eff. June 4, 1999.

**227-D:6 National Natural Landmarks.** – The general court recognizes the 1987 designation of Mount Monadnock and the Rhododendron Grove in Fitzwilliam as National Natural Landmarks by the U.S. National Park Service, and hereby directs the Monadnock advisory commission and the department of resources and economic development to ensure the integrity of that designation in its management policies and plans.

**Source.** 1975, 432:1. 1990, 258:4, eff. June 27, 1990.

## APPENDIX G

### National Natural Landmark Brief Mount Monadnock, New Hampshire

#### **Location**

Within the towns of Jaffrey and Dublin, Cheshire County, New Hampshire, about 130 km (80 miles) WNW of Boston, Massachusetts.

#### **Natural Region**

New England – Adirondacks

#### **Size**

1852 ha (4578 acres)

#### **Ownership**

State (Monadnock State Park; administered by the New Hampshire Division of Parks and Recreation); Municipal (Town of Jaffrey); and Private (Society for the Protection of New Hampshire Forests, and seven additional tracts in diverse private ownership).

#### **Description**

One of the most celebrated mountains in the eastern United States, Mount Monadnock stands alone, rising more than 450 m (1500 ft) above its base to a summit elevation of 956 m (3165 ft). It is probably the subject of more pictures, paintings, poems, and publications than any other New England mountain. In fact, it was Ralph Waldo Emerson's epic poem, "Monadnock," which appeared in his first volume of poems in 1847 that greatly popularized the mountain. Henry David Thoreau himself climbed the peak four times and described it in his now famous journal.

Its geologic fame is owed to William Morris Davis, Professor of Geology at Harvard University. In his 1895 National Geographic Monograph, "The Physical Geography of Southern New England," Davis suggested that this mountain should serve as the type locality and its name should be adopted as the geologic term for a "mountain of circumdenudation," which rises conspicuously above the general level of a peneplain and represents an isolated remnant of a former erosion cycle in a mountain region that has been largely beveled to its base level, thus indeed the geomorphic history of Mount Monadnock. The term "Monadnock" was so adopted by the geological community and has been used as such ever since.

The bedrock of Mount Monadnock consists of interbedded schists and quartzites of the Littleton Formation, deposited in the Devonian as eugeosynclinal marine sediments and uplifted and metamorphosed during the Devonian Acadian Orogeny. Underlying the Littleton Formation are granitic rocks. An andalusite-garnet-mica schist, a metamorphic rock containing an abundance of those three minerals, composes most of the mountain.

Characteristic structures in the schist include micaceous alterations of the mineral sillimanite that form a whitish network either remaining in relief or occasionally filling grooves in the rock. In addition, the upward orientation of cleavage in the schist provides important evidence that Mount Monadnock is not the worn-down remnant of a once much higher peak, but rather the core of a saddle between ancient mountains that have long since been eroded away.

Few other places in southern New England exhibit the marks of Pleistocene glaciation better than Mount Monadnock, especially above tree line. Gouged across the bedrock at these elevations are great, smooth-edged grooves, as well as smaller striations that trace the former movement of ice in a generally southeasterly direction. Also evident are “roche moutonnees,” or whalebacks, which are bedrock protuberances molded by glacial action into a classic shape with gently sloping north faces and south faces oversteepened by glacial plucking of loosened bedrock. In fact, the entire mountain exhibits such a profile on a large scale for the same reason. Glacial erratics deriving from a northerly source are also sporadically distributed over the mountain, deposited as the ice sheet melted away.

Because of its isolation, the mountain affords a spectacular view of the surrounding countryside. In fact, on a clear day it is possible to identify points in all six New England states.

### **Significance**

This site is the type locality of monadnock, or isolated mountain remnant. In addition, the mountain exhibits the conspicuous effects of Pleistocene glacial erosion, including striations, roche moutonnees or whalebacks, and an oversteepened profile resulting from glacial plucking.

### **Land Use**

The area is used principally for recreation and timber harvest. According to state park officials, the mountain is climbed by more than 100,000 people each year, and so has the reputation of being the second most-climbed mountain in the world, after Japan’s Mount Fuji. Despite such intense use, the mountain yet retains an element of wildness, and state park personnel work to preserve this character by picking up litter and maintaining trails to minimize the impact of heavy visitation.

Certain portions of the Society for the Protection of New Hampshire Forests’ holdings on the mountain, principally on the lower slopes, are periodically logged. The logging practices follow strict self-imposed guidelines, including maintenance of buffer zones along established trails, careful placement and reseeding of logging roads, and minimization of erosion.

### **Special Conditions**

None

### **Proposed By**

Leslie Clark, executive secretary of the Society for the Protection of New Hampshire Forests, April 1, 1969; and T.G. Siccama, W.A. Niering, G. Kalison, A.M. O'Dell, and E.B. Spera, 1982, "Potential Ecological and Geological Natural Landmarks of the New England-Adirondack Region," National Park Service, pp. 385-388.

### **Evaluated By**

Paul G. Favour, Jr., Special Assistant to the Regional Director (Natural History Surveys), North Atlantic Region, National Park Service, July 1969; and Ian A. Worley and Howard P. Whidden, Botany Department, University of Vermont, Burlington, Vermont, April 19, 1985, and revisions of May 8, 1985.

### **Designated**

1985

## APPENDIX H

### REFERENCES

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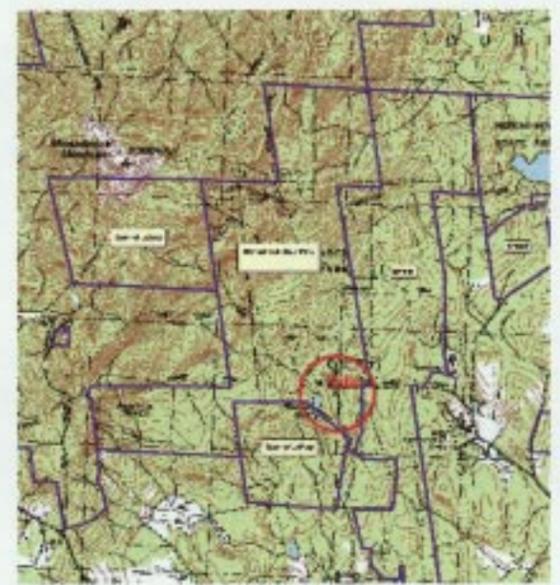
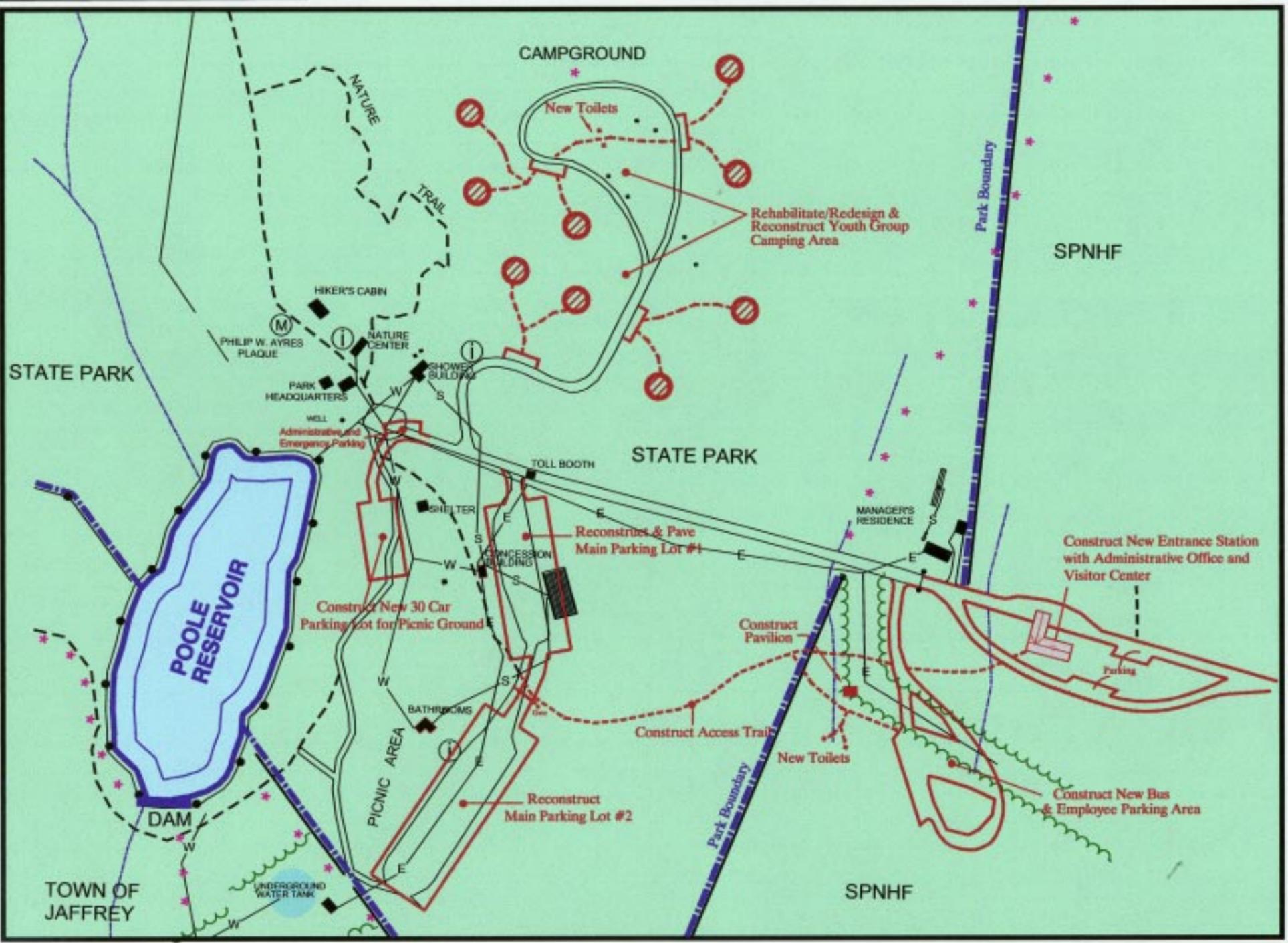
Appendix I Concept Plan - Headquarters



**Legend**

	Hiking Trail
	Electric Line
	Water Line
	Contour Line
	Stream
	Chain Link Fence
	CRS Country Sign
	Information Board
	Existing Outhouse

Proposed Improvements

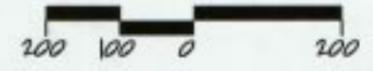


Vicinity Map  
Source: Grant, Computer Systems

THIS MAP IS A COMPILATION OF MAPS ON FILE AT D.R.E.D. AND AT THE SOCIETY FOR THE PROTECTION OF NH FORESTS.  
TRAILS SHOWN ARE FROM THE APPALACHIAN MOUNTAIN CLUB TRAIL GUIDE FOR NH, MONADNOCK, AND MAPS FROM THE SOCIETY FOR THE PROTECTION OF NH FORESTS.  
CONTOURS ARE IN METERS AT A 30 METER INTERVAL. THE SOURCE FOR THESE CONTOURS IS MAPTECH INC., USING THE TERRAIN PROFESSIONAL SOFTWARE.  
THIS MAP IS NOT FROM A SURVEY AND IS TO BE USED ONLY FOR PLANNING PURPOSES.

Conceptual Plan for Headquarters  
FOR  
**Monadnock State Park Master Plan**  
JAFFREY NEW HAMPSHIRE

Design by Thomas Kokx Associates/ Plan by State of NH, DRED



Appendix J Concept Plan - Gilson Pond Area

State of New Hampshire  
Dept. of Resources & Economic Dev.



Legend

	Hiking Trail
	Electric Line
	Sewer Line
	Water Line
	Contour Line
	Stone Wall
	Stream
	Chain Link Fence
	Cross Country Ski Trail
	Information Board
	Existing Outhouse

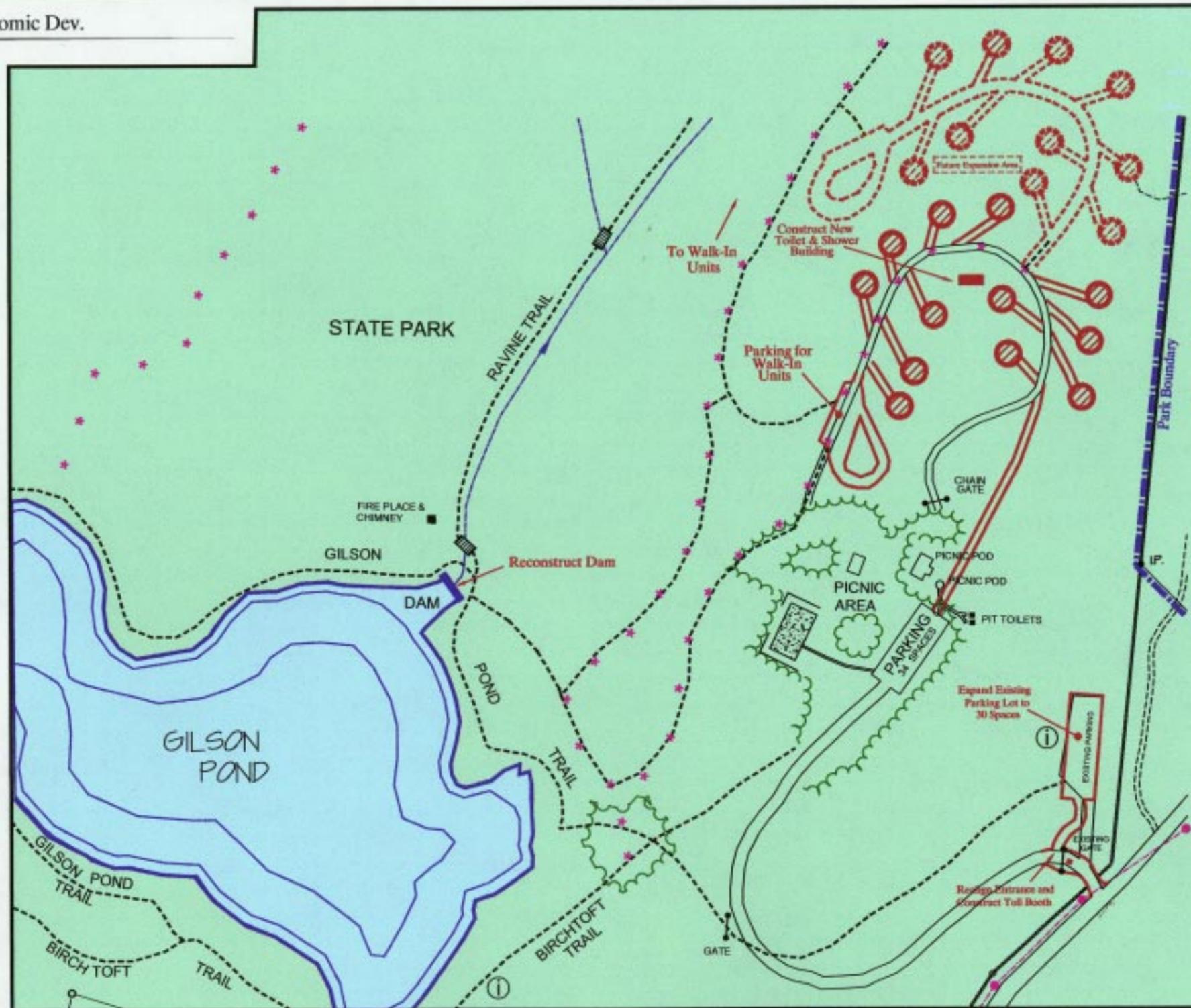
Proposed Improvements

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Vicinity Map  
Source: Granite Complex Systems

Conceptual Plan for Gilson Pond Area  
FOR  
**Monadnock State Park Master Plan**  
JAFFREY NEW HAMPSHIRE

Design by Thomas Kokx Associates/ Plan by State of NH, DRED

