

Appalachian National Scenic Trail

Resource Management Plan



*Appalachian National
Scenic Trail*

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September 2008

Foreword: Purpose of the Resource Management Plan

The purpose of this plan – the *Appalachian Trail Resource Management Plan* – is to document the Appalachian National Scenic Trail’s natural and cultural resources and describe and set priorities for management, monitoring, and research programs to ensure that these resources are properly protected and cared for. This plan is intended to provide a medium-range, 10-year strategy to guide resource management activities conducted by the Appalachian Trail Park Office and the Appalachian Trail Conservancy (and other partners who wish to participate) for the next decade. It is further intended to establish priorities for funding projects and programs to manage and protect the Trail’s natural and cultural resources. In some cases, this plan recognizes and identifies the need for preparation of future action plans to deal with specific resource management issues. These future plans will be tiered to this document.

Management objectives outlined in the *Appalachian Trail Resource Management Plan* are consistent with the *Appalachian Trail Comprehensive Plan* (1981, re-affirmed 1987), the *Appalachian Trail Statement of Significance* (2000), and the *Appalachian Trail Strategic Plan* (2001, updated 2005). These objectives also are based on the resource protection mandates stated in the NPS Organic Act of 1916 and the Trail’s enabling legislation, the National Trails System Act.

The *Appalachian Trail Resource Management Plan* also builds upon policy guidelines set by ATC. These policies, which have been developed through an extensive policy analysis process guided by ATC’s Board, are contained in the Appalachian Trail Conservancy *Local Management Planning Guide* (updated 1997).

Chapter I describes the legislative and administrative background for the preparation of this plan.

Chapter II describes the resource baseline information available at the time this plan was prepared. To the extent that information is not available, the plan identifies new information that must be gathered in order to provide an adequate scientific basis for decision-making.

Chapter III outlines existing natural and cultural resource management programs, current threats to those resources, resource issues, and program needs. It outlines the most significant issues and urgent problems facing Trail resource managers, and presents current and long-term strategies for addressing these issues.

Chapter IV contains project statements (for project-level work) and program statement (for program-level work) that respond to the needs identified in Chapter III. Many of these projects and programs are described in greater detail in National Park Service Project Management Information System and Operations Formulation System. The plan also identifies monitoring projects and programs that are needed to evaluate trends in resource health and impacts (both positive and negative) associated with implementing the resource management actions outlined in this plan. Lastly, this chapter contains the Appalachian Trail Park Manager’s recommendations for project and program priorities.

It is important to note what this plan has been developed to accomplish. This plan is not a strategic plan, land use plan, land allocation plan, implementation plan, or project plan. It is a *programmatic* plan, intended to examine and analyze issues, conditions, threats, and program strengths, needs, and priorities for management of natural and cultural resources on the Appalachian Trail.

This plan will be updated every five to ten years, or earlier if significant new program needs are identified or new planning direction is issued.

The Planning Process: How the Appalachian Trail Resource Management Plan Was Developed

The planning effort for the *Appalachian Trail Resource Management Plan* began in 2001, when letters were sent to more than 300 key Trail club volunteers and staff, agency representatives, Appalachian Trail Conservancy and Appalachian Trail Park Office staff, and other interested parties inviting their comments and interest in receiving and reviewing a copy of the plan. Over the next two years, Appalachian Trail Conservancy and Appalachian Trail Park Office staff also announced in many public forums – including ATC regional management committee meetings, state agency meetings, Trail club meetings, and ATC general meetings – that the plan was under development, and invited and encouraged participation in the process. In addition, work on the plan was announced in ATC's *The Register* and *The Appalachian Trailway News*, and several other publications and newsletters of broader circulation. More than 200 people responded and expressed an interest.

In the summer of 2001, two scoping meetings were held – one with a team of cultural resource specialists, managers, and other individuals interested in cultural resource management issues along the Trail, and another with a team of natural resource specialists, managers, and other individuals interested in natural resource management issues along the Trail. In these meetings, participants discussed the status of available knowledge of resource conditions, defined resource management issues, selected key natural resources for the A.T. , and outlined resource management program needs.

In addition, staff also brought the matter before the Appalachian Trail Conservancy's Board and committees on a number of occasions, and continue to keep these entities apprised of progress on the plan.

Based on the input received during these forums and meetings, Appalachian Trail Park Office and Appalachian Trail Conservancy staff outlined a timeline for the planning process and began obtaining, analyzing, and synthesizing information about the current condition of natural and cultural resources along the Trail. With assistance and input from a variety of natural and cultural resource experts, staff completed descriptions of current resource conditions, threats, and management programs, outlined potential programs and projects, and prepared a set of electronic maps to illustrate resource conditions. Resource issues, conditions, threats, current

management capabilities, and current management needs were integrated into the programs and projects described in Chapter IV of the plan.

A preliminary draft plan was distributed for review and comment in October 2004. Based on this input, substantial revisions were made, and this final version – the *Appalachian Trail Resource Management Plan* – is now available. Copies of this plan have been placed on the Appalachian National Scenic Trail's and Appalachian Trail Conservancy's websites.

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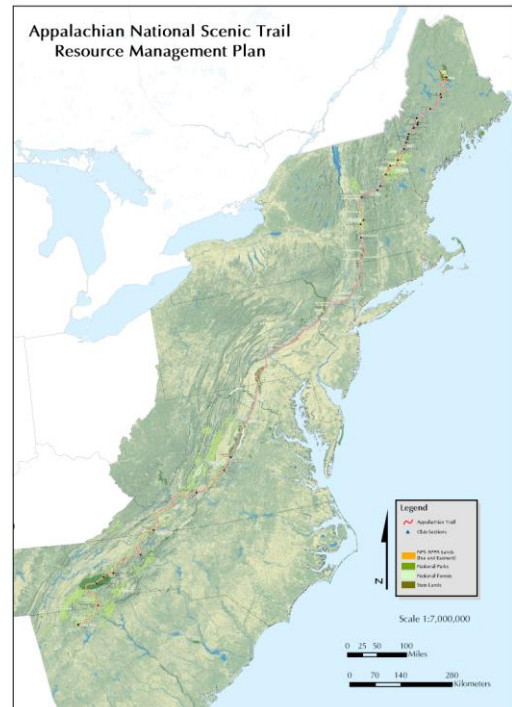
CHAPTER I: INTRODUCTION

A. Establishment and Purpose of the Appalachian National Scenic Trail

1. Establishment

The **Appalachian National Scenic Trail** is a continuous, marked footpath that traverses the Appalachian Mountain chain from central Maine to northern Georgia, for a distance of approximately 2,175 miles. [See [Map I.A.1, Appalachian National Scenic Trail Resource Management Plan](#).]

The Appalachian Trail (or “A.T.,” as it is often called) was originally designed, constructed, and marked in the 1920s and 1930s by volunteer hiking clubs joined together under the umbrella of the Appalachian Trail Conference, which is now called the **Appalachian Trail Conservancy (ATC)**, a non-profit organization formed in 1925 and now based in Harpers Ferry, West Virginia. Since its inception, ATC has worked with the National Park Service, the USDA Forest Service, other federal and state agencies, local communities, and its affiliated Trail-maintaining clubs to develop, maintain, and promote use and protection of the Appalachian Trail. Today, the Appalachian Trail Conservancy and the National Park Service’s **Appalachian Trail Park Office (APPA)** work as partners with other organizations and agencies to ensure Trail-wide continuity in protection and management of the Trail to the greatest extent possible.



The A.T. evolved from the 1921 proposal of regional planner Benton MacKaye, who conceived of the Trail as a means of preserving the crest line of the Appalachian Mountains for a wilderness retreat from eastern urban life. (Read [MacKaye’s Article: An Appalachian Trail: A Project in Regional Planning](#)) Under the leadership of Myron Avery, ATC’s chairman from 1931 to 1952, ATC and its affiliated Trail clubs concentrated initially on the hiking aspects of MacKaye’s vision. The Trail clubs, with assistance from their federal and state agency partners and the Depression-era Civilian Conservation Corps, succeeded in opening a continuous Appalachian Trail by August 1937. Unfortunately, hurricanes, highway construction, and the demands of World War II undid those efforts for much of the next decade. Finally, in 1951, the Trail was reopened again from end to end. But by the 1960’s, growth and new developments again threatened the Trail.

Early in the 1960s, concerted efforts to provide federal and state protection for the Trail began, and the era of Federal assistance was ushered in. The most significant event occurred on October 2, 1968, when President Lyndon Johnson signed the **National Trails System Act** (Public Law 90-543; 16 U.S.C. 1241-1251), designating the Appalachian Trail as the nation's first national scenic trail.

The National Trails System Act

The National Trails System Act, dated October 2, 1968 (Public Law 90-543), established the Appalachian National Scenic Trail and directed the Secretary of the Interior, in cooperation with the Secretary of Agriculture, state and local governments, and private citizens, to protect and administer the Trail. The Act provided the Secretaries of Interior and Agriculture with the authority to relocate the Trail; administer use of and access to the Trail; regulate incompatible uses, including motorized uses, bicycles, and horses; and enter into agreements with state agencies and non-governmental organizations to protect, manage, maintain, and develop the Trail. It also encouraged state agencies to pass similar legislation and take active steps to protect the Trail; and authorized federal land acquisition as necessary to establish a permanent route and protective corridor surrounding the footpath. [See [Map I.A.2, America's National Historic and Scenic Trails.](#)]

On March 21, 1978, President Carter signed a significant amendment to the National Trails System Act. This law re-authorized the Appalachian National Scenic Trail Advisory Council, required a comprehensive management plan for the Trail, and increased the amount of funding for land acquisition available for protection of the Trail to \$90 million. The authority for acquisition of lands by eminent domain was increased to an average of 125 acres per mile, and the Secretaries of Interior and Agriculture were directed to substantially protect the Trail within three years.

On March 28, 1983, President Reagan signed an Act of Congress to Amend the National Trails System Act (Public Law 98-11). This amendment strengthened support for volunteers and



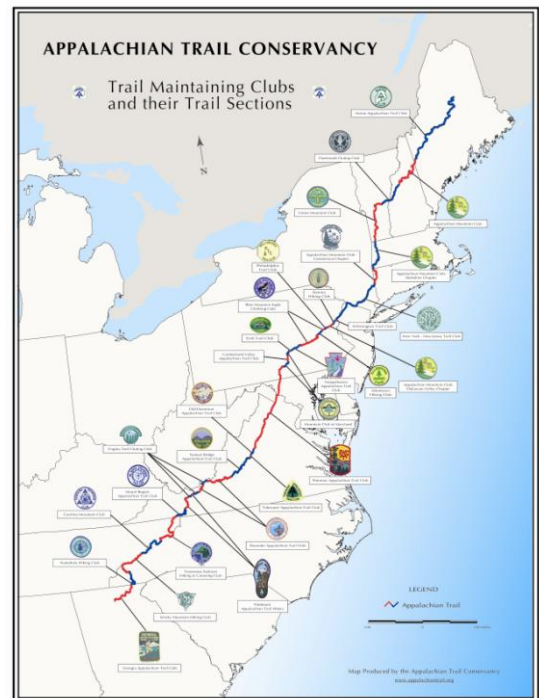
volunteer-based organizations, refined the process for designating side and connecting trails, provided authority for administrative transfers of land, authorized whole tract acquisition with the consent of the landowner, defined trail uses, and clarified that donated easements qualify as conservation tax exemptions.

During the next 35 years, the National Park Service, the USDA Forest Service, and many state agencies purchased

more than 180,000 acres to protect the Appalachian Trail. More than 99% of the Trail now lies within a protective corridor of land that averages approximately 1,000 feet in width, and negotiations to secure the remaining lands are in progress.

Today, the Appalachian Trail is considered a premiere example of a public-private partnership engaged in the conservation and management of a nationally significant resource. Approximately 270,000 acres have been acquired or designated through management agreements for protection of the Appalachian Trail. This protected corridor now forms a slender greenway from Georgia to Maine, connecting more than seventy-five public land areas in 14 states. The responsibility for managing these lands, the Trail footpath, Trail facilities, and the vast array of natural and cultural resources that exist on these lands falls to ATC, its 30 Trail clubs, and their agency partners in a complex cooperative relationship referred to as the “Appalachian Trail Cooperative Management System.” [see Chapter I.B for a more detailed description of the “Cooperative Management System” and [Map I.A.3, Appalachian Trail Conservancy Trail Maintaining Clubs.](#)]

The end result of this public-private partnership is the Appalachian National Scenic Trail, a 2,175-mile long unit of the National Park System that provides countless opportunities for visitors to traverse and experience a wide variety of wild, scenic, natural, and pastoral settings that represent the landscape of the Appalachian Mountains. The Trail affords opportunities for backcountry recreation and long-distance hiking that are among the best in the world. Millions of visitors come to the Trail each year, for hikes as short as an afternoon’s walk and as long as a five-month trek from Georgia to Maine. Equally important, however, is the protection the Trail’s narrow corridor of land provides for an exceptional legacy of natural and cultural resources. From the standpoint of protecting natural resources, the Trail’s vast geographic expanse and location atop the crest of the Appalachian Mountains provide a unique opportunity to study and measure the effects of anthropogenic and natural change agents. And from a cultural resource perspective, the Trail not only protects a narrow slice of our nation’s pre-history and history: it is, in and of itself, a significant historical place that is in all likelihood eligible for the National Register of Historic Places. The challenge for Appalachian Trail managers is to protect these resources, so that opportunities remain available for future generations to enjoy and experience them.



2. Purpose

Purpose: *The Appalachian National Scenic Trail will be administered primarily as a footpath by the National Park Service in cooperation with the United States Forest Service and the 14 States encompassing the Trail, to provide for maximum outdoor recreation potential as an extended trail and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which the Trail passes.*

*-- Mission, Purpose, and Significance of the Appalachian Trail
"Appalachian Trail Strategic Plan" (2000)*

Significance: *The Appalachian Trail is a way, continuous from Maine to Georgia, for travel on foot through the wild, scenic, wooded, pastoral, and culturally significant lands of the Appalachian Mountains. It is a means of sojourning among these lands, such that visitors may experience them by their own unaided efforts.*

In practice, the Trail is usually a simple footpath, purposeful in direction and concept, favoring the heights of land, and located for minimum reliance on construction for protecting the resource. The body of the Trail is provided by the lands it traverses, and its soul is in the living stewardship of the volunteers and partners of the Appalachian Trail Cooperative Management System.

*-- Definition of the Appalachian Trail, from the
"Appalachian Trail Management Principles" (1977)*

Legislative Intent: In addition to the language of the National Trails System Act itself, the legislative history of the Act (which includes the House and Senate reports and the Congressional Record) clarify Congress's intent for the following elements of the Appalachian National Scenic Trail's mission, purpose, and significance statements:

1. "Primarily as a footpath" – The Appalachian Trail was conceived, designed, and constructed to be a footpath for pedestrian use. The only recognized divergences from use as a footpath are along three sections where horseback riding was permitted as an accepted and customary or traditional use at the time of the Act's passage. These sections are a 30-mile section of the Trail in Great Smoky Mountains National Park, a three-mile section of the Appalachian Trail that coincides with the C&O Canal National Historical Park in Maryland, and a three-mile section of the Trail that coincides with the Virginia Creeper Trail in Virginia.
2. "Maximum Outdoor Recreation Potential" – This phrase is used only in the context of the Trail's length and location as an extended trail, rather than types of use. All references to this phrase throughout the legislative history are in the context of the Trail's location to urban areas or in reference to the duration of use, such as: "...a few hours at a time, or on

one day jaunts, overnight treks, or expeditions lasting a week or more.” There is even reference to volunteer work as a recreational activity: “Their work on the trail has been as important an outdoor recreation activity to them as the enjoyment of hiking and camping along the trail.”

3. “Volunteers and private nonprofit trail groups” – As referenced in the National Trails System Act, these groups are recognized for purposes of the Appalachian National Scenic Trail as the ATC and its member trail maintaining clubs. “The (House of Representatives Subcommittee on Parks and Forests) recognizes that ATC has pioneered the way for this legislation by its long-time personal stewardship of the Trail, and believes that its stewardship – in partnership with the Secretary of the Interior – should be continued and expanded.”

B. Appalachian Trail Cooperative Management System

The Appalachian Trail is recognized around the world for its success in fostering and promoting partnerships among private citizen groups and public land-managing agencies. This success is due in part to its historical development in the 1920s and 1930s as a largely volunteer-driven, private civilian effort in the public interest. Since the earliest days of the Trail’s construction, volunteers affiliated with ATC and its 30 member Trail clubs have devoted millions of hours to construct, reconstruct, and maintain the Trail footpath, as well as managing a system of more than 260 Trail shelters and associated facilities.

The 1960 National Trails System Act offered a greatly expanded role and increased responsibilities for ATC and its affiliated Trail clubs. Congress directly recognized the contributions of ATC and the Trail clubs, and provided for their active participation in management of the Trail in Sections 7 and 11 of the Act. As a result, the Trail continues to be maintained, developed, and managed by volunteer-based organizations under the leadership of ATC in close cooperation with their agency partners through the “**Appalachian Trail Cooperative Management System.**”

Today, actual operations affecting use of the Trail are shared responsibilities between these volunteer organizations and their agency partners. Responsibilities of each partner are described in memorandums of understanding. The National Park Service, USDA Forest Service, and most of the 14 states have entered into management agreements that further this intent.

Perhaps the most important of these agreements are the agreements between the National Park Service and ATC. Recognizing the historical role of ATC and the Trail clubs in creation and perpetuation of the Trail, the National Park Service in 1984 delegated to ATC the day-to-day responsibilities for managing NPS lands that have been acquired to protect the Trail. This landmark “**delegation agreement**” (which was renewed in 2004 for another ten-year period) and many other similar agreements between ATC, its Trail clubs, and other federal and state agencies, define the roles and responsibilities for each partner in the Cooperative Management System.

The two partners with trail-wide management responsibilities are the **Appalachian Trail**



Conservancy (ATC) and the National Park Service's

Appalachian Trail Park Office (APPA), both are based in Harpers Ferry, West Virginia. ATC, with a 15-member Board of Directors and a staff of approximately 55, serves as a membership organization to its approximately 36,000 members, as an umbrella organization coordinating the efforts of its 30 affiliated Trail-maintaining clubs, and as the primary partner to the National Park Service's Appalachian Trail Park Office. For the past 20 years, ATC and its 30 affiliated Trail clubs have steadily increased their contributions to maintenance, management, and protection of the Trail, now averaging close to 200,000 hours and \$4,000,000 annually. APPA, with a staff of ten employees, is the responsible National Park Service office for all matters pertaining to administration of the Appalachian National Scenic Trail. Although APPA has delegated most land-management responsibilities for the Appalachian Trail to ATC, it retains responsibilities for land acquisition, survey, issuance of permits, compliance with the National Environmental Policy Act and other resource protection laws, law enforcement, and over-all administration of the Appalachian National Scenic Trail.

C. Legislation and Policies Applicable to Management of Natural and Cultural Resources along the Appalachian Trail

Management direction is derived from *NPS Management Policies (2006)* and various laws and executive orders related to resource management, including the National Environmental Policy Act, the Endangered Species Act, the National Historic Preservation Act, the Clean Air Act, the Clean Water Act, the Antiquities Act, the Archaeological Protection Act, and the Wilderness Act.

Relevant portions of these acts and highlights of policies pertaining to management of these resources are provided below.

Legislation and Policy Guidance for Management of Air Resources - The purpose of the Appalachian National Scenic Trail, according to its enabling legislation is to:

“provide for maximum outdoor recreation potential and for conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass.”

-- Section 3(a), National Trails System Act, as amended, 82 Stat. 919 *et seq.*

Inherent in this purpose are: (1) clean air, so that visitors can enjoy a healthy outdoor recreation experience, (2) scenic vistas unimpaired by poor visibility, and (3) natural and cultural resources unaffected by air pollution. In fact, the 1981 *Comprehensive Plan for the Appalachian Trail* recognized air quality as a Trailway value, and expressed concerns about potential future air quality degradation. Unfortunately, those concerns were well founded,

because many parts of the Trail corridor today have high concentrations of a number of air pollutants.

To facilitate implementation of the air quality provisions of the 1977 Clean Air Act amendments, Congress established a classification scheme for the entire United States, classifying areas as Class I, II, or III air quality areas.

Class I areas receive the highest degree of protection, with only a small amount of certain kinds of additional air pollution allowed. Mandatory Class I areas are designated by Congress, and include international parks, national wilderness areas or national memorial parks larger than 5,000 acres, or national parks larger than 6,000 acres, that were in existence (or authorized) on August 7, 1977. The Appalachian National Scenic Trail passes through five mandatory Class I areas: Great Smoky Mountains and Shenandoah National Parks (which are managed by the National Park Service), and the James River Face, Lye Brook, Great Gulf Wilderness Areas (which are managed by the USDA Forest Service), and is immediately adjacent to the Presidential Range-Dry River in New Hampshire.

All other National Park Service, Forest Service, state, municipal, and privately owned lands along the Trail are designated Class II and are allowed a moderate increase in certain air pollutants.

No Class III areas, where a large amount of new air pollution would be allowed, were initially designated by Congress, but a process was established for redesignating Class II areas to the more protective Class I or the less protective Class III status. Only states or Native American governing bodies have authority to redesignate these areas. No Class II areas along the Trail have been redesignated as Class I or Class III areas.

In the 1916 National Park Service Organic Act, Congress declared that the fundamental mission of the National Park Service would be "...to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations..." That mandate includes the protection of air quality in all units of the National Park System. Accordingly, the NPS *Natural Resources Reference Manual (RM-77)* makes no distinction in the level of air quality protection afforded to Class I versus Class II NPS units.

"Air is a resource in all NPS units, and many park resources and values are dependent on good air quality. Air pollution can impair visibility, injure vegetation, erode buildings and monuments, acidify water, leach nutrients from soil, and affect visitors' health and enjoyment. In order to prevent or remedy these harmful effects, the NPS will carefully manage air resources of NPS units."

The *NPS Management Policies 2006* also declares that:

“...the Service will seek to perpetuate the best possible air quality in parks to (1) preserve natural resources and systems; (2) preserve cultural resources; and (3) sustain visitor enjoyment, human health, and scenic vistas.... The Service will actively promote and pursue measures to protect these values from the adverse impacts of air pollution. In cases of doubt as to the impacts of existing or potential air pollution on park resources, the Service will err on the side of protecting air quality and related values for future generations. (4.7.1)”

-- *NPS Management Policies 2006, page 52*

The *NPS Management Policies 2006* further states that the National Park Service will:

- Inventory the air quality related values associated with each park;
- Monitor and document the condition of air quality and related values;
- Evaluate air pollution impacts and identify causes;
- Minimize air pollution emissions associated with park operations, including the use of prescribed fire and visitor use activities; and
- Ensure healthful indoor air quality in NPS facilities. (4.7.1)

-- *NPS Management Policies 2006, page 52.*

These management policies are intended to guide the National Park Service and its partners in managing lands administered by the Appalachian Trail Park Office and within the six units of the National Park System crossed by the Trail. Similar policies are in effect for the USDA Forest Service, other federal agencies, and most state agencies that administer lands crossed by the Trail.

While the Appalachian Trail Conservancy has no formal policy statement with respect to air quality issues, it and several of its affiliated Trail clubs (including the New York-New Jersey Trail Conference and the Appalachian Mountain Club) are active members of Hikers for Clean Air, an organization dedicated to protecting air quality in outdoor recreation environments.

Legislation and Policy Guidance for Management of Water Resources - The primary legislation governing water is the 1972 Federal Water Pollution Control Act, commonly referred to as the Clean Water Act. This act furthers the objectives of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters and of eliminating the discharge of pollutants into navigable waters. It establishes effluent limitation for new and existing industrial discharge into U.S. waters, and authorizes states to substitute their own water quality management plans developed under §208 of the act for federal controls. This act also provides an enforcement procedure for water pollution abatement and requires conformance to permits

required under §404 for actions that may result in discharge of dredged or fill material into a tributary to, wetland, or associated water source for a navigable river.

The Water Resources Planning Act of 1965 and Water Resource Council's Principles and Standards is a national policy “to encourage the conservation, development, and utilization of water and related land resources on a comprehensive and coordinated basis by the federal government, states, localities, and private enterprises with the cooperation of all affected federal agencies, states, local governments, individuals, corporations, business enterprises, and others concerned.” It establishes the Water Resources Council with responsibility for assessing the adequacy of water supplies, studying the administration of water resources, and developing principles, standards, and procedures for federal participants in the preparation of comprehensive regional or river basin plans. It also establishes the framework for state and federal cooperation through a series of river basin commissions. Water Resource Council’s Principles and Standards for planning water and related land resources have been revised to achieve national economic development and environmental quality objectives.

A primary means for protecting water quality under the Clean Water Act is the establishment of water quality standards. Generally, water quality standards are established by the states (though subject to federal approval) and consist of three components: (1) the designated beneficial uses of a water body, such as contact recreation, aquatic life, cold water fishery, or body contact recreation (i.e. swimming or wading); (2) the numerical or narrative criteria that define the limits of physical, chemical, and biological characteristics of water that are sufficient to protect the beneficial uses; and (3) an anti-degradation provision to protect the existing uses of water. The standards are applicable to all waters of the United States and, depending on the state water quality program, may also apply to groundwater.

Monitoring, regulation, and protection of water quality is a responsibility shared by many local, state, and federal agencies that have mandates for land use planning, natural resource management, and/or environmental protection. The NPS should work actively with these agencies to enhance program cooperation, efficiency, and effectiveness. Cooperative activities include (but are not limited to) the following.

- Consulting with federal (e.g., U.S. Geological Survey and Environmental Protection Agency), state, local, and Native American agencies in the design of complementary and effective monitoring networks.
- Providing water quality monitoring data to the Environmental Protection Agency's Water Quality Storage and Retrieval system (STORET), which serves as the primary national repository for stream and lake water quality data.
- Providing regulatory agencies with information regarding NPS compliance with point source and nonpoint source pollution control programs.
- Consulting with appropriate Native American, local, state, and federal agencies regarding planned upstream activities, permit applications, and water quality issues of concern to the NPS.

Maintaining water in its natural condition, free of pollutants generated by human activity, is an important goal of NPS managers. The goal of the NPS as expressed in *Management Policies* is to preserve and protect entire ecosystems, an integral part of which are water and aquatic resources. In addition, the Clean Water Act, passed in 1972 and substantially amended in 1977 and 1987, was designed to restore and maintain the integrity of the nation's waters, including those of the National Park System. In addition, Section 313 of the Clean Water Act requires the NPS, in implementing its management activities, to "... comply with all federal, state, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution in the same manner and to the same extent as any non-governmental entity including the payment reasonable service charges."

The NPS *Management Policies* states that:

"The National Park Service will perpetuate surface and groundwaters as integral components of park aquatic and terrestrial ecosystems.... The Service will determine the quality of park surface and ground water resources and avoid, whenever possible, the pollution of park waters by human activities occurring within and outside of parks. The Service will:"

-- *NPS Management Policies 2006, page 50-51.*

- Work with appropriate governmental bodies to obtain the highest possible standards available under the Clean Water Act for the protection of park waters;
- Take all necessary actions to maintain or restore the quality of surface waters and ground waters within the parks consistent with the Clean Water Act and all other applicable federal, state, and local laws and regulations; and
- Enter into agreements with other agencies and governing bodies, as appropriate, to secure their cooperation in maintaining or restoring the quality of park water resources. (4.6.3)

-- *NPS Management Policies 2006, page 51.*

- In managing floodplains on park lands, the National Park Service will (1) manage for the preservation of floodplain values; (2) minimize potentially hazardous conditions associated with flooding; and (3) comply with the NPS Organic Act and all other federal laws and executive orders related to the management of activities in flood-prone areas, including Executive Order 11988 (Floodplain Management), the National Environmental Policy Act, applicable provisions of the Clean Water Act, and the Rivers and Harbors Appropriation Act of 1899. (4.6.4)

-- *NPS Management Policies 2006, page 51.*

- The Service will manage wetlands in compliance with NPS mandates and the requirements of Executive Order 11990 (Protection of Wetlands), the Clean Water Act, the Rivers and Harbors Appropriation Act of 1899, and the procedures described in Director's Order 77-1 (Wetland Protection).

- The Service will (1) provide leadership and take action to prevent the destruction, loss, or degradation of wetlands; (2) Preserve and enhance the natural and beneficial values of wetlands; and (3) avoid direct and indirect support of new construction in wetlands unless there are no practicable alternatives and the proposed action includes all practicable measures to minimize harm to wetlands.
- The Service will implement a “no net loss of wetlands” policy. In addition, the Service will strive to achieve a longer-term goal of net gain of wetlands across the national park system through restoration of previously degraded or destroyed wetlands (4.6.5)

-- NPS Management Policies 2006, page 52.

Legislation and Policy Guidance for Management of Biological Resources – The National Park Service Organic Act of 1916 (16 USC 1 et seq.) provides the very broad mandate “to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”

The Endangered Species Act of 1973 directs the National Park Service to take actions to prevent adverse impacts to species listed as federally endangered or threatened. The term “endangered species” refers to any species which is in danger of extinction through all or a significant portion of its range, and “threatened species” refers to any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Section 7 of the Endangered Species Act requires all federal agencies to consult with the U. S. Fish and Wildlife Service regarding federally threatened and endangered species and to ensure that any action authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any federally endangered or threatened species or result in the destruction or adverse modification of the habitat of such species which is critical. A “critical habitat” for a threatened or endangered species refers to the specific geographical area that is essential to the conservation of the threatened or endangered species and which may require special management considerations or protection. Recovery plans are to be developed and implemented for the conservation and survival of each threatened or endangered species that is federally listed.

(Source: P.L. 93-205, 87Stat. 884, 16 U.S.C. 1531 et seq.)

Most of the 14 states through which the Appalachian Trail passes have their own individual state threatened and endangered species acts.

The National Park Service will fully meet its obligations under the NPS Organic Act and the Endangered Species Act to both proactively conserve federally listed species and prevent detrimental effects on these species. The NPS will:

- cooperate with both the U.S. Fish and Wildlife Service and the NOAA Fisheries to ensure that NPS actions comply with both the written requirements and the spirit of the Endangered Species Act, which includes consultation, conferencing, and informal discussions;
- undertake active management programs to inventory, monitor, restore, and maintain listed species' habitats, control detrimental nonnative species, manage detrimental visitor access, and reestablish extirpated populations as necessary to maintain the species;
- manage designated critical habitat, essential habitat, and recovery areas to maintain and enhance their value for the recovery of threatened and endangered species;
- cooperate with other agencies, states, and private entities to promote candidate conservation agreements aimed at precluding the need to list species; and
- conduct actions and allocate funding to address endangered, threatened, proposed, and candidate species (4.4.2.3).

--NPS Management Policies 2006, page 45

Management of state-listed and state and globally rare species of plants and animals is particularly important to management of the Appalachian Trail, since relatively few species in the A.T. corridor are federally listed species. Regarding state listed and state rare species, the NPS Management Policies (2006) state that:

- the NPS will inventory, monitor and manage state and locally listed species in a manner similar to its treatment of federally listed species to the greatest extent possible;
- the NPS will inventory other native species that are of special management concern to parks, such as rare, declining, sensitive, or unique species and their habitats, and will manage them to maintain their natural distribution and abundance, and
- the NPS will determine all management actions for the protection and perpetuation of federally or state listed species through park management planning and will consult with other federal and state agencies as appropriate (4.4.2.3).

--NPS Management Policies 2006, page 45

The National Park Service Omnibus Management Act of 1998 requires that the Secretary of the Interior to continually improve the NPS's ability to provide management, protection and interpretation of National Park System resources. The statute directs the NPS to manage its units by employing high quality science and information; to inventory the system's resources to create baseline information so that NPS can monitor and analyze future data to determine trends in the resources' conditions; and to use the results of the scientific studies for park management.

In 1999, Executive Order 13112 on Invasive Species became the first legal or executive authority to specifically address the issue of invasive or exotic species. This Executive Order states that, subject to the availability of appropriations and to the extent practicable, Federal agency have the responsibility to:

- prevent the introduction of invasive species;
- detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner;
- monitor invasive species populations accurately and reliably;
- provide for restoration of native species and habitat conditions in ecosystems that have been invaded;
- conduct research on invasive species; and
- promote public education on invasive species and the means to address them.

(Source: Executive Order 13112 of February 3, 1999, Section 2 (2), in Federal Register, Vol. 64, No. 25)

The Executive Order on Invasive Species also states that Federal agencies shall not take actions that it believes are likely to cause or promote the introduction of spread of invasive species. In addition, the executive order provided for the establishment of a National Invasive Species Council, which prepared a National Invasive Species Management Plan in 2001. The Management Plan provided detailed Federal responses for implementing the goals and objectives noted above, and it noted that adequate funding and public awareness are critical to meeting the goals and objectives. The Plan notes that more than 40% of endangered species are believed to be impacted by invasive species. The Plan recognizes that complete eradication is generally not feasible for widespread invasive species. Control and management objectives may also include: eradication within a local area, population suppression, limiting dispersal, or reducing impacts. The Plan notes that volunteers should be utilized wherever appropriate to help extend the limited funds available for control efforts.

(Source: Management Plan: Meeting the Invasive Species Challenge, National Invasive Species Council, January 18, 2001, 88 pp.)

The NPS Management Policies (2006) state that the NPS will successfully maintain native plants and animals by:

- preserving and restoring the natural abundances, diversities, dynamics, distributions, habitats, and behaviors of native plant and animal populations and the communities and ecosystems in which they occur;
- restoring native plant and animal populations in parks when they have been extirpated by past human-caused actions; and
- minimizing human impacts on native plants, animals, populations, communities, and ecosystems, and the processes that sustain them (4.4.1).

--NPS Management Policies 2006, p. 42

Whenever possible, natural processes will be relied upon to maintain native plant and animal species and influence natural fluctuations in populations of these species within NPS units. Situations in which management of native plants and animals in NPS units may be necessary are:

- to protect rare, threatened, or endangered species;
- when a population occurs in an unnaturally high or low concentration as a result of human influences and it is not possible to mitigate the effects of the human influences;
- to protect specific cultural resources of parks;
- to accommodate intensive development in portions of parks appropriate for development;
- to protect human health and safety; and
- to protect property when it is not possible to change the pattern of human activities (4.4.2)

--NPS Management Policies 2006, p. 44

The NPS Management Policies (2006) states that, in general, new exotic (non-native) species will not be introduced into parks. The Policies state that all exotic plant and animal species will be managed –up to and including eradication—if control is prudent and feasible. High priority will be given to managing exotic species that have, or potentially could have, a substantial impact on park resources, and that can reasonably be expected to be successfully controlled. Lower priority will be given to exotic species that have almost no impact on park resources or that probably cannot be successfully controlled. Where an exotic species cannot be successfully eliminated, managers will seek to contain the exotic species to prevent further spread or resource damage. Programs to manage exotic species will be designed to avoid causing significant damage to native species, natural ecological communities, natural ecological processes, cultural resources, and human health and safety.

The impacts of exotic or invasive plants on rare, threatened, and endangered species and significant natural communities within the Appalachian Trail corridor became increasingly recognized in the late 1990's, and its significance was emphasized by the Federal Executive Order on Invasive Species in 1999. In 2001, the Appalachian Trail Conservancy and the NPS Appalachian Trail Park Office developed a three-pronged Policy on Invasive Exotic Species:

- **Education:** The ATC will incorporate information on invasive exotic species and the threats they present into its education efforts and shall seek to raise the collective awareness of its members, volunteers, and staff regarding the potential harm caused by invasive species and methods that can be employed to control them effectively;
- **Monitoring:** The occurrence and spread of invasive exotic species will be monitored as resources permit, with priority given to those areas where

threatened and endangered species are at risk, and in natural communities that are most vulnerable to invasion;

- Control: Invasive exotic species will be controlled to the extent feasible, with priority given to those areas (1) where exotic species have the potential to do the greatest harm and (2) where actions to control exotic species will do the greatest good and have the highest likelihood of success. The ATC will work with its agency partners and member clubs to identify areas where rare plant or animal species or natural communities are threatened by invasive exotic species and assist in developing and implementing plans to control or eradicate invasive exotic species from those areas.

(<http://www.appalachiantrail.org/site/c.jkLXJ8MQkH/b.855323/k.D939/Policies.htm>)

The NPS Management Policies (2006) states that the NPS shall utilize an Integrated Pest Management (IPM) approach to reduce risks to the public, park resources, and the environment from native and exotic (non-native) pests and pest-related management strategies. In general, native pests are allowed to function unimpeded, except where their control is needed to conserve rare, threatened, or endangered species or communities, to preserve or maintain cultural resources, or to manage a human health hazard. The NPS and each park unit are to conduct IPM activities according to the IPM process prescribed in Director's Order #77-7: Integrated Pest Management. Pest issues will be addressed on a case-by-case basis. Controversial pest issues, or those that have the potential to negatively impact the environment, must be addressed through established planning procedures and be included in an approved park management or IPM plan. IPM procedures will be used to determine when to implement pest management actions and which combination of strategies will be most effective for each pest situation. All prospective users of pesticides in parks must submit pesticide use requests to a designated IPM specialist, and these requests will be reviewed on a case-by-case basis, taking into account environmental effects, cost and staffing, and other relevant considerations. Pesticide applications will be performed by or under the supervision of certified or registered applicators licensed under the procedures of a federal or state certification system. All pesticide use on lands managed or regulated by the Service must be reported annually.

Legislation and Policy Guidance for Management of Cultural Resources - Americans values regarding protection of cultural resources are eloquently expressed in the first four parts of Section 1 of the National Historic Preservation Act of 1966, as amended [Public Law 89-665, 16 U.S.C. 470-1(b): 1-4]:

The Congress finds and declares that—

- the spirit and direction of the Nation are founded upon and reflected in its historic heritage;
- the historical and cultural foundations of the Nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people;

- historic properties significant to the Nation’s heritage are being lost or substantially altered, often inadvertently, with increasing frequency;
- the preservation of this irreplaceable heritage is in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, economic, and energy benefits will be maintained and enriched for future generations of Americans.

The National Trails System Act, which formally designated the Appalachian Trail as the Appalachian National Scenic Trail, stipulated that it “shall be administered primarily as a footpath by the Secretary of the Interior, in consultation with the Secretary of Agriculture” [82 Stat 919:5(a)]. It went on to authorize “written cooperative agreements with the States or the political subdivisions, landowners, private organizations, or individuals to operate, develop, and maintain any portion of a national scenic or national historic trail either within or outside a federally administered area” [82 Stat 919:7(h)].

Congress has passed a wide range of federal laws pertaining to management of cultural resources. Foremost among these are the National Historic Preservation Act, the Antiquities Act of 1906, the Historic Sites Act of 1935 (Public Law 74-292), Executive Order 11593, the Archeological Resources Protection Act of 1979, as amended (Public Law 96-95), and the Native American Graves Protection and Repatriation Act of 1990 (Public Law 101-601). These acts provide systematic frameworks for managing cultural resources for the benefit of the American people on federally owned and regulated lands or on lands affected by federally funded or regulated actions. The keystones in this body of preservation law are Sections 106 and 110 of the National Historic Preservation Act (NHPA).

Section 106 states:

The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation established under Title II of this Act a reasonable opportunity to comment with regard to such undertaking [16 U.S.C. 470f].

Section 110 requires Federal agencies to establish historic preservation programs to preserve and use significant historic properties. Among its other provisions, Section 110 stipulates that such programs shall ensure:

- that historic properties under the jurisdiction or control of the agency, are identified, evaluated, and nominated to the National Register;
- that such properties under the jurisdiction or control of the agency as are listed in or may be eligible for the National Register are managed and maintained in a way that

- considers the preservation of their historic, archaeological, architectural, and cultural values in compliance with Section 106 of this Act and gives special consideration to the preservation of such values in the case of properties designated as having National significance;
- that the preservation of properties not under the jurisdiction or control of the agency, but subject to be potentially affected by agency actions are given full consideration in planning;
 - that the agency's preservation-related activities are carried out in consultation with other Federal, State, and local agencies, Indian tribes, Native Hawaiian organizations carrying out historic preservation planning activities, and with the private sector [16 U.S.C. 470h-2(a)].

Rather than mandate specific actions, the National Historic Preservation Act instead requires consultation and consideration in all undertakings having the potential to affect significant cultural resources. The Act also created a framework for consultation and consideration that includes the Advisory Council on Historic Preservation (an independent government agency that provides guidance to the President, Congress, and the nation on matters relating to historic preservation), Federal, Tribal, and State Historic Preservation Offices (SHPO's), the National Register of Historic Places, and the National Historic Landmark programs.

The center pieces of the national historic preservation effort, the National Register of Historic Places and National Historic Landmark program, provide formal sets of criteria and procedures for identifying, evaluating, and designating cultural resources significant in American history, architecture, archeology, engineering, and culture. Properties considered for National Register nomination must possess integrity of location, design, setting, materials, workmanship, feeling, and association at national, state, or local levels of significance relating to one or more of the following criteria:

- A. Association with historic events, activities or patterns;
- B. Associations with persons important in American history;
- C. Distinctive physical characteristics of design, construction, or form; or
- D. Potential to yield important information.

The National Register also defines integrity as "authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period" and establishes criteria for evaluating "integrity" (National Register Bulletin 16A: Appendix IV:2).

The National Historic Landmark program uses the same integrity criteria within a similar but more rigorous evaluative framework appropriate for properties possessing the potential to contain information of the highest level of national significance. As set forth in 36 CFR 65.4, the regulations governing National Historic Landmarks define properties meeting these criteria as those that:

- Are associated with events that have made a significant contribution to, and are identified with, or that outstandingly represent, the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained; or
- Are associated importantly with the lives of persons nationally significant in the history of the United States: or
- Represent some great idea or ideal of the American people; or
- Embody the distinguishing characteristics of an architectural type specimen exceptionally valuable for a study of a period, style or method of construction, or that represent a significant, distinctive and exceptional entity whose components may lack individual distinction; or
- Are composed of integral parts of the environment not sufficiently significant by reason of historical association or artistic merit to warrant individual recognition but collectively compose an entity of exceptionally historical or artistic significance, or outstandingly commemorate or illustrate a way of life or culture; or
- Have yielded or may be likely to yield information of major scientific importance by revealing new cultures, or by shedding light upon periods of occupation over large areas of the United States. Such sites are those that have yielded, or which may be reasonably expected to yield data affecting theories, concepts, and ideas to a major degree.

Cemeteries, birthplaces, graves, religious properties, properties moved from original locations, reconstructions, commemorative locales, and properties less than 50 years old are only eligible for National Register or National Historic Landmark nomination when they are contributing properties of districts meeting evaluation criteria, are unique or sole surviving examples, possess outstanding, exceptional, or transcendent significance, or are traditional cultural properties important to an Indian tribe or Native Hawaiian organization.

In their capacity as resource managers in partnership with the National Park Service and the USDA Forest Service, the Appalachian Trail Conservancy Board of Managers adopted the following cultural resource management policy statement at its April 1989 meeting:

The Appalachian Trail Conservancy (ATC) seeks to preserve and protect cultural resource sites, including those that are nominated, eligible, or potentially eligible for the National Register of Historic Places. To this end, ATC will seek to ensure that its actions, in concert with the actions of trail-maintaining clubs and agency partners, do not adversely affect any cultural resource site eligible or potentially eligible for such designation.

The Appalachian Trail Conservancy recognizes cultural resources as an integral part of the Trail environment and the obligations that are imposed by federal statute upon federal agencies (and by state law upon state agencies) for protection of cultural resources. It is the policy of

ATC to support and endorse efforts to protect and enhance cultural resources located on or adjacent to the Appalachian Trail. ATC also believes that its principal mission, which is to protect and promote the Appalachian Trail, can aid efforts to protect cultural resources. As a matter of policy, ATC is confident that the Trail can coexist with and provide protection for cultural resource sites. Should conflicts arise, ATC will resolve matters through consultation with its management partners. If a situation arises where protection or use of the Trail has the potential to affect a cultural resource site, the Appalachian Trail Conservancy will enter into formal consultation procedures with the involved agency partner(s), Trail-maintaining club(s), and the State Historic Preservation Office prior to undertaking any action that could adversely affect a significant or potentially significant cultural resource [ATC 1997: Chapter 5(H)].

Trail-maintaining Club Cultural Resource Management Policies: Review of cultural resource policy or principles statements presented in resource management sections of 24 Trail-maintaining club Local Management Plans completed between 1992 and 2001 reveal the following policy patterns:

- All Trail clubs explicitly support and endorse ATC cultural resource preservation and protection principles and policies.
- Eighteen Trail clubs specifically identify consultation with appropriate federal, state, tribal agencies and other stakeholders as a key cultural resource management policy.
- Six Trail clubs endorse increased information dissemination efforts. Three of these are among the five trail clubs emphasizing the importance of minimally intrusive signage and interpretive facilities.
- Four Trail clubs recognize the need for cultural resource inventories within their trail sections.
- Five Trail clubs, responsible for a total of 38.7 miles of Appalachian Trail, report no present awareness of cultural resources within their sections of trail. All others identify types of resources or particular properties. The Natural Bridge Appalachian Trail Club in central Virginia, states that its 89.7 mile section “is among the richest on the entire A.T. in prehistoric and historic cultural resources.”
- Three Trail clubs formally support nomination of particular cultural resource properties within their trail sections to the National Register of Historic Places.

D. Overview of Natural and Cultural Resources on the Appalachian Trail

According to the *2006 National Park Service Management Policies*, **natural resources** include:

- Physical resources such as water, air, soils, topographic features, geologic features, paleontological resources, natural soundscapes and clear skies, both during the day and at night;

- Physical processes such as weather, erosion, cave formation, and wildland fire;
- Biological resources such as native plants, animals, and communities;
- Biological processes such as photosynthesis, succession, and evolution;
- Ecosystems; and
- Highly valued associated characteristics such as scenic views.

- *NPS Management Policies 2006, page 36*

The 270,000-acre land base of the Appalachian Trail contains a vast array of scenic and natural wonders: magnificent alpine and mountain habitats; spectacular lakes, rivers, and streams; stately hardwood and coniferous forests; and pastoral fields, farmlands, and meadows.

The Appalachian Mountains stretch from Alabama in the United States to Newfoundland in Canada, in a north-south alignment which is thought to have enabled species migration throughout history. This ancient chain of mountains has helped shape the natural history of North America by providing gradients in elevation, latitude and moisture that have helped species persist through periods of climate change. The Appalachian Mountains' peaks, coves, and valleys provide isolated climatic refuges for boreal and subtropical species found nowhere else in the world.

Today, the Appalachian Mountains hold one of the richest assemblages of temperate zone species in the world. The Appalachian Trail's protected corridor anchors the nation's Eastern forests, which are ecologically vital components of the nation's natural resources, protecting watersheds that serve more than 10% of the nation's population. The Southern Appalachians, never impacted by glaciers, are a center of endemism for terminally slow organisms, including snails, vernal herbaceous plants and salamanders. Rivers also drain to the south in the Southern Appalachians, which allowed many species to escape ice-age extermination. As a result, the Southern Appalachians have an exceptionally rich diversity of fish, mussel and crayfish species.

NPS Management Policies define **cultural resources** as:

- Archaeological resources,
- Cultural landscapes,
- Ethnographic resources,
- Historic and prehistoric structures; and
- Museum collections.

-- *NPS Management Policies 2006, page 60*

The cultural landscape of the Appalachian Mountains, and their extraordinarily rich cultural history, may be as significant as the natural heritage of these ancient mountains. Archaeological evidence indicates that humans have inhabited the Appalachian Mountains for more than 10,000 years. The turns of more recent history, from the initial surge of European

settlers into the western frontier of a new country to the wilderness protection efforts of the late 20th century, also are woven into the lore and landscape of these mountains. The Trail itself passes through 18 National Register Properties and Districts, including the Harpers Ferry and Skyline Drive Historic Districts. Appalachian Trail lands also protect the sites of the Ring Quarry Prehistoric Mining District, the Brown Mountain Creek Free Black Community, large portions of the Battle of South Mountain, Shay's Rebellion Surrender, and many other significant cultural sites.

The Appalachian Trail itself is a national cultural icon, beginning as one man's dream and growing through the work of tens of thousands of Americans to become a recreational resource used and revered by millions of people each year. Despite the fact that it has been moved many times, the Trail stands alone as our nation's first continuous long-distance hiking trail, and it remains the country's premier trail today. It is also unique in its construction, having been constructed and maintained to design standards established by ATC.

Natural and cultural resource inventories: Trail managers have only begun to assemble comprehensive, Trail-wide inventories on this immense expanse of natural and cultural resources. Numerous local and regional inventories and surveys have been conducted – some of which even predate the Trail's designation as a National Scenic Trail.

None, however, were done on a Trail-wide scale with a consistent methodology, until the Appalachian Trail Park Office and ATC initiated a program in 1989 to inventory occurrences of threatened, endangered, and sensitive plant and animal species and exemplary natural communities along the Trail. These inventories, which involved participation by numerous national forests, state agencies, state natural heritage program offices, and Appalachian Trail clubs, were conducted on a state-by-state basis over a twelve-year period. Ultimately, the inventories identified more than 2,100 "element occurrences," or discrete occurrences of rare plants, animals, and rare or exemplary communities, at more than 500 locations along the length of the Appalachian Trail.

A similar program to inventory archaeological resources began in 1999. The Appalachian Trail Conservancy and Appalachian Trail Park Office secured funding and entered into a cooperative agreement with Pennsylvania State University to conduct an "overview and assessment" of cultural resources along the 229 miles of Trail in Pennsylvania. Fifty-five archaeological resource sites were identified in the initial inventory, which was completed in 2000. Further field research in 2001 and 2002 identified 21 additional sites. A second overview and assessment project, which identified 382 archaeological sites along the Trail in Connecticut, was completed in 2004. Plans are underway to continue the program in other states. In addition, the Appalachian Trail Park Office and ATC are working with the NPS Olmsted Center to evaluate the potential for conducting cultural landscape inventories of the Appalachian Trail.

A tremendous amount of data exists on other resource values, including geologic resources, air, water, and scenic quality. However, much of these data exist in local or regional contexts, with

widely disparate protocols, methodologies, and data standards. The National Park Service's Inventory and Monitoring Program is assisting the Appalachian Trail in obtaining comprehensive natural resource information for the Trail as time and funding permit, but some information is not likely to be available for years. No program currently exists for cultural resources.

These resources are described in greater detail in Chapter II, "Present Resource Status."

E. Relationship to Existing Planning Documents

Managing the Appalachian Trail is a complex undertaking, with multiple agencies and organizations often sharing responsibilities for specific tasks. In fact, rarely is a Trail project planned or carried out by one partner alone. Most projects are conceived, planned, and executed by at least three – and often four – partners. The land-managing agency, the Appalachian Trail Conservancy, and the local Trail-maintaining club are always involved. The NPS Appalachian Trail Park Office (in instances when it is not the actual land-managing agency) sometimes participates as well. The following documents guide this coordinated effort:

[The Appalachian Trail Comprehensive Plan](http://www.appalachiantrail.org/site/c.jkLXJ8MQkH/b.855323/k.D939/Policies.htm) – *The Comprehensive Plan for the Protection, Management, Development, and Use of the Appalachian National Scenic Trail*, signed by the Director of the National Park Service and Chief of the USDA Forest Service in 1981, sets the over-all tenor for management of the Appalachian Trail. The *Comprehensive Plan* (available at: <http://www.appalachiantrail.org/site/c.jkLXJ8MQkH/b.855323/k.D939/Policies.htm>) establishes a broad set of management principles for the Trail and encourages a decentralized management framework that relies on management partners to resolve issues at the local level within the parameters of some broad policy guidelines. The *Plan* endorses the use of local management plans and agency plans for coordinating efforts to manage the Trail. Planning at the local level typically consists of two tiers of planning, local management planning and agency planning, which are described in more detail below.

[The Appalachian Trail Conservancy's Local Management Planning Guide](http://www.appalachiantrail.org/site/c.jkLXJ8MQkH/b.855323/k.D939/Policies.htm) and *[Trail Club Local Management Plans](http://www.appalachiantrail.org/site/c.jkLXJ8MQkH/b.855323/k.D939/Policies.htm)* – Local management plans are documents written by Trail-maintaining clubs in cooperation with their agency partners, ATC, and the Appalachian Trail Park Office that: (1) outline Trail club roles, responsibilities, and policies; and (2) define and prioritize Trail club programs and work projects along their respective sections of the Appalachian Trail. The plans are written in accordance with direction provided by the *Appalachian Trail Comprehensive Plan* and guidance provided in ATC's *Local Management Planning Guide*, which was last updated in 1997. The *Planning Guide*, which includes twelve chapters on resource management issues, is available at <http://www.appalachiantrail.org/site/c.jkLXJ8MQkH/b.855323/k.D939/Policies.htm>.

Trail clubs prepare their local management plans with input from a variety of sources, including their land-managing agency partners, ATC, and the Appalachian Trail Park Office. ATC's Stewardship Council endorses each plan upon recommendation from the ATC regional partnership committee chair. Each local management plan contains brief policy statements by the Trail club on what roles and responsibilities, if any, the club is willing to assume with regard to natural and cultural resource management.

Agency Planning Efforts – Most agency partners are required by law to develop plans to guide their management activities. At the federal level, national parks develop general management plans, resource management plans, facility management plans, and backcountry management plans; national forests develop forest plans; and fish and wildlife units develop refuge plans. Each entity has defined an area that is set aside for the Appalachian Trail, either as a management area, prescription area, or Trail corridor in which actions are coordinated with other local Trail-management partners.

State agencies have similar mandates. Most agencies have plans that define their management emphases and prioritize their management activities. And, in almost every case, state land-managing agencies have entered into cooperative agreements with their other management partners that set aside a defined corridor for protection and management of the Trail.

Agency resource management plans typically identify management actions that can be carried out in a manner that is consistent with the over-arching principles of the Trail and that allow for continued use of the Trail. Actions range from closures of damaged or sensitive areas, to control of invasive species, to protection of a threatened or endangered species, to interpretation and signage. Agencies also carry out monitoring programs to identify trends in air quality, water quality, forest and agriculture pests, and other resources.

[The Appalachian Trail Strategic Plan](#) – In 2005, the Appalachian Trail Park Office updated its strategic plan for the Appalachian National Scenic Trail. Among other things, the *Appalachian Trail Strategic Plan* provides overall goals and objectives for protection and management of natural and cultural resources based on Service-wide goals

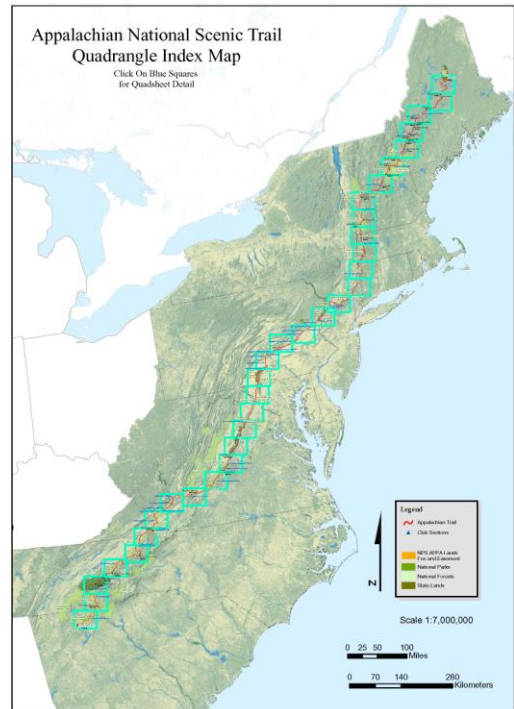
F. Land Ownership and Responsibilities for Resource Management

One of the most confusing and challenging realities of managing the Appalachian National Scenic Trail is created by the complex patchwork of land ownership along much of the length of the Trail. The Trail crosses lands administered by eight national forests, six national parks, one national wildlife refuge, 67 state game lands, forest, or park areas, and more than a dozen local municipal watershed properties. In addition, the Appalachian Trail Park Office has acquired 2,700 tracts comprising more than 105,000 acres of land that are located in and among the larger blocks of existing forest, park, and game lands. (As of 2006, the Appalachian Trail Park Office still needs to acquire an additional 1,100 acres to complete the Trail corridor.) National forests, state agencies, and the Appalachian Trail Conservancy have acquired an additional 80,000 acres.

[Maps I.G.1 through I.G.20, Land Ownership Maps of the Appalachian Trail](#) provide a comprehensive, scalable series of maps in electronic format that depict this land ownership pattern.

For the purposes of this plan, it is important to understand a critical distinction in terminology pertaining to land ownership and management:

Appalachian Trail Park Office lands are lands specifically acquired and managed by the National Park Service Appalachian Trail Park Office for the Appalachian Trail. The Appalachian Trail Park Office serves as the primary management partner and exercises full jurisdictional responsibilities for these lands and interests in lands. However, the Park Office has delegated most responsibilities for Trail operations, development, maintenance, and management of these lands to the Appalachian Trail Conservancy and its Trail-maintaining clubs. This land base consists of some 2,300 tracts and 82,700



acres acquired by the National Park Service to protect the Trail that have not been administratively transferred to other land-managing agencies. These APPA lands are located almost entirely in nine states: Maine, Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Maryland, West Virginia, and Virginia. These lands do not include approximately 23,000 acres of land acquired by the National Park Service that have been transferred to and are now managed by the USDA Forest Service or other agencies.

The term **Appalachian Trail lands** is used in this plan to refer to *all* lands crossed by the Trail, including lands that (1) are identified in Appalachian Trail management areas or prescription areas, (2) are covered under a memorandum of understanding between the Appalachian Trail management partners responsible for managing that section of the Trail, (3) have been acquired for the protection of the Trail, or (4) are identified in some other manner as being set aside or managed as part of the Appalachian Trail. The agencies responsible for managing these lands typically identify specific responsibilities for Trail operations, development, maintenance, and management activities on these lands that are carried out by the Appalachian Trail Conservancy and its Trail-maintaining clubs. This land base consists of approximately 270,000 acres of land across all fourteen Trail states.

Maine

Approximately two-thirds of the 281-mile A.T. corridor lies on National Park Service APPA land, and one-third lies on state-owned land. More than 30,000 acres have been acquired by the National Park Service for the A.T. in Maine. The Trail also passes through two large state parks, Baxter State Park and the Bigelow Preserve, as well as numerous other state land ownership.

New Hampshire

Though approximately 8,500 acres along the Trail in New Hampshire were purchased by the National Park Service, these lands were administratively transferred to the USDA Forest Service in 1994. The White Mountain National Forest Plan (2005) identifies a management area for the Appalachian Trail on National Forest lands based on the application of the Agency's Scenery Management System. With the exception of three small state park units, Crawford, Franconia and Mt. Washington, the entire 161-mile length of the Appalachian Trail in New Hampshire is now located on lands administered by the White Mountain National Forest.

Vermont

Approximately 145 miles of the 150-mile length of the Appalachian Trail in Vermont is located on lands administered by the Green Mountain National Forest. Approximately 91 miles cross Green Mountain National Forest land. The Green Mountain National Forest Plan (2006) also identifies a management area for these sections of the Appalachian Trail based on the application of the Agency's Scenery Management System. In addition, 54 miles of Trail are located on 12,000 acres of land that were acquired by the National Park Service in the 1980s and 1990s and administratively transferred to the Forest Service in 1994. The remaining five miles of Trail cross lands administered by the State of Vermont's Agency of Natural Resources.

Massachusetts

Appalachian Trail lands are managed by the NPS Appalachian Trail Park Office, which administers approximately 5,300 acres and 33 miles of the Trail, and the Massachusetts Department of Environmental Management, which administers approximately 6,700 acres and 57 miles of Trail.

Connecticut

Appalachian Trail lands are administered by the NPS Appalachian Trail Park Office and the state. The National Park Service administers approximately 6,700 acres protecting 34 miles of Trail and the Connecticut Department of Environmental Protection administers roughly 2,100 acres and 17 miles of Trail.

New York

The Appalachian Trail in New York lies primarily on lands administered by the NPS Appalachian Trail Park Office and New York state agencies, including Sterling Forest State Park, Harriman State Park, Bear Mountain State Park, Hudson Highlands State Park, Clarence Fahnestock Memorial State Park, and the New York Department of Environmental Conservation Division of Lands and Forests. The Appalachian Trail Park Office administers approximately 8,300 acres of land and 57 miles of Trail. The remaining 32 miles of Trail cross 4,000 acres of state lands.

New Jersey

The Appalachian Trail lies within a protective corridor split almost evenly between state and federal land. Among the large state holdings are Wawayanda State Park, High Point State Park, Worthington State Forest, Stokes State Forest, and Abram Hewitt State Forest. In total, these and other state land holdings, which total nearly 4,000 acres of land, protect approximately 41

miles of Trail. The largest federal land entity is Delaware Water Gap National Recreation Area, located along the state border with Pennsylvania, which protects approximately 28 miles of Trail. The Wallkill River National Wildlife Refuge, the only federal wildlife refuge along the A.T., protects a one-mile section of the Trail near the state's border with New York, and two miles are protected by approximately 1,000 acres of NPS Appalachian Trail Park Office lands of the A.T.

Pennsylvania

The Appalachian Trail follows a 229-mile route through Pennsylvania state forests, state parks, and game commission lands, as well as through National Park Service Appalachian Trail lands and Delaware Water Gap National Recreation Area. More than half of the Trail (121 miles) is located on Pennsylvania state lands. Four miles of the Trail are administered by the NPS Delaware Water Gap National Recreation Area. The remaining 104 miles are protected by 13,500 acres of NPS Appalachian Park Office lands.

Maryland

Forty miles of the Appalachian Trail pass through a corridor of federal, state, and local park land. Federal lands include the Chesapeake and Ohio National Historical Park (protecting three miles of Trail) and land administered by the NPS Appalachian Trail Park Office (approximately 1,600 acres, protecting six miles of Trail). State park lands, which include portions of Greenbrier State Park, Gathland State Park, and Washington Monument State Park, all of which are within Maryland's South Mountain Recreation Area, which total more than 4,000 acres, protect the remaining 28 miles of Trail.. Washington County's Park Department administers a small section of the Trail at Pen Mar and the NPS recently secured an easement over a three-mile stretch of land passing through the Hagerstown Watershed.

West Virginia

South of the Potomac River, the A.T. generally follows the state boundary of West Virginia and Virginia for approximately 13 miles. Two of the miles in northeastern West Virginia are administered by NPS Harpers Ferry National Historical Park; and eleven are administered by the NPS Appalachian Trail Park Office. Several hundred miles to the south, the Appalachian Trail again follows the ridgeline between Virginia and West Virginia for a distance of approximately 10 miles, just north of Pearisburg, Virginia, on lands administered by the Jefferson National Forest.

Virginia

Approximately 549 miles, or one-fourth of the total length of the Appalachian Trail, are located in Virginia. North of Shenandoah National Park, approximately 55 miles of the Trail are situated on more than 11,000 acres of land administered by the NPS Appalachian Trail Park Office and the state of Virginia. The Trail passes through two state land holdings: Sky Meadows State Park and the G. Richard Thompson Wildlife Management Area. Also in northern Virginia, 95 miles of the Trail pass through Shenandoah National Park. In central and southwest Virginia, the Trail corridor passes primarily through Jefferson and George Washington National Forests, which have designated an Appalachian Trail management area or prescription area on approximately

75,000 acres. Smaller portions of the Trail pass through lands administered by the Blue Ridge Parkway (outside Waynesboro and Lynchburg) and the Appalachian Trail Park Office (outside Roanoke), and the state also administers a small portion of Grayson Highlands State Park to protect the Trail.

Tennessee

Approximately 80 miles of the A.T. corridor are located in Tennessee between the Virginia border and Carvers Gap, Tennessee, on lands administered by the Cherokee National Forest. The Cherokee National Forest Plan provides for a designated Appalachian Trail Management Area. The Tennessee Valley Authority administers a small tract of land near Watauga Dam.

North Carolina

The Trail also follows the Tennessee/North Carolina state line for an additional 134 miles on lands administered by the Cherokee National Forest (in Tennessee) and the Pisgah National Forest (in North Carolina). The Forest Plan provides a designated Appalachian Trail Management Area. Another 71 miles of the A.T. within Great Smoky Mountains National Park closely parallel the Tennessee/North Carolina state line. Following a short section across the Tennessee Valley Authority's Fontana Dam, the Trail continues south through North Carolina across lands administered by the Nantahala National Forest for another 88 miles to the Georgia border.

Georgia

Approximately 76 miles of the A.T. pass through lands administered by the Chattahoochee National Forest. The Forest Plan provides a designated Appalachian Trail Management Area. The southern terminus of the A.T. is located on Springer Mountain, Georgia. An eight-mile approach trail, which begins on state-owned property in Amicalola Falls State Park, leads to Springer Mountain.

G. Distinction between Resource Management Plan's Direction for Appalachian Trail Park Office Lands and Lands Administered by Other Agencies

This resource management plan, since it is intended to provide direction primarily for the Appalachian Trail Park Office and the Appalachian Trail Conservancy, will adopt the following approach for delineating responsibilities of these two organizational entities from other Trail-management partners:

- 1) To the greatest extent possible, inventories, assessments, and data-gathering will be conducted on a Trail-wide basis using a common methodology, irrespective of land ownership, so that Trail managers will have a common data set for management of Trail resources whenever possible. Inventory data will be shared with all management partners.
- 2) Site-specific recommendations contained in any inventory or assessment for management of resources on lands administered by the Appalachian Trail Park Office will be addressed and

prioritized in this resource management plan. Site-specific recommendations for management of resource on lands administered by other agencies will be forwarded to the responsible land-managing agency as recommendations only.

3) Trail-wide recommendations for Appalachian Trail Park Office and Appalachian Trail Conservancy management programs and activities (such as the natural heritage inventories and natural heritage site-monitoring program) contained in this resource management plan will be addressed and prioritized in this resource management plan. The Appalachian Trail Park Office and Appalachian Trail Conservancy will seek to coordinate and cooperate with other agencies and organizations to the greatest extent possible to facilitate consistent implementation of Trail-wide recommendations for management. However, participation in these efforts by other agencies and organizations is purely voluntary.

4) Responsibilities for implementing components of this resource management plan may be shared between the Appalachian Trail Park Office, the Appalachian Trail Conservancy, the Trail-maintaining clubs, and other agencies and organizations. However, this plan does not require or commit any agency or organization other than the Appalachian Trail Park Office to implement or adopt any project or program identified in this plan, nor does it infer any responsibility for any other agency or organization to do so.