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Final Case Study for the National Scenic Byways Study

A Case Study of the Environmental Impact
of the Blue Ridge Parkway

Scenic **BYWAYS**



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Final Case Study
for the
National Scenic Byways Study

**A CASE STUDY of the ENVIRONMENTAL
IMPACT of the BLUE RIDGE PARKWAY**

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Prepared for
The Federal Highway Administration

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PURPOSE AND METHODOLOGY

The purpose of this study is to identify the environmental impacts of the Blue Ridge Parkway to assist the Federal Highway Administration in preparing recommendations to Congress on the current status and future development of a national system of scenic highways.

The research methodologies utilized in this study include an extensive literature search, numerous telephone and personal interviews with government agency officials and representatives of organizations with an interest in the Blue Ridge Parkway, and site visits to the National Park Service in Atlanta, Georgia and Asheville, North Carolina.

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I. INTRODUCTION

The Blue Ridge was among the world's first parkways designed exclusively for leisure travel. In that role, it has become a model for other parkways in the U.S. in many respects--planning, design, natural resource conservation and land protection. In 1935 when construction began, no precedent existed for a 470-mile road that had recreation and preservation among its primary purposes. New policies had to be created, new practices established and decisions made based on these.

A discussion of the environmental impacts of the Blue Ridge Parkway must at once recognize the overriding purpose of the roadway as being to enhance and protect environmental and cultural resources while necessarily disrupting and dividing the land area it seeks to protect. Many Parkway observers believe that the magnitude of a project like the Blue Ridge Parkway, if initiated under today's extensive regulatory controls and dynamic political and economic climate would not survive.

While the absence of environmental guidelines and policies may have posed one less hurdle for Parkway planners and designers in the 1930s, in retrospect, it has left a void in Parkway records and history documenting environmental issues and impacts. Most analytic environmental studies have occurred in recent years and have related to isolated activities affecting Parkway surroundings.

In providing an understanding of the environmental effects of the Blue Ridge Parkway, this report will: 1. trace the history and process of environmental assessments for the Blue Ridge Parkway; 2. review pertinent environmental studies; 3. examine identifiable impacts of the Parkway and specific activities related to maintaining and upgrading the Parkway; 4. summarize current management practices for

fulfilling parkway objectives; and 5. discuss the potential evolution and development of the area without the existence of the Parkway.

II. OVERVIEW OF ENVIRONMENTAL STUDIES OF THE BLUE RIDGE PARKWAY

A. Background

Detailed and documented study of the environmental impact of Parkway activities commenced with the National Environmental Policy Act (NEPA) of 1969, which mandated environmental planning for all federally funded projects. The purpose of the act, together with subsequent executive orders, Council on Environmental Quality guidelines, and numerous federal agency procedures, is to ensure that balanced decision making occurs in the public interest. The legislation requires that economic, environmental, social, technical and other factors be considered and coordinated together.

Prior to NEPA, technical and economic factors tended to dominate the decision-making process. Natural resource management studies of the Blue Ridge Parkway largely constituted environmental inventories, surveys or scientific histories of Parkway lands and surrounding areas. Since the implementation of NEPA in 1970, all agencies of the federal government conduct environmental reviews for any proposed actions affecting the physical, biological, or cultural environment.

The key step in meeting the requirements of NEPA is the "environmental assessment." In essence, it is an effort to evaluate the results of a proposed action on the environment; predict anticipated changes; and determine the significance of those changes. Environmental assessments are prepared by the federal agency initiating the action and reviewed by all agencies affected by the proposal or responsible for monitoring compliance with various environmental regulations. An important part of this process is public review and comment. Ultimately, a determination is made as to whether the proposed project constitutes a "major Federal action significantly affecting the quality of the human environment." If the action does not meet this

criterion, a Finding of No Significant Impact (FONSI) is declared and the most desirable course of action determined. However, if a FONSI is not issued, preparation of an Environmental Impact Statement (EIS) must follow. An EIS includes a detailed environmental inventory and findings of the assessment. A draft EIS is prepared and circulated for review and comment to local, state and federal agencies. A final EIS is developed reflecting modifications based on problems and objections raised by reviewers.

Since the passage of NEPA, nearly 30 environmental assessments have been prepared for the Blue Ridge Parkway, the majority of which resulted in the declaration of a Finding of No Significant Impact. Two projects required preparation of an EIS. The following section provides a chronological listing and brief synopses of these environmental reports.

B. Significant Environmental Studies

1973. PROPOSAL TO CONSTRUCT SECTION 2H, BLUE RIDGE PARKWAY

The project involves construction of 3.8 miles of highway in the last link in the 470 miles of the Blue Ridge Parkway. It is located at Grandfather Mountain. In addition to the roadway the project includes construction of five new parking overlooks, clearing of 63 acres of woodland, turf establishment and numerous related activities. The proposed action alternatives consider improving existing U.S. 221 or constructing the Parkway at a higher elevation. Neither of these was deemed feasible or desirable.

1973. PROPOSED PROJECT 2H4, GRADING DRAINAGE, BASE AND SURFACE TREATMENT.

Project 2H4 consists of numerous work activities related to the construction of Section 2H of the Blue Ridge Parkway. These activities

include construction of 1.2 miles of 20 foot wide surfaced roadway, construction of two new overlooks, clearing and grubbing of 20 acres of woodland, excavation, placement of pavement, turf establishment and other miscellaneous, related activities. This project relates directly to Section 2H construction and the alternatives considered were the same.

April 1975. PROPOSED DEVELOPMENT CONCEPT PLAN, MABRY MILL HISTORIC AREA

This plan proposes to restore the Mabry Mill, a 96 acre site on the Parkway, to a condition closely approximating its appearance in the 1930s in order to provide a glimpse of the historical and cultural heritage of the area. The plan includes relocating Route 603 to access this historic area, constructing a new parking area, creation of concession and orientation facilities, reconstruction of historic buildings, land acquisition and construction of utilities.

July 1975. ACCESS ROAD IN CONJUNCTION WITH THE SCIENCE MUSEUM OF VIRGINIA

A motor road was proposed near milepost 120 to provide access to the Science Museum of Virginia. This would enable Blue Ridge Parkway visitors to conveniently enjoy the museum's natural history and interpretive programs related to the Appalachian Region.

1975. FOLK ART CENTER, ASHEVILLE, NORTH CAROLINA

The Southern Highland Handicraft Guild for the Blue Ridge Parkway proposed the establishment of a Folk Art and Visitor Center to encompass exhibit space, library, craft sales and a 180 car capacity parking area, among other features. Alternatives considered various locations adjacent to the Parkway on sites of varying sizes.

July 1976. PEAKS OF OTTER SEWAGE SYSTEM

The Blue Ridge Parkway is responsible for operating and maintaining the sewage system for the Peaks of Otter Recreation Area in Bedford County, VA. The force main has been a source of trouble for many years and the absence of standby power for facility operations threatens the possibility of raw sewage overflow. The proposed action alternatives seek to move the sewage treatment operations to another site.

June 1981. FINAL ENVIRONMENTAL IMPACT STATEMENT, APPLICATION FOR A RIGHT OF WAY PERMIT BY APPALACHIAN POWER COMPANY

Appalachian Power Company serves western and central areas of Virginia, a portion of which the Parkway bisects. In 1974, the company applied for a certificate of necessity to locate a 765 kilovolt transmission line to establish a direct extra high voltage power source to communities in central Virginia and to ensure continued reliability of electric power supply. The preferred route--which would minimize adverse impact on the environment of the state--would include crossing the Parkway at milepost 160.

March 1982. CONSTRUCTION OF HAUL ROAD, GRANDFATHER MOUNTAIN, BLUE RIDGE PARKWAY, NORTH CAROLINA

The National Park Service proposed to build 3,000 feet of construction access road between U.S. 221 and the parkway construction site in order to provide cost-effective and timely completion of the Grandfather Mountain segment of the Parkway. The alignment of the road would conform to the private road easement that exists for the access road between U.S. 221 and private lands on Grandfather Mountain.

Several alternatives were considered including the use of the helicopters to transport equipment and other road alignments. Cost and other impracticalities eliminated these alternatives and the proposal was accepted.

March 1982. UNDERGROUND TELEPHONE LINE RIGHT-OF-WAY, BLUE RIDGE PARKWAY, VIRGINIA

A private resident was in the process of constructing a new home on the east side of the Parkway at Willis Gap. In order to provide telephone services in this area, a right-of-way grant was required. The proposal to install the line in a conduit underground in the shoulder of Route 608, a gravel road, was approved.

April 1982. RIGHT-OF-WAY FOR TWO INCH WATERLINE, LITTLE SWITZERLAND, NORTH CAROLINA

The Swiss Village Property Owners Association of Little Switzerland, NC explored options for an adequate and reliable water source to meet the needs of residents. The Association located a producing well, but required a right-of-way grant across the Parkway property to deliver the water from the well. The proposed right-of-way grant would involve burying a two inch waterline in an abandoned logging road that crosses the Parkway property. Without pursuit of this option, the Association would be left to continue reliance on an intermittent spring. With very few environmental impacts expected, the right-of-way request was granted.

October 1982. VISTA MANAGEMENT PLAN

Large stretches of the Parkway are overgrown with vegetation. Large trees and high underbrush obscure views. A need exists to decide how best to manage parkway vistas to perpetuate scenic views. The plan presents various management techniques to satisfy this objective.

January 1983. TRAIL SYSTEM AT GRANDFATHER MOUNTAIN/IMPROVED FACILITIES AT LINVILLE FALLS

This proposal addresses the need to provide opportunities for visitors to enjoy the scenic resources of Grandfather Mountain and to expand parking and provide public restroom facilities at the overcrowded Linville Falls area. The proposal includes building 10-14 miles of foot trail in the Grandfather Mountain vicinity and to increase the size of the parking area and provide minimal public facilities at Linville Falls. The trail would enhance recreation opportunities and have no appreciable effects on the local environment. The parking lot and facilities, however, would require the clearing of one acre of trees. This proposal was approved.

November 1983. PROPOSED COMMUNITY ANTENNA TELEVISION CABLE RIGHT-OF-WAY, BLUE RIDGE PARKWAY, VIRGINIA

Roanoke Valley Cablevision, Inc. requested a right-of-way grant over Blue Ridge Parkway lands to construct at three locations a community antenna television cable to provide service to homes south of Roanoke and east of Vinton, Virginia. The cable would be on Parkway lands for 3,148 feet in which it would be a direct buried line except in certain areas where it would be located on Appalachian Power Company power poles. No significant environmental resources would be affected and the proposal was approved.

June 1986. PEAKS OF OTTER LODGING EXPANSION

To accommodate increased visitation and rooming needs, expansion of the lodging facilities at the Peaks of Otter was proposed. A 20 to 30-unit lodge facility is desirable and would be considered a requirement of the concessioner contracted with when the current agreement expires in 1988. The proposal discussed constructing the

new wing in linear fashion with the existing three buildings, parallel to Abbott Lake.

July 1986. PROPOSAL TO EXPAND PISGAH INN FACILITIES

Increased demands for overnight visitor accommodations and expanded employee quarters have led to this proposal to build additional lodging facilities on the north side of the current Pisgah Inn and build employee quarters just south of the Pisgah Campground. The primary alternative considered was to build additional lodging at the Old Pisgah Inn site. A major concern relates to the Inn's eligibility for listing on the National Register of Historic Places, necessitating extensive preservation in any construction activity. The Inn's poor condition would make this a difficult task.

September 1988. UTILITY RIGHT-OF-WAY AT MILEPOST 335.8

The Rutherford Electric Membership Corporation, an electric power cooperative, applied to the National Park Service for a right-of-way to construct an underground, 7,200 volt, single phase direct buried power cable across lands within the boundaries of the Blue Ridge Parkway in McDowell and Mitchell Counties, NC. The purpose is to supply electricity to an adjacent park landowner.

The proposal would affect 0.5 acre of land with disturbance to trees and shrubs. The alternative is no action. The National Park Service approved the right-of-way request, permitting construction of an underground cable.

September 1988. PAVED WATERWAY AT MILEPOST 114.8, ROANOKE COUNTY, VIRGINIA

The County of Roanoke, VA applied for a right-of-way to construct a paved waterway within a fifteen-foot wide by 500-foot long drainage

easement across lands within the boundaries of the Parkway in Roanoke County, Virginia. The waterway will discharge water onto Park lands from a catch basin and settling system in operation on adjacent lands. The proposal would disturb less than 0.1 acre of land. If no action is taken, water would continue to discharge on park lands, creating a greater occurrence of erosion; hence, the right-of-way was approved.

October 1988. TELEPHONE RIGHT-OF-WAY AT MILEPOST 335.8, MCDOWELL AND MITCHELL COUNTIES, NORTH CAROLINA

Consideration is given to a proposal to issue a right-of-way for Southern Bell to construct an underground telephone line from State Road 1452 in McDowell County to State Road 1209 in Mitchell County, North Carolina and crossing the Parkway for a total of 220 feet. The telephone line would supply services to an adjacent park landowner.

If construction is accomplished simultaneous with the Rutherford Electric right-of-way for an underground power line, no additional land will be disturbed. If it is constructed separately, 0.5 acre of trees and plant life will be disturbed. As environmental impacts are inconsequential, the proposal was approved.

January 1989. CONSTRUCTION OF SEASONAL QUARTERS AT CRABTREE MEADOWS CAMPGROUND, BLUE RIDGE PARKWAY, NORTH CAROLINA

Housing for seasonal employees at Crabtree Meadows Campground, milepost 339.5, is considered inadequate and in need of replacement. It is recommended that a two-bedroom trailer be replaced by a two-bedroom log house of approximately 1,000 square feet with 600 square feet for porches and sidewalks. This proposal would disturb 0.3 acres of land. A no action alternative was eliminated because of the Park's inability to respond quickly to emergency needs within the campground after hours, and the proposal was approved.

March 1989. REPAIR TROUT LAKE DAM, WATAUGA COUNTY, NORTH CAROLINA

Trout Dam Lake was cited by the U.S. Bureau of Reclamation as in need of extensive modifications to meet federal guidelines for dam safety. The proposal discusses repair measures allowing the dam to withstand overtopping by a maximum probable flood.

May 1989. CONSTRUCTION OF A HORSE TRAIL BETWEEN JAMES RIVER AND ROANOKE MOUNTAIN, VIRGINIA

During the public comment period for the Land and Resource Management Plan of the Jefferson National Forest, the need for a continuous horse trail between James River and Curry Gap became apparent. The project was initiated in 1985 but to complete the trail system several crossings of the Parkway are needed, including: Petits Gap (milepost 71), Kewanee Tract (milepost 93.2), Black Horse Gap (milepost 97.7) and Curry Gap (milepost 101.5). The Parkway may also connect the trail from Stewarts Knob to Roanoke Mountain and Curry Gap to Roanoke Mountain, an estimated 12 miles.

This proposal was adopted and will include: connecting Forest Service horse trails by constructing two crossings at Kewanee Tract and Petite's Gap; and construction of horse trails between Curry Gap and Stewart's Knob.

March 1989. DRAINING PRICE LAKE IN JULIAN PRICE PARK, WATAUGA COUNTY, NORTH CAROLINA

According to the U.S. Bureau of Reclamation, Price Lake Dam would require modifications to meet federal guidelines for dam safety. Plans to repair the dam call for the lake to be drained during construction activity. As the dam must be repaired for safety reasons and park managers decided that retaining the dam is an integral part of the Parkway, no alternatives were considered.

March 1989. DAM SAFETY MODIFICATIONS AT BASS LAKE, WATAUGA COUNTY, NORTH CAROLINA

In 1983, the U.S. Bureau of Reclamation advised the Parkway Superintendent that Bass Lake Dam would require modifications to meet federal guidelines for dam safety. A proposal to rehabilitate Bass Lake is under review. Dam repair is required for reasons of public safety and maintenance is required as part of Park Service management responsibilities. Therefore, no alternatives were considered and the proposal was accepted.

June 1989. DRAIN COLD PRONG POND AND BREACH ASHE BEAR PEN DAM, WATAUGA COUNTY, NORTH CAROLINA

This proposal responds to the U.S. Bureau of Reclamation's advisement that safety modifications to breach Ashe Bear Pen Dam would be required to meet federal guidelines for dam safety. It was recommended that the reservoir, Cold Prong Pond, be drained to: reduce downstream hazards in the event of failure; to meet safety standards; and to determine what repairs will be required to make the dam safe and to bring it into compliance with federal standards.

This environmental assessment reviews the consequences of draining Cold Prong Pond and breaching Ashe Bear Pen Dam. One noted impact of the draining is possible disturbance to the State-threatened bog turtle which has been observed in the area. Consideration was given to the "no action" alternative. However, the consequence of dam break, as it is unsafe, could be significant to both animal and park visitors. Further, no action would be in violation of Public law 92-367 for maintenance of an unsafe dam. Therefore, the proposal was approved.

June 1989. DEVELOPMENT CONCEPT PLAN FOR BLUE RIDGE PARKWAY HEADQUARTERS, BUNCOMBE COUNTY, NORTH CAROLINA

For several reasons, the Parkway headquarters located in rented private space in downtown Asheville, NC is insufficient. A site selection study was undertaken for a headquarters facility and a visitor center, which culminated in the selection and acquisition of an 81 acre tract adding Hemphill Knob to the Parkway in 1986.

This assessment considers a proposal for development of a 15,000 square foot headquarters facility, and associated parking. Approximately ten acres would be disturbed with associated effects on small animals, vegetation and hydrology. Alternatives included development of a headquarters and a visitor center; continuation of existing conditions; and construction of the facility on top of Hemphill Knob. Cost and development limitations ruled out these alternatives and the initial proposal was accepted.

June 1989. REMOVE OLD PISGAH INN AND ASSOCIATED BUILDINGS

The proposal calls for the removal of the Old Pisgah Inn and associated buildings dating to 1920. In 1986, the Inn was determined to be eligible for the National Register of Historic Places. Seventy to 80 percent of the existing structure needs replacement in order to remedy safety and health code violations. Some of the architectural elements will be retained as "historic fabric" and reused in the construction of a future inn. The proposal calls for complete demolition with 20-25 dump truck loads of materials being removed.

August 1989. MANAGEMENT OF CRAGGY GARDENS

Located at milepost 364 on the Blue Ridge Parkway, Craggy Gardens harbors the greatest number of rare and endangered plant species of any site along the Parkway with the greatest concentration of rare

plants on the summit of Craggy Pinnacle. The rare plant populations have suffered serious decline in recent years. The rock ledges which house these plants have become viewing sites and transportation routes for visitors. Plant succession is also a threat to the summit and likely to impact or replace the rare plant community. This assessment reviews a proposal for intensive management of visitor activities that seeks to protect rare plants while offering the kinds of recreational opportunities that visitors want.

January 1990. EXPANSION OF THE NORTHWEST TRADING POST ON THE BLUFFS DISTRICT IN ASHE COUNTY, NORTH CAROLINA

In order to increase space, improve visitor flow and provide wheelchair access, a proposal was made to construct a new wing of the trading post. It includes an information station, a craft demonstration site, additional parking and handicap access. No significant environmental impacts were identified from this proposed action. Therefore, the project was approved.

March 1990. GYPSY MOTH MANAGEMENT IN THE APPALACHIAN INTEGRATED PEST MANAGEMENT DEMONSTRATION PROJECT IN THE BLUE RIDGE PARKWAY, VIRGINIA

As gypsy moth populations move southerly and westward, infestation is expected to attack significant portions of the Blue Ridge Parkway, as the insects have already been identified in increasing numbers on Park lands. Serious large-scale direct and indirect damage can be expected from these insects from defoliation of forests and increased forest fire hazard. The Park is aggressively monitoring the spread of gypsy moths on Park property and has created a plan in cooperation with other federal and state agencies to ensure pest management, reduce the loss of sensitive plant and animal species, reduce the risks of spread of moths, reduce the risks to visitor safety and above all, protect special value areas from excessive defoliation and tree mortality.

Proposals for pest management included varying degrees of chemical intervention. The alternative adopted incorporates both mechanical and low-level, chemical treatments at all Blue Ridge Parkway proposed sites and is considered the least disruptive to the environment of the action alternatives.

August 1990. DRAFT ENVIRONMENTAL IMPACT STATEMENT, ROANOKE RIVER PARKWAY, BEDFORD, FRANKLIN AND ROANOKE COUNTIES, VIRGINIA

Funding for a demonstration project to construct a ten mile extension of the Blue Ridge Parkway has been authorized by the Surface Transportation and Uniform Relocation Assistance Act of 1987. The extension would connect the Parkway with the Explore Project. This EIS analyzes three alternative road corridors for a Roanoke River Parkway and the construction of a visitor center to serve the Parkway and the Roanoke Valley. Five potential sites are reviewed and a conceptual plan for recreational facility development within the alternative parkway corridors is also discussed.

III. ENVIRONMENTAL IMPACT OF THE BLUE RIDGE PARKWAY

A. The Environmental Setting and Parkway Construction

The Blue Ridge Parkway was constructed as an elongated park linking Shenandoah National Park in Virginia and the Great Smoky Mountains National Park in North Carolina and Tennessee through a recreation-oriented road. The Parkway passes through two states, 29 counties, and many geophysical and vegetative zones at an average elevation of 3,000 feet. The great variety of landscapes and land uses throughout the Parkway corridor, together with its cultural and historical resources help create the real significance of the Parkway.

The Parkway extends 470 miles through the Blue Ridge, Great Craggies Blacks, Great Balsam and Plott Balsam Mountains of the Southern Appalachian Highlands. The Appalachian Mountain chain extends from Maine to Georgia and resembles a broad ribbon of many parallel ranges connected by cross ranges, mountains and hills. Parkway vegetation includes both coniferous and deciduous forests and is among the Nation's richest in variety of trees and flowering plants.

The history of its settlers and inhabitants has been significantly influenced by the physiography of the Southern Highlands. The first white pioneers settled in the valleys, cutting forests and setting in motion a process that gradually diminished both natural and human resources.

Poor farming techniques, lack of arable land and widespread erosion created a standard of highly unprofitable agriculture in the region. By the early 1900s, exploitative mining and lumbering had also caused extensive damage to the lands surrounding the future Parkway. In the wake of this industrial progress, a destitute people were left who had no funds for roads, schools, public improvements or general personal needs. These conditions coupled with the poverty of the Depression,

made the coming of the Parkway a significant boost to the overall human conditions of the area.

In preserving, protecting, treating and utilizing these diverse natural and cultural resources, Parkway planners and designers were particularly challenged. Stanley Abbott, the former National Park Service's resident Landscape Architect and the Parkway's designer and first superintendent is considered the Parkway's environmental guardian. His approach and philosophy toward environmental planning can be summarized in his own words: "from air, a ribbon of concrete in a continuous broader ribbon of lovely unbroken green. The idea is to fit the Parkway into the mountains as if nature had put it there." During its 50 years of construction, the Parkway has been guided by three environmental principles:

1. Enough park width to enable a buffer zone on either side of the roadway, allowing for increased roadside beautification.
2. Elimination of major road crossings through the installation of bridges and infrequent spacing of access roads in order to minimize conflict with major auto routes.
3. Roadway will follow a path effecting the most scenic diversity in this region of the U.S.

A commitment to protect, maintain and be sensitive to the environment did not avoid two major hurdles that in today's complex political environment may well have halted the project. The first involved the resettlement of the Cherokee Indian Reservation, and the second was the Wilderness Society which protested the encroachment of a super roadway. The Indians were made a trade of land and money for their territory which fell along the Parkway route. The Wilderness Society was successful in influencing public opinion to delay construction. No doubt, the Wilderness Society's protests encouraged the adoption of maximum protective measures assuring preservation of the natural environment. In fact, the Parkway today is credited as being a catalyst for innovative environmental design.

The most highly touted planning concept was that of "scenic easements." Scenic easements refer to the right-of-way lands along the road which would be owned by the adjacent property owner, but controlled by the National Park Service for the purpose of protecting the natural setting. No commercial structures were to be erected on the lands and no trees or vegetation could be removed without express permission of the Park Service. This land protection tool has been viewed as an essential and effective means of protecting the visual quality of the Parkway.

Other unique features of the Parkway intended to preserve or enhance the natural environment were: Parkway structures which made extensive use of natural materials, earth tones and indigenous forms; curvilinear alignment that adapts sections of the roadway to the topography and minimizes visual and physical disruption; the use of frequent rest areas, scenic overlooks and picnic areas, that reduce congestion and general roadside impacts; high standards of roadside protection and landscape improvement both during construction and over the long term; and great attention to background and middle-ground views to enhance the aesthetic values of the visual resources.

Because of its success with these development practices, the Parkway has been credited with contributing to the nation's environmental awareness, particularly among road builders. Restoration and stabilization of disturbed environmental areas, protection of natural and cultural characteristics and respect for community values are commonly accepted principles today.

B. Impact of the Blue Ridge Parkway Today

In the absence of ongoing scientific study of Parkway environs--prior to and after the road's completion--even a general discussion of environmental effects becomes limited to an examination of current conditions and issues. At one philosophical extreme, the Parkway may

be viewed as an intrusion and disruption of both the physical and cultural environments. But the dominant view among Parkway historians, managers and visitors is of the Parkway as an unparalleled means of ensuring the best protection of resources while also providing a nationally significant historical recreational opportunity.

These two perspectives are pivotal in all current activities and future considerations for Parkway development and are manifest in the overriding need to balance the popularity of the Parkway and subsequent impacts on the environment with the desire to preserve and enhance the opportunities for recreational usage and enjoyment.

Usage of the Parkway has accelerated through the years. Visitation has steadily increased at a rate of about five percent annually throughout the 1980s. This percentage translates into an increase of more than one million visits, in addition to the more than 23 million visits to the Parkway recorded annually. During peak visitation periods (summer and fall), Parkway resources and facility capacities may exceed their limits. From the visitor standpoint the quality of the experience may begin to decline. Degradation of the natural environment is also inevitable, creating numerous and complex challenges for Parkway planners and managers.

This section will examine the relationship and effects of the Blue Ridge Parkway as a national recreational resource to those it serves--the general public--and that which it seeks to preserve--the physical environment and heritage of the Appalachian Region.

Impact on the Human Environment

The impact of the Parkway on the human environment fundamentally relates to the preservation of cultural, recreational, and land use

resources. The visitor's enjoyment and experience of the Parkway is derived from the quality of these characteristics, collectively.

Cultural Resources

The Parkway offers visitors a broad range of historic structures and related themes. As discussed in the Parkway's 1989 Statement for Management, several themes represent its cultural resources. They are: 1. Southern Appalachian folklife and its related structures (the Parkway has identified 99 historic structures); 2. Modes of transportation throughout the region's history--from Indian paths and wagon trails to canals and steam railroads; 3. Planning, development, construction and maintenance of a scenic motorway--the Blue Ridge Parkway, itself; and 4. The role of business and industrial giants in western North Carolina who had a significant impact on the surrounding mountain communities.

The cultural experience offered by the Blue Ridge Parkway of both past and present mountain culture, the dynamic nature of folklife and the changing character of rural life, as well as the inherent value to preserve local history and the mountain Appalachian environment have guided the activities and development of the Parkway throughout its history. The Parkway is viewed as a positive force in maintaining cultural and social traditions and values of the region.

The most recent Statement for Management (1989) and the results of the Blue Ridge Parkway's strategic planning process in 1985 identified numerous challenges to the cultural resources of the Parkway. These appear in Exhibit One. Exhibit Two provides an assessment of the condition and significance of Parkway Cultural Resources as it appeared in the Statement for Management.

CULTURAL RESOURCES

External Influences

Growing interest in cultural life, folkways and "real" folklife materials

Trends towards recreation experiences that are educational

Increasing role for educated volunteers and private interests

Impacts/Issues

Increased demand for new and varied cultural activities and programs

Opportunities to involve private sector in maintaining and sharing cultural heritage

Internal Influences

Increasing pressure to inventory cultural resources

Absence of definitive preservation guidelines and structural care data

Inadequate funding and increasing cost of maintaining structures

Need to improve decision making process

Deterioration (vandalism, fire, inadequate interpretation) of historic resources

Historic viewsapes and other cultural resources are threatened

Assessment of Cultural Resources

Park and Theme	Resource	Significance	Condition	Internal Threat	External Threat	Documentation
Blue Ridge Parkway						
Native Villages & Communities Southeast (I.B.8)	Indian Sites	Regional	Can't Evaluate	Can't Evaluate	Can't Evaluate	Can't Evaluate
Contacts of Native & Non-Native Peoples Changes in Native Life Due to Contact (I.C.2)		Regional	Good	--	--	Poor
Contemporary Native Cultures Native Peoples of the Southeast (I.D.9)	Cherokee Indians	Regional	Good	--	--	Good
Aboriginal Technology Quarrying (I.F.2)	Mica Quarrying	National	Can't Evaluate	Can't Evaluate	Can't Evaluate	Can't Evaluate
French Exploration & Settlement Atlantic (II.B.1)	French Broad River Basin	State/Local	Good	--	--	Good
American Revolution War in the South (IV.A.3)	Overmountain Victory Trail	Regional	Can't Evaluate	--	--	Good
The Civil War War in the East (IV.D.2)	Earthworks	State/Local	Poor	Moderate	--	Poor
Early Pathfinders (VI.A.1)	Boone's Trace	Regional	Can't Evaluate	--	--	Can't Evaluate

Assessment of Cultural Resources

Park and Theme	Resource	Significance	Condition	Internal Threat	External Threat	Documentation
Blue Ridge Parkway (Cont'd)						
Agriculture Era of Specialized Agriculture (VII.A.4)	Mountain Homesteads	Regional	Good	Low	--	Good
Commerce & Industry Commerce (VII.B.1)	Kanawa Canal	State/Local	Good	--	--	Can't Evaluate
Industry (VII.B.2)	Habry Flour Mill	State/Local	Good	Low	--	Fair
Transportation & Communication Transportation (VII.D.1)	Kanawa Canal	Regional	Good	Low	--	Good
Architecture Classic & Eclectic Revival (VII.E.3)	Moses Cone House	Regional	Good	--	--	Poor
Other Specialized (VII.E.6)	Cabins CCC and other Stonework	State/Local	Fair	--	--	Poor
Landscape Architecture (VII.E.7)	Parkway	National	Good	--	--	Poor
Literature, Drama & Music Music (VIII.A.3)		Regional	Assoc.	--	--	Can't Evaluate
Engineering Transportation Systems (VIII.F.2)	Motor Road	National	Good	--	--	Good
Other Structures (VIII.F.6)	Engineering Projects	State/Local	Good	--	--	Good
American Ways of Life Occupational Groups & Economic Classes (IX.A.4)	[Non-Coal Appalachian Culture]	Regional	Assoc.	--	--	Good
Recreation Unorganized Recreation (IX.D.2)	Motor Road	National	Good	Moderate	Moderate	Good

Recreational Resources

Among the principal management objectives for the Blue Ridge Parkway are to: promote public awareness of available recreational opportunities, interpretive programs and visitor services and to encourage the use of recreational resources in a manner that minimizes adverse effects on the Park and its facilities. A 1987 survey of visitors to the Parkway examined participation and interest in recreation activities. Driving for pleasure and sightseeing constituted the most important recreational activities. The second most frequent reason for visiting the Park, after an interest in the scenery, is to visit Parkway facilities and enjoy outdoor recreation.

The Parkway has 275 parking scenic overlooks and 17 developed areas for recreational and visitor services. Current plans provide for expansion of facilities in campgrounds, picnic grounds, concessions and interpretive/information facilities. The Parkway also provides a range of other recreational opportunities such as boating, canoeing, bicycling, hiking, horseback riding, rock climbing and more.

The ever-increasing popularity (and at times, congestion) of the Parkway, together with the influence of contemporary social and cultural values and limited funds to develop new recreational and educational programs have created several issues that now challenge Parkway managers. These have been identified both by the 1989 Statement for Management and the strategic planning process. They include:

- Exhibits are old, faded and lack "hands on" participatory experiences that today's technology readily provides (e.g., video touch screens).
- Interpretation is not relevant to current world views.
- Lack of low-cost information brochures on what to see and what to do.
- Alcohol and drug abuse, vandalism and malicious conduct from visitors have stretched law enforcement rangers thin and

resulted in an increasing number of problems at recreation facilities.

Land Resources

Perhaps most complex of all the elements affecting the human environment and impacted by human activity are land resources. Land use impacts are complicated by the nearly 5,000 adjacent property owners and neighbors along the Parkway boundary and the 270 public and private road accesses to and crossings of the Blue Ridge Parkway, as well as the numerous arrangements and controls for protecting scenic views and land resources.

The Parkway is protected by federal government ownership of more than 79,000 acres of the 87,000 acres in the right-of-way. The right-of-way strip was set at one thousand feet, with no section to be less than two hundred feet in width. Either spurred by existing land degradation and unattractive scenes or foresight for the preservation battles of today, Parkway planners insisted on obtaining a right-of-way of one hundred acres per mile in fee simple, plus fifty acres per mile of scenic easement control.

The most prominent theme of the relationship between the Blue Ridge Parkway and the lands surrounding it is the Park as a driving force for preservation and land control. To fulfill its objective of protecting and maintaining scenic values, some may argue land protection practices have redirected or refined the natural course of growth and development. Vegetation may be manipulated and forests confined, all in the name of visual aesthetics. Yet, the Parkway has had an overwhelmingly positive influence on land-use planning efforts and land-use policies that maintain the scenic integrity of adjacent lands and minimize sprawl, congestion and exploitative development practices. The irony is the beauty that has made the mountains so attractive is in danger of being spoiled by its popularity.

The Parkway has several values or objectives related to land protection that it constantly works to promote. The National Park Service describes the road as a highway that:

- is designated for noncommercial, recreational use;
- seeks to avoid unsightly buildings and other roadside developments that mar the ordinary highway;
- eliminates frontage and access rights and preserves the natural scenic values;
- preferably takes a new location, bypassing built up communities and avoiding congestion;
- aims to make accessible the best scenery in the country it traverses; and
- eliminates major grade crossings.

As expressed in the strategic planning meetings of 1985, in today's high-paced world, the Parkway "provides a place to escape stress, technology and overcrowding; renews the human spirit; and combines visual beauty with isolation."

Numerous forces from development pressures to lack of funds jeopardize these Parkway priorities. Major influences and their impacts as depicted by the 1989 Statement for Management and through the strategic planning conference are summarized in Exhibit 3.

LAND RESOURCES

External Influences

Lack of control of public/private accesses

Adjacent urban centers becoming popular tourist/recreation spots

Native Appalachian population declining and land ownership is shifting to developers and seasonal residents

Expanding residential development

Access from private and secondary roads

Internal Influences

Lack of comprehensive scenic resource inventory

Parkway land use maps and land data base require updating and revision

Lack of funds and personnel to complete all responsibilities

Impacts/Issues

Stimulating off-Parkway development and increased traffic

Increased congestion; rapid growth in surrounding areas, but, providing needed accommodations for visitors

Traditional land uses are changing from agriculture to commercial and low-density residential; lack of zoning or regulation on adjacent land threatens Parkway values and generates incompatible uses

Negatively affecting the Parkway scenery; diminishing rural agricultural scene

Potential incompatible land uses and unsafe conditions for visitors

Difficulty in tracking/monitoring land use changes and impacts

Difficulty in managing adjacent property

Maintenance of Parkway vistas at approved standards is declining

Impact on the Natural Environment

The Blue Ridge Parkway encompasses over 87,500 acres of lands and includes 1,250 different vascular plant species, 25 endangered and rare plant species, 4 endangered and rare animal species, 21 natural heritage areas, 110 miles of streams and 13 impoundments. The Parkway road provides access to and views of the Blue Ridge, Blacks, Craggies, Pisgah Ridge, Great Balsam, and Plott Balsam Mountain ranges.

Among the especially unique resources of the Parkway are the: high elevation rock outcrops, boulderfields emphasizing the extensive botanical and geological diversity of the Southern Appalachians, mountain bogs supporting rare plants and animals and numerous islands of undeveloped land supporting natural processes and providing protection from land development.

A discussion of the Blue Ridge Parkway's impact on the natural environment is complicated by its principal functions of managing and preserving natural resources. For instance, the management of natural resources on the Parkway requires manipulation of ecosystems. As an illustration, scenic views are created for the Parkway visitor, while simultaneously, the protection of rare plants and animals is sought as is mitigation of resource degradation and loss.

An evaluation of environmental impact is also affected by the limited baseline data and natural resource inventories. This limitation coupled with the lack of accumulated quantitative measurements makes it difficult to provide a comprehensive assessment of ecosystem trends and changes.

The National Park Service is actively pursuing steps to address the need for sound information on vegetation, animals, soils, hydrology, air quality and numerous other environmental categories that will guide present and future park programs.

Action programs are being developed and executed addressing the four major categories of resource management needs: 1. Landscape management; 2. Baseline inventories; 3. Outdoor recreation management; 4. Ecosystem/dynamic system management. Each is directly related to the primary values and purposes of the Blue Ridge Parkway. The Resource Management Plan discusses detailed action plans for each of these categories. Based upon this document, the Statement for Management, and telephone interviews with Park Service, Forest Service personnel and representatives of various environmental organizations, the following exhibits have been prepared summarizing the direct and indirect impacts of the Blue Ridge Parkway on elements of the natural environment.

Exhibit 4 identifies impacts on vegetation and flora. Exhibit 5 addresses wildlife. Air quality and water quality are discussed in Exhibits 6 and 7, respectively. Exhibit 8, extracted from the Statement for Management summarizes the significance, condition and threats of various subcategories of the Park's natural resources.

ENVIRONMENTAL ELEMENT: **Vegetation/Flora**

INFLUENCES/EXTERNAL FACTORS	IMPACTS/ISSUES
<p>Increased visitor use/indiscriminant off-trail use and increasing encroachment from timber, hunter and neighbor trespass</p> <p>Encroaching vegetation and plant succession</p> <p>Forest infestation by pests such as gypsy moth and woolly aphid</p> <p>Tree and brush damage and soil impaction/erosion from campers and equipment</p> <p>Roadway construction removed forest cover</p> <p>Mowing and vista management activities</p>	<p>Moderate to severe trampling of native and rare vegetation and disturbance of various ecosystems and habitats</p> <p>Scenic values are being eroded; intervention required to maintain views</p> <p>Potential defoliation and deforestation, increased fire hazards, adverse effects on aesthetics</p> <p>Potential structural damage of tree stands</p> <p>Opportunities for enhanced physical erosion in open areas</p> <p>Potential effects on rare and endangered species</p>

ENVIRONMENTAL ELEMENT: **Wildlife**

INFLUENCES/EXTERNAL FACTORS	IMPACTS/ISSUES
<p>In the safety of Parkway lands, deer population breed and multiply rapidly. Overpopulation of deer has been noted at Peaks of Otter and Doughton Park.</p>	<p>Agricultural damage in adjacent non-Parkway lands a frequent complaint and control measures may be necessary</p>

ENVIRONMENTAL ELEMENT: **Air Quality**

INFLUENCES/EXTERNAL FACTORS	IMPACTS/ISSUES
Increasing air pollution, (acid rain) attributable in some part to increasing Parkway visitation, 23 million visitors annually	Degradation of scenic, natural and cultural resources

ENVIRONMENTAL ELEMENT: **Water Quality**

INFLUENCES/EXTERNAL FACTORS	IMPACTS/ISSUES
<p>Increasing visitor usage is straining numerous Parkway sewage systems that operate at capacity</p> <p>Measures of increasing acid precipitation fallout (acid rain)</p> <p>Runoff water from the roadway and parking areas containing auto-related pollutants, such as hydrocarbons, oil, lead and acidic compounds</p> <p>Disposal of hazardous waste on adjoining lands</p>	<p>Potential adverse effects on ground water and/or stream ecosystems</p> <p>Long-term adverse effects on lakes, rivers, groundwaters and aquatic ecosystems; degradation of drinking water systems</p> <p>Potentially significant detrimental impacts on aquatic ecosystems, aquatic flora and fauna</p> <p>Potential adverse impacts on ecosystems and groundwater resources</p>

Assessment of Natural Resources

Park and Theme	Significance	Condition	Threats	Documentation
Blue Ridge Parkway				
Landforms				
Mountain Systems (I.B)	National	Good	None	Fair
Springs (I.E)	State/Local	Good	Internal/External	Poor
Cliffs and Gorges (I.G)	National	Good	Internal	Poor
River Systems (I.H)	State/Local	Fair	Internal/External	Fair
Lakes (I.I)	State/Local	Fair	Internal/External	Poor
Fossil History				
Age of Primitive Invertebrates (II.A)	Regional	Good	None	Can't Evaluate
Ecological Systems				
Needleleaf Vegetation				
Southeastern Spruce-Fir (III.A.1)	National	Poor	Internal/External	Fair
Hemlock (III.A.2)	National	Good	Internal/External	Fair
Broadleaf Vegetation				
Appalachian Oak (III.B.2)	National	Good	Internal/External	Fair
Mixed Mesophytic (III.B.3)	Regional	Good	None	Fair
Broadleaf and Needleleaf Vegetation				
Northern Hardwoods (III.C.1)	National	Fair	Internal/External	Fair
Oak-Hickory-Pine (III.C.2)	Regional	Good	Internal	Fair
Cliff Flora (III.C.6)	National	Good	Internal/External	Poor
Grassland and Forest Combinations				
Balds/Heath (III.D.6)	National	Poor	Internal/External	Poor
Balds/Grass (III.D.6)	National	Poor	Internal/External	Poor
Freshwater Ecosystems				
Non-Forested Wetland (III.E.1)	State/Local	Fair	Internal	Poor
Lakes and Ponds (III.E.2)	State/Local	Fair	Internal/External	Fair
Streams and Rivers (III.E.3)	State/Local	Fair	Internal/External	Fair

C. Impact of Facility Construction

Several long term objectives guide the continued maintenance and development of Park facilities such as campgrounds, lakes, and visitor centers. As outlined in the Statement for Management, these include:

- Work with local governments, adjacent landowners, and private interests along the Parkway to ensure ample accommodations and services for visitor use and enjoyment; help to ensure that recreational opportunities, visitor services, and public facilities in the Park and its vicinity are complementary and efficiently serve the needs of park visitors and local and regional residents.
- Provide appropriate visitor contact facilities and increase interpretation of significant natural and cultural features to help Parkway visitors understand, appreciate and properly use and protect the Park.
- Ensure that Park and concession facilities are the minimum necessary to provide for efficient administration and essential services for visitors and that those facilities deemed to be necessary are maintained at a high standard.
- Ensure that the needs of the handicapped are considered and provided for in current and proposed Park developments as feasible.

In support of these objectives, special projects are periodically initiated that necessitate the preparation of environmental assessments. The anticipated impact on the environment of these undertakings have largely been insignificant. The major consequences identified are enhanced enjoyment and safety of Parkway visitors.

For each facility construction project requiring an environmental assessment, a matrix of impacts has been prepared and follows in this section.

PROJECT TITLE: IMPROVE FACILITIES AT LINVILLE FALLS

NEED FOR PROPOSED ACTION: Improve hiking, alleviate vehicle crowding, provide toilets and visitor contact.

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Scenic walkway; expand parking; enhance restroom facilities & visitor contact		10-14 miles of foot trail	Expand parking; minimal restrooms & visitor contact
Vegetation	1 acre of tree cutting; possible erosion on trails		Possible soil erosion	Slightly reduced impact over full proposal; loss of ground cover due to clearing
Wildlife	No rare species; minor disturbance/elimination of small animal habitat			Minimal disturbance
Water	Some increased runoff			
Noise	Moderate increase in noise levels for several weeks during construction			Some increase in noise levels during construction
Socioeconomic	Employment opportunities to local labor during construction; alleviate vehicle crowding	Vehicle crowding and visitor congestion would remain		Local employment opportunities. Eliminate parking congestion

PROJECT TITLE: DAM SAFETY MODIFICATIONS, BASS LAKE

NEED FOR PROPOSED ACTION: Modification to meet federal guidelines for dam safety

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Various modifications to correct safety deficiencies. Lake is now drained.			
Vegetation/erosion/ sedimentation	Soil disturbances and potential increases in sedimentation; some tree cutting necessary	No effects		

PROJECT TITLE: DRAINING PRICE LAKE IN JULIAN PRICE PARK

NEED FOR PROPOSED ACTION: To repair Price Lake Dam

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
<p>IMPACT CATEGORIES</p> <p>Geological</p> <p>Sedimentation</p> <p>Wildlife</p> <p>Recreational</p>	<p>Drain Price Lake</p> <p>47 acre lake destroyed</p> <p>Minimal due to construction of riprap check dams</p> <p>Some impact due to adaptation difficulties; overall limited impact; drainage will occur during off-breeding season</p> <p>Loss of fishing opportunities</p>	<p>Not discussed</p>		

PROJECT TITLE: HEMPHILL KNOB DEVELOPMENT CONCEPT PLAN

NEED FOR PROPOSED ACTION: To remedy insufficient headquarters

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Construction of headquarters, facilities, roadway & parking area		Headquarters, roadway, visitor center, trail & parking	Headquarters on top of Hemphill Knob
Vegetation	9.5 acres will be disturbed/permanently altered		Additional acreage disturbed 10.5 acres and 1/2 mile trail	Significant impact on wildlife, rare species and other special populations and high cost of implementation
Wildlife	Permanent loss of habitat for small animals and some animal loss		Slightly greater effects on small animals	
Cultural/Socioeconomic	Positive impact on visitor enjoyment; availability of wheelchair access; Reduced leasing costs and personnel commuting costs	No wheelchair access; continued cramped Headquarters; Additional rental space needed General inconvenience to visitors will continue		

PROJECT TITLE: CONSTRUCTION OF SEASONAL QUARTERS AT CRABTREE MEADOWS CAMPGROUND

NEED FOR PROPOSED ACTION: Replacement of inadequate housing for seasonal employees at Crabtree Meadows Campground

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Replace current 2 bedroom trailer with 2 bedroom log house			
Vegetation	Short term erosion possible; Disturbance of 0.3 acres of land			
Wildlife	Minor disturbance to small animal habitat			
Socioeconomic	Improved responsiveness to emergency situations possible by Park			

PROJECT TITLE: DRAIN COLD PRONG POND AND BREACH ASHE PEN DAM

NEED FOR PROPOSED ACTION: 1. Reduce downstream hazards in event of failure; 2. Meet safety standards; 3. Determine what repairs are needed to make dam safe

ALTERNATIVES IMPACT CATEGORIES	Proposed Action	No Action	Alternative	Alternative
<p>Wetlands</p> <p>Cultural/historic resources</p> <p>Water/Aquatic resources</p>	<p>Drain Cold Prong Pond & Breach Ashe Pen Dam</p> <p>Historic wetlands exist 1 mile below dam;</p> <p>No federal. State-listed narrow leaf willow-herb and bog turtle. Measures identified to limit impacts</p> <p>Measures taken to reduce impacts and loss of aquatic life including: slow siphoning; no drainage during breeding season; no discharge to migratory water fowl breeding areas</p>	<p>No effects</p>		

PROJECT TITLE: MABRY MILL DEVELOPMENT CONCEPT PLAN, APRIL 1975
 NEED FOR PROPOSED ACTION: Restore Mabry Mill scene to a condition approximating its appearance in the 1930s

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative	Alternative
IMPACT CATEGORIES	Relocate Virginia Rt. 603; construct new facility; restore historic buildings		Remodel & expand existing restaurant	Remove restaurant to Rocky Knob Park	Locate Rt. 603 outside Park
Geological	5 acres of topsoil will be removed				
Vegetation	3 acres vegetation will be cleared, mostly small timber		Continued disturbance of natural environment		
Wildlife	Loss of habitat and food source will be minor				
Water and air	Runoff during construction will be minor. From permanent 19,000 sq. yds. of parking, some polluting runoff will occur	Air and visual pollution ongoing			Massive earth moving required
Cultural	Increased site preservation. Authentic restoration will be valuable cultural resource	Visitor information limited	Facility would remain an intrusion		
Socioeconomic	Construction activities + restaurant facility will create minor jobs. Relocation of Rt. 603 will reduce commercial traffic Tax loss to Floyd County of \$115 mil. annually	Rt. 603 would remain a hazard			Cost-benefits reduced

PROJECT TITLE: EXPANSION OF THE NORTHWEST TRADING POST

NEED FOR PROPOSED ACTION: The trading post is cramped and visitor flow is hindered. Wheelchair access is not possible and no visitor information services are present

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Construction of new wing; information station, draft demonstration, parking, handicap access/walkways		Alternative parking space in meadow;	
Vegetation	1.5 acres will be disturbed (1 acre of trees removed) Sedimentation will occur during ground disturbance activities			
Cultural/recreational	Enhanced enjoyment of visitor facility and provision for educational opportunities; service to handicapped persons	Cramped, uncomfortable visit and little room for nonstandard size vehicles to park	Safety hazard as visitors would need to cross state road. Short site distance for turnaround	

PROJECT TITLE: REMOVE OLD PISGAH INN AND ASSOCIATED BUILDINGS

NEED FOR PROPOSED ACTION: Significant deterioration of this historic 70 year old inn necessitates the complete removal of all surface materials to refurbish it and associated buildings

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Remove Inn & buildings; excavate site			
Vegetation Air/Water	Minor loss of trees to allow for new construction Insignificant sedimentation and erosion during removal May be positively affected by removal of propane gas tanks.			

PROJECT TITLE: CONSTRUCTION OF A HORSE TRAIL BETWEEN JAMES RIVER AND ROANOKE MOUNTAIN, VA

NEED FOR PROPOSED ACTION: To complete the trail system within the Jefferson National Forest

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Make connections to existing trails & construct 12 miles of new trails			
Vegetation	Little or no impact: May affect some state-listed plants Some erosion due to runoff may occur			
Wildlife	Adverse impacts likely to the Peaks of Otter salamander which would not migrate well to adjacent trail ground			

PROJECT TITLE: PROPOSAL TO EXPAND PISGAH INN FACILITIES

NEED FOR PROPOSED ACTION: To accommodate demands for overnight visitor lodging and expand employee living quarters

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Build additional lodging on north side of current Inn & employee quarters south of Pisgah Campground		Build additional lodging at Inn site, just south	
Vegetation	Construction could lead to sedimentation into Laurel Bog, proposed national heritage area Potential for exotic plant invasion (oriental bittersweet)		No effect on rare plants Limited potential for exotic plant invasion.	
Land Form	Slight modification; excavation of wooded area.		Little excavation required	
Social/Recreational	Minor pedestrian hazard as Inn workers must cross Parkway to work; greater privacy to employees from more remote living quarters	Visitor enjoyment would be significantly reduced. Visitation (and Park revenues) may decline	No impact on visitor access and/or convenience	
Historical			Inn eligibility for hist. reg. would necessitate extensive preservation	

PROJECT TITLE: DEVELOPMENT OF A FOLK ART CENTER, ASHEVILLE, N.C.

NEED FOR PROPOSED ACTION: To serve Parkway travellers with a variety of cultural and educational opportunities related to Appalachian/Blue Ridge area

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative	Alternative
IMPACT CATEGORIES	Locate center on 16 acre site near V.A. Hospital, Oteen, NC	No action	Locate on 8.5 acre site adjacent to Parkway, milepost 382	Locate on 10.5 acre site adjacent to Parkway, milepost 389	Locate on 8.5 acre site adjacent to Parkway, milepost 389
Vegetation	1.0 acres of mature oaks and pines cleared and several shrubs		As these alternatives represent only slight modifications from the proposal, the E.A. did not discuss their impact on the environment		
Water	Minor sedimentation				
Wildlife	Loss of some habitat and displacement of small mammals				
Air Quality	No significant deterioration of air quality				
Noise	No significant increase in noise levels				
Cultural	Extensive historic, cultural, education benefits				
Socioeconomic	Income to scores of craftsmen from craft sales; and increase in Park staff jobs				

PROJECT TITLE: PEAKS OF OTTER LODGING EXPANSION

NEED FOR PROPOSED ACTION: To accommodate increased demand for overnight visitor lodging

ALTERNATIVES IMPACT CATEGORIES	Proposed Action	No Action	Alternative	Alternative
Vegetation	Build the new wing in linear fashion with existing three buildings		Build new complex on hill behind current buildings	
Landform	Removal of several trees; exposure of unstabilized soils and possible sedimentation of Abbott Lake Excavation of open area; slight modification of bank		Removal of several trees. Excavation will disturb tree root systems Excavation into bank	
Recreation/ Socioeconomic	Enhanced visitor enjoyment and increased visitor spending/fund generation	May significantly reduce visitor enjoyment. No new revenues for facility improvements	Enhanced visitor enjoyment and increased visitor spending/fund generation	

D. Impact of Infrastructure Development

Several Blue Ridge Parkway objectives regarding the Park's resources have an indirect bearing on sustaining infrastructure, such as utilities, roadways, and waterways. One objective specifically addresses this need:

- Have an effective cyclic maintenance program that recognizes the need to repair or replace the Parkway's deteriorating infrastructure.

The reconstruction and expansion of the Park's infrastructure is an ongoing process. For this reason, the majority of Park projects necessitating environmental assessments pertain to these activities. The impacts vary considerably with the size and scope of the undertaking. Most activities however are small in scale and the impacts are inconsequential to Park resources.

The following exhibits summarize the environmental impacts of projects related to Blue Ridge Parkway infrastructure.

PROJECT TITLE: PROJECT 2H4, GRADING, DRAINAGE, BASE AND SURFACE TREATMENT

NEED FOR PROPOSED ACTION: To assist with completion of final section of Parkway, Section 2H

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
<p>IMPACT CATEGORIES</p>	<p>Work construction program including surfaced roadway, overlooks, clearing, excavation</p>			
<p>Land Form</p>	<p>Alteration of land form of significant magnitude</p>	<p>Land returned to private ownership and subject to development</p>		
<p>Water</p>	<p>Natural flow of surface water will be interrupted; low impact on water quality</p>			
<p>Vegetation</p>	<p>Some erosion--temporary in nature; small slides may occur; tree/shrub disturbance of 20 acres; overall moderate impact due to restoration plans</p>			
<p>Animals</p>	<p>30% of habitat to be destroyed on 20 acres. Small animals may be destroyed; no rare species in area</p>			
<p>Wilderness/Open Space</p>	<p>Positive impact from increased opportunities to enjoy terrain</p>			
<p>Recreational</p>	<p>Positively affected by increased recreational opportunities and scenic views</p>	<p>Gap in Parkway would remain and visitors would continue to travel a windy detour around US 221</p>		
<p>Socioeconomic</p>	<p>Temporary increase in employment opportunities during construction, plus minor long term increase in jobs</p>			

PROJECT TITLE: CONSTRUCT SECTION 2H, BLUE RIDGE PARKWAY

NEED FOR PROPOSED ACTION: To complete final section of Parkway

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Construct 3.8 miles to complete the Parkway		Improve existing US 221	Construct Parkway at higher elevation
Land Form	Significant alteration from cuts of 45 feet and fills of 40 feet		Unable to acquire frontage rights; would create substandard Parkway section	Long standing controversy with property owner makes this unfeasible
Water	Surface water flow redirected; low impact on water quality due to erosion control steps			
Vegetation	Some erosion of temporary nature; small slides or slumps on terrain could occur in supersaturated conditions; disturbance on 63 acres with 15 acres permanently destroyed; no rare species affected			
Animals	24% of 63 acres permanently eliminated as wildlife habitat. No endangered species impacted			
Wilderness/Open Space	314 additional acres of land dedicated to open space	Land returns to private owners; possible development		
Recreational	Positive impacts due to increased opportunities for recreational activities and public enjoyment; economic loss to commercial area along US 221 detour; some increase in employment from construction	Parkway visitors continue to travel narrow, winding detour		

PROJECT TITLE: ACCESS ROAD IN CONJUNCTION WITH THE SCIENCE MUSEUM OF VIRGINIA

NEED FOR PROPOSED ACTION: A road is desirable to offer Parkway travellers access to the museum of natural history and other resources of the Blue Ridge area

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Construct a 20 ft. wide, 1300 ft. long paved road at BRP's Mill Mountain		Same as Proposed, without special use permit to prevent through access between Mill and Yellow Mtns. Rds.	
Vegetation	1.25 acres of woodland would be cleared		(Same impact as Proposed Action)	
Water	Mild sedimentation; increased surface runoff			
Wildlife	Temporary loss of some wildlife; long term enhancement by opening forest canopy; some permanent habitat loss			
Air Quality	No significant deterioration in air quality			
Noise	No significant effect on ambient noise levels			
Cultural and Aesthetic	Significant positive impacts due to enhanced educational opportunities	Most Parkway visitors would be deprived of educational & cultural benefits due to access barriers	Increased traffic from commuter use	

PROJECT TITLE: PEAKS OF OTTER SEWAGE SYSTEM

NEED FOR PROPOSED ACTION: Inadequate and inefficient sewage disposal system

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Construct new on-site treatment plant w/ gravity flow system		Convey sewage to new package treatment plant, Big Otter River	Convey sewage to City of Bedford treatment plant
Water	Effluent discharge to Big Otter River	Periodic raw sewage pollution of Peaks of Otter Lake. Health hazard. Long term lake pollution	Moderate siltation along Little Stony Creek; effluent discharge into Big Otter River	Moderate siltation along Little Stony Creek and some effluent discharge into Big Otter River
Vegetation	Excavation for sewer lines and treatment plant would disturb mature vegetation. Minor erosion		Excavation for sewer lines would disturb vegetation	Excavation for sewer lines would disturb vegetation
Socioeconomic	Positive effects due to uninterrupted public services	Shutdown of concession operations. 55 jobs lost	Positive impacts due to uninterrupted service and possibility for future expansion	Would allow for future expansion of lodge and picnic area; additional expense to city for operations

PROJECT TITLE: RIGHT OF WAY FOR TWO INCH WATERLINE

NEED FOR PROPOSED ACTION: To provide a reliable and adequate water source for private property owners, Swiss Village Property Association

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
<p>IMPACT CATEGORIES</p>	<p>Burying a 2 inch waterline in an abandoned logging road that crosses the BRP</p>			
<p>Vegetation Socioeconomic</p>	<p>Minor disturbance to soils and plant life Great benefit to Swiss Village residents</p>	<p>Increased costs to residents to explore other options</p>		

PROJECT TITLE: TELEPHONE LINE RIGHT OF WAY, MCDOWELL AND MITCHELL COUNTIES, NC

NEED FOR PROPOSED ACTION: Provide telephone service for adjacent park landowner

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Construct underground telephone line 400 feet long			
Vegetation	Some minor disturbance though no effect on rare species; short term erosion possible; 0.5 acre will be affected			
Animals	Small animals will be affected through habitat disturbance			
Water	Some surface water runoff anticipated			

PROJECT TITLE: PAVED WATERWAY RIGHT OF WAY, ROANOKE COUNTY, VA

NEED FOR PROPOSED ACTION: County of Roanoke proposes paved waterway which will discharge water onto Park lands

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Construct a paved waterway within a drainage easement across BRP lands			
Vegetation	0.1 acre of land permanently disturbed; short term erosion possible; long term erosion will be reduced	Greater erosion from water discharging on Park lands		
Wildlife	Disturbance to small animal habitat, minimal			

PROJECT TITLE: TELEVISION CABLE RIGHT OF WAY, AMERICAN CABLE TV INVESTORS

NEED FOR PROPOSED ACTION: To provide television cable service to homes in the east section of Buncombe County

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	<p>Underground installation of cable service requiring right of way grant</p> <p>No impacts of consequence on natural or human environmental elements</p>		<p>Underground installation of revocable right of way</p> <p>No identifiable impacts</p>	<p>Alternative</p> <p>cable line pursuant to</p>

PROJECT TITLE: UTILITY RIGHT OF WAY, RUTHERFORD ELECTRIC MEMBERSHIP CORPORATION

NEED FOR PROPOSED ACTION: To supply electricity to an adjacent park landowner

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Gain right of way to construct underground power cable			
Vegetation Wildlife	Minor disturbance to trees and shrubs; short term erosion possible; 0.5 acre impacted Small animal habitats affected; complete adaptation likely			

PROJECT TITLE: PROPOSED UNDERGROUND TELEPHONE LINE

NEED FOR PROPOSED ACTION: To provide telephone service to the east side of Parkway

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Right of way grant for underground lands of the BRP		Right of way over private lands	
Vegetation	Minimal disturbance to place 1,500 feet of line	Violation of existing statutory requirements to provide right of way	Effect not discussed	

PROJECT TITLE: CONSTRUCTION OF HAUL ROAD, GRANDFATHER MOUNTAIN

NEED FOR PROPOSED ACTION: Access road from US Hwy 221 to the middle of the uncompleted Parkway to facilitate its construction

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Construct access road to BRP conforming to alignment of existing deeded private road easement		Aerial transportation of equipment	Develop another access road
Vegetation	Minor erosive effects; 1.3 acres of terrain cleared and permanently lost		Some erosion possible	Minor erosion possible
Noise	Increased noise pollution from construction and long term road usage		Increased noise levels	Increased noise levels
Socioeconomic	Expedite Parkway completion and save \$3 mil. in doing so	Would slow Parkway construction by several years	Costs outweigh benefits	

PROJECT TITLE: REPAIR TROUT LAKE DAM, WATAUGA COUNTY, NORTH CAROLINA

NEED FOR PROPOSED ACTION: Restore the dam to meet Federal Guidelines for Dam Safety

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Repair dam to withstand overtopping by maximum probable flood		Breach dam so that no artificial barrier exists on Flannery Fork Creek	Modify dam height to provide smaller lake
Water Quality	Siltation likely to increase during reconstruction Some erosion will occur which will affect water quality in short term	Not viable due to violation of federal guidelines for safe dams	Downstream siltation during removal Short term erosion	Downstream siltation during reconstruction Negligible soil erosion
Vegetation	Vegetation below structure will be lost during construction; slight loss of forest		Loss of vegetation during dam removal	Plant succession considered positive
Animal	No rare species affected; fish may benefit from grasses and stumps in lake basin		No long term impacts of forest populations	Positive impact on animal life due to smaller lake basin
Land Form	Excavation will be moderate		Significant change; bowl-shape lake basin retained	Appearance significantly altered
Recreational	Repaired dam will provide quiet restful area for fishing, hiking, horseback riding and picnicking		Loss of lake activities such as fishing. Loss of lake aesthetics	Varied recreational opportunities will continue on smaller scale
Historical/Cultural	Character and landscape created by Moses Cone will be preserved		Return to pre-dam conditions	

PROJECT TITLE: ROANOKE RIVER PARKWAY, VIRGINIA DRAFT ENVIRONMENTAL IMPACT STATEMENT

NEED FOR PROPOSED ACTION: To construct a ten mile extension of the Blue Ridge Parkway along the Roanoke River and a visitor center to serve the Parkway and Roanoke Valley

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Alignment 2 - 9.1 miles	No road extension; visitor center provided for Roanoke area	Alignment 1 - 9.6 miles	Alignment 3 - 9.7 miles
<u>Land Use</u>				
% of road in 100-year floodplain	8%		19%	36%
Acres of wetlands	20		25	25
Wetlands permanently lost (acres)	5		11	21
Acres of forest	135		123	133
Acres of water	4		2	6
Urban land	11		16	39
Grassland	11		30	28
<u>Land Ecosystem Impact</u>	moderate		moderate	moderate
<u>Water Ecosystem Impact</u>	moderate		moderate	moderate
<u>Cultural Resource</u>				
No. of archeological sites	6		13	14
No. of historic structures	2		3	3

PROJECT TITLE: ROANOKE RIVER PARKWAY CONT'D

NEED FOR PROPOSED ACTION:

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Alignment 2 - 9.1 miles	No road extension; visitor center provided for Roanoke area	Alignment 1 - 9.6 miles	Alignment 3 - 9.7 miles
<u>Community Impact</u>				
Residences affected	16		38	33
Community facilities	minimal		moderate	moderate
<u>Traffic</u>				
(Peak-hour wk day	moderate to heavy congestion		moderate to heavy congestion	moderate to heavy congestion
<u>Air Quality</u>	small increase in pollutants		small increase in pollutants	small increase in pollutants
<u>Noise</u>	small increase		small increase	small increase
<u>Visual Quality</u>	most desirable		fair	desirable

PROJECT TITLE: APPLICATION FOR A RIGHT OF WAY (ROW) PERMIT, APPALACHIAN POWER COMPANY, (FINAL EIS)

NEED FOR PROPOSED ACTION: To facilitate construction of 73.5 miles of 765 kilovolt transmission line in Virginia which would cross the Blue Ridge Parkway

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	1,800 foot long/200 foot wide ROW at milepost 159.9	Denial of ROW permit	440 foot long/200 foot wide ROW at milepost 187.3	880 foot long/200 foot wide ROW at milepost 164.1
Impacts at Parkway crossing:				
<u>Vegetation</u>	8.26 acres would be affected; 1% cleared of vegetation; 1.8 acres of trees topped; 11% temporarily affected; another .46 acre of vegetation would be removed adjacent to ROW	No effect	1.5 acres would be cleared of vegetation; clearing of major trees along ROW	1.4 acres would be cleared and .3 acres of trees cleared
<u>Water</u>	Exposed soils could lead to turbidity and siltation on temporary basis		Exposed soils could lead to turbidity and siltation on temporary basis	
<u>Aesthetics</u>	Adverse visual impacts: portions of 3 towers would be visible from road. From Shortt Knobs overlook, portions of 4 towers visible (minor visual intrusion).		Direct view of towers a certainty from Groundhog Mountain, towers and 6 miles of line and 24 towers visible (major visual intrusion).	Significant visual impact. Most of 2 towers completely visible. For 1.5 miles power line parallels Parkway with total view of towers. Overall negative impact on recreational/visual experience
<u>Noise</u>	Line noise audible at crossing		Line noise would be audible at crossing and radio interference likely	Line noise and radio interference would occur at crossing

E. Impact from Environmental Management

A principal responsibility of Blue Ridge Parkway staff is to preserve the general environmental resources of the Park. Three long-term objectives specifically address this:

- Safeguard the scenic corridor and ensure cultural and natural resource conservation and use by skillful management of the Parkway in cooperation with other agencies, organizations, and private landowners.
- Encourage appropriate safe, year-round use of the Park's natural, cultural, and recreational resources in a manner that minimizes adverse effects on Park resources and facilities.
- Identify and inventory potential and active threats or encroachments to the Park's resources and develop a process for monitoring and controlling these elements.

To satisfy these objectives and in response to certain adverse environmental conditions, the Park has undertaken a number of projects to improve and effectively manage the Park's general environment. The impacts of proposed actions and their alternatives are highlighted in the following exhibits.

PROJECT TITLE: GYPSY MOTH MANAGEMENT IN THE APPALACHIAN INTEGRATED PEST MANAGEMENT DEMONSTRATION PROJECT IN BLUE RIDGE PARKWAY, VA

NEED FOR PROPOSED ACTION: Infestation of the gypsy moth is building to defoliating levels in the forested areas on the Blue Ridge Parkway. If left untreated, defoliation and tree mortality will follow and could reduce the beauty of these sites

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Preferred Alternative: Use of Integrated Pest Management techniques at all BRP sites. (Chemical & mechanical)		Application of Bt to entire area	Application of difubenzuron over areas with large egg mass counts
Vegetation		Defoliation and some tree mortality		Could impact critical state-listed plants
Insects	Significant reduction in gypsy moth (g.m.) population	No reduction in g.m.	Significant reduction in g.m., butterflies and beetles	Significant reduction in g.m.
Wildlife		Loss of shade and food resources		
Human	Could pose some risks to workers	Public nuisance; loss of scenic values; possible transport to their homes	Could pose health hazard to workers and risk through ingestion of fish or meat; possible health hazard to workers	Could pose health hazard to workers and risk through ingestion of fish or meat; possible health hazard to workers
Water			Sensitive aquatic insects could be reduced in number	

PROJECT TITLE: MANAGEMENT OF CRAGGY GARDENS

NEED FOR PROPOSED ACTION: Protect rare plants that are threatened by visitor trampling and plant succession

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Intensive management of visitor activities and vegetation at Craggy Pinnacle			
Vegetation	<p>Minor disturbance due to soil testing; some impacts on tree populations due to selective removal; some mowing and burning; shrub removal necessary for overlook construction. Trail construction will require some tree removal</p> <p>Enhanced recreational opportunities due to expanded outreach program</p>	<p>Continued/increased trampling of rare plants</p> <p>Violation of Endangered Species Act</p>		
Cultural				

PROJECT TITLE: VISTA MANAGEMENT PLAN

NEED FOR PROPOSED ACTION: To decide how best to manage Parkway vistas and other openings to perpetuate scenic views

ALTERNATIVES	Proposed Action	No Action	Alternative	Alternative
IMPACT CATEGORIES	Continue present practice of mechanical clearing	No action: discontinue vista maintenance	Controlled burning	Apply selective herbicides on periodic basis
Vegetation	Continued cutting of locust sprouts results in crowding of other plants; accumulation of dead combustible material; fire hazard increase		50-60 acres of vegetation burned per season; some localized soil erosion could occur;	No significant environmental effects expected, but long-term chemical build-up is undesirable
Aesthetic	Vistas obscured by unmanageable species or insufficient maintenance	Few scenic views would be sustained in long term	Positive impact on views and open areas	
Water			Short term increases in infiltration and storm water runoff; slight chemical imbalance in water in short term	
Animal			Reduction in insects and invertebrates in burned area	

IV. MANAGEMENT PRACTICES

The Blue Ridge Parkway traverses dozens of political boundaries and subsequently has always demanded close coordination of management practices. Among the myriad complex problems that affect developments along a 1,200 mile boundary are utility routes, road crossings, and billboard and land use controls. Intergovernmental cooperation and coordination with nonprofit groups and other organizations have historically been of paramount importance.

The critical management issues facing the Park today are both internal and external in nature. They range from a lack of baseline data for natural and cultural resources to overuse of existing facilities, and are summarized in Appendix A.

The continued successful development of the Park is contingent on the effective management of current issues and the ability to anticipate and plan for future opportunities and challenges.

The National Park Service planning process provides the framework for establishing the Blue Ridge Parkway's resource management objectives and implementing strategies to accomplish them.

Characteristic of this process is that it is dynamic and continuous. It includes all the essential elements of a sound strategic management program including the assessment of existing conditions and future trends, the identification of critical issues, an evaluation of alternative actions and the selection of a preferred alternative approach to problem-solving. The process results in the creation of several planning documents used by National Park Service employees, the public and the Congress. Each of these is summarized below.

Statement for Management

The first step in the planning process is the development of a Statement for Management. This document provides the overall strategic direction for all planning and programming of the Blue Ridge Parkway. It presents the Park's mission, (what it is trying to accomplish); identifies major issues facing the Park in accomplishing its mission; establishes short and long term management objectives; and determines needs for additional information and plans.

The Statement for Management is evaluated and updated bi-annually by the park superintendent and regional director of the National Park Service.

A complete list of short and long term management objectives of the Blue Ridge Parkway as appears in the 1989 Statement for Management is included in Appendix B.

Upon completion of this document, an analysis is undertaken of the plans and tasks needed to address key management issues and achieve objectives.

General Management Plan (GMP)

The GMP is the operational plan that discusses broad strategies for resolving key issues and general recreation and resources management within a 15 year planning horizon.

No such plan exists at present for the Blue Ridge Parkway. Although a GMP is in the process of being developed, it is two-to-three years from completion. A Master Plan (predecessor to GMPs) was prepared in 1976, but never approved. Until a GMP is completed, the management objectives established by the Statement for Management guide day-to-day operations.

General management planning is a comprehensive process conducted by an interdisciplinary team of planning professionals and managers from the Park, the regional office and the Denver Service Center. As required by the National Environmental Policy Act, a range of alternatives for dealing with issues is formulated to evaluate different management approaches. Environmental assessments or impact statements describe potential impacts of alternatives and help guide the decision-making process.

One crucial management tool prescribed by the GMP is a system of management zoning for park lands and waters to designate where various management techniques will best fulfill park objectives. The management zoning system considers the capabilities of lands to support identified uses and guides overall management decisions.

Four primary management zones are identified for each park:

Natural Zone: includes lands and waters that will be managed to conserve natural resources and ecological processes and provide for their use and enjoyment by the public.

Cultural Zone: includes lands that will be managed for the preservation, protection and interpretation of cultural resources.

Special Use Zone: includes lands and waters that the National Park Service anticipates will continue to be used for activities not appropriate in other zones, such as commercial uses.

Park Development Zone: includes lands that will be managed to provide and maintain facilities serving park managers and visitors.

Implementation Plans

In the logical sequence of the planning process, implementation or action plans are developed based upon the issues and strategies identified in the Statement for Management and GMP. These action plans discuss how problems and issues will be addressed and provide

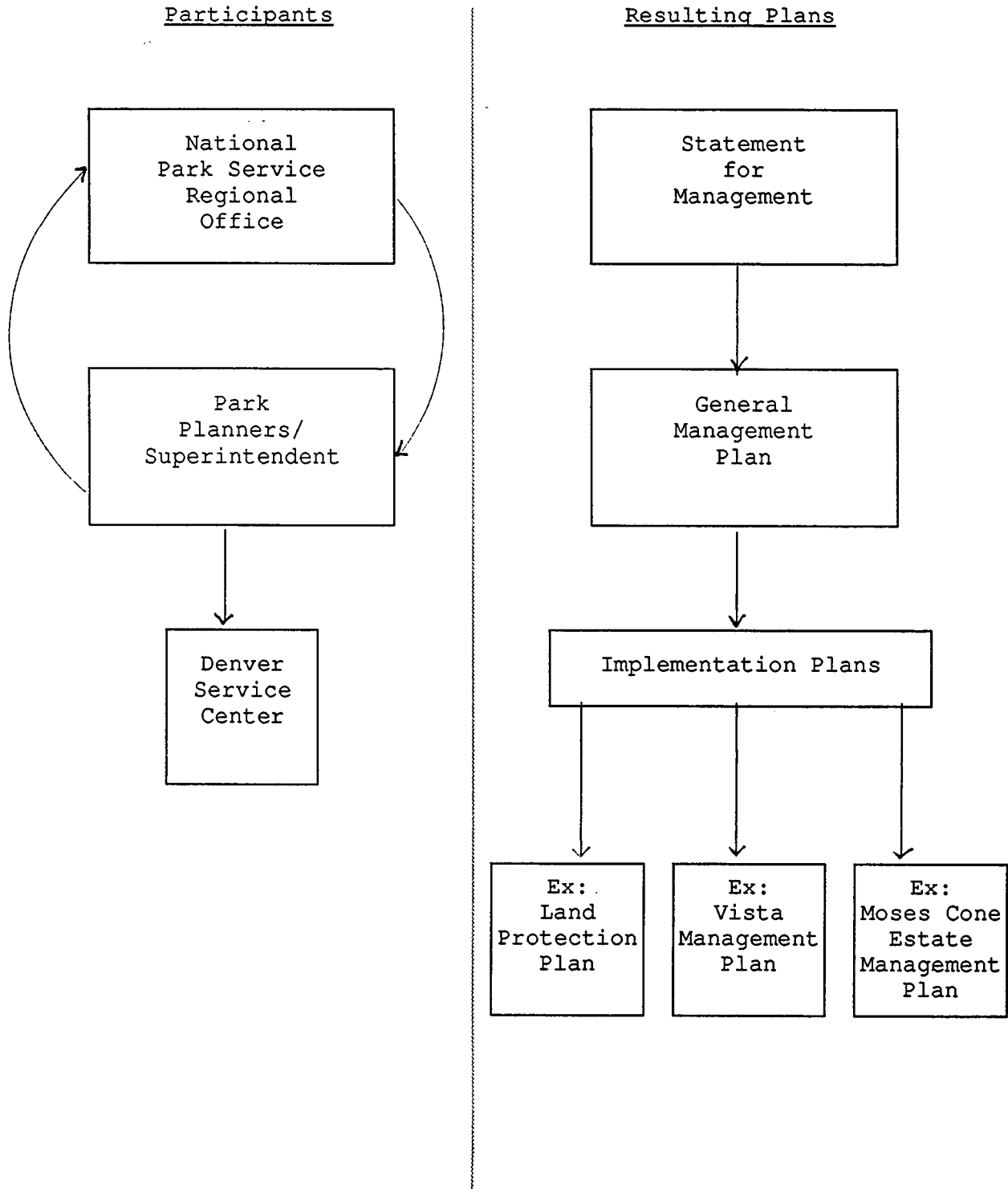
the basis for funding requests. Specialists from the Denver Service Center are typically involved in the preparation of these documents.

Among the most significant of action plans from the standpoint of the scope of information are the Resource Management Plan, Land Protection Plan and Development Concept Plan. A list of action plans for the Blue Ridge Parkway and their status (as of March 1989) from the 1989 Statement for Management is provided in Appendix C, Status of Planning. Most plans are updated on an as needed basis, however, the Resource Management Plan is updated annually and Land Management Plan, bi-annually.

Resource Management Plan (RMP) is illustrative of implementation plans. It documents the Park's natural and cultural resources, describes and evaluates its current resource management activities and prescribes an action program based on legislative and executive mandates, NPS management policies and related planning documents. The RMP certifies resource problems and resource data deficiencies and lays out a logical course for addressing them. It is a means by which resource management accomplishments can be measured against short and long-term objectives.

Exhibit 39 summarizes the planning process of the National Park Service and the Blue Ridge Parkway.

OVERVIEW OF THE PLANNING PROCESS



V. THE ENVIRONMENT IN THE ABSENCE OF THE BLUE RIDGE PARKWAY

The legacy of the Blue Ridge Parkway is broad and rich, has touched and will continue to affect millions of visitors each year. It represents the union of two of the most absorbing--and seemingly contrary--symbols for American civilization: the wilderness and the automobile. The special qualities of the Blue Ridge Parkway are perhaps best expressed by trying to imagine the environmental consequences--both human and natural--that would result from its absence.

Without the Blue Ridge Parkway, the public would not have had access to this ancient, remote natural mountain region. Not less substantial than the recreational loss would be the cultural loss, since the roadway also allows for the sharing of the diverse native Appalachian heritage. In all respects, the Blue Ridge Parkway offers a precious opportunity to escape the stresses of urban living, an opportunity all the more to be treasured since it can be enjoyed by so many.

Without the Parkway, it is likely that over the last half-century, the area and where it is situated would have been physically disrupted and potentially devastated. A history of poor farming practices, coupled with widespread tree harvesting, mining and other industrial activity would have gravely accelerated the erosion of the ancient mountain formations. The area would have been susceptible to haphazard and developmental sprawl from adjacent urban areas such as Asheville and Roanoke and resort towns like Boone, Blowing Rock and Cherokee. All of these potential risks have been offset through the establishment of a planned recreational refuge which is expressly intended to merge the modern convenience of the automobile with an appreciation and respect for maintaining our cultural past and preserving our nation's natural beauty.

VI. LESSONS OF THE BLUE RIDGE PARKWAY

The Blue Ridge Parkway is unique as both a Park and a highway. It cannot be duplicated. Today's economic, political and environmental circumstances forbid a project of this scale and dimension. Still, the Blue Ridge serves as an excellent model for the nation and the states when considering the creation of scenic byways for the public to enjoy.

The experience of the Parkway provides guidance toward the successful development of other scenic highways in many important areas. Among the noteworthy themes which stem from the Blue Ridge Parkway are: cooperation and consensus; balanced resource management; and the overwhelming public demand for a scenic, recreational motor road.

Cooperation and Consensus

Support of governmental agencies affected by or responsible for the Parkway is critical. Cooperation and open communication must be in place from the outset and be unflagging. Lacking this support, implementation and maintenance are exceedingly difficult.

Intergovernmental cooperation is necessary among local and state governments and federal agencies including the Federal Highway Administration, the U.S. Forest Service, the U.S. Park Service and the Bureau of Land Management.

For scenic byway programs, cooperation can be enhanced by:

1. developing a clear statement of purpose and objectives together with strategies for cooperative planning and implementation;
2. establishing mechanisms for joint decision-making; and 3. up-front clarification of roles and responsibilities.

External public cooperation and consensus building is equally important for early and continued success of any program that may be initiated today. Careful and considerate dealings with landowners and rural residents have been essential to achieving the goals of the Blue Ridge Parkway, especially to ensuring compatible land uses and to protecting the natural environment.

As is true with any effective planning process, the early involvement of individuals, organizations and groups (public and private) affected, significantly increases the likelihood of gaining commitment, support and momentum over the long term. Time, energy, money and effort can be saved by avoiding unnecessary conflicts or confrontations.

Balanced Resource Management

The continued success of the Blue Ridge Parkway and endeavors like it, requires that several "dichotomies" be carefully balanced. Among these are:

- Byway and corridor protection vs. development
- Regular through traffic vs. the impacts of tourist-generated traffic
- Environmental protection vs. highway improvements
- Vista management vs. natural evolution

Throughout its history, Parkway management has worked hard to "check" inappropriate development adjacent to the Parkway and overuse or abuse of the natural environment by visitors. Today, more than ever before, Parkway planners and proponents recognize the need for sound data about existing natural and cultural resources--so crucial to measuring changes, identifying needs and managing precious Parkway resources.

Public Demand

As demonstrated by the phenomenal increase in visitation to the Blue Ridge Parkway, public interest and need for natural recreational resources is growing, in part as a reaction against the rapid urbanization of the last decade. Increasingly, people seek opportunities to escape the stresses of daily life and city living. The growing interest in the Blue Ridge Parkway in recent years has created both problems and opportunities that other scenic byways can heed and learn from.

1. Assuming a sound implementation program and strong marketing effort, expect a high interest level and demand for highway usage.
2. Anticipate the inevitable pressure for increased commercial and residential development near these roads. Land use conflicts are likely to occur regarding issues of environmental protection and scenic values.
3. Prepare for and provide sufficient visitor services--both in terms of general public facilities and also interpretive services. The role of public education about the natural and cultural environments has always been an important one to the Blue Ridge Parkway, and one which offers any scenic byway program tremendous opportunities to provide visitors a wealth of information about the areas which they traverse.
4. Anticipate the possible degradation of natural areas around overlooks and public facilities--protective measures and precautions can be taken to avoid some of the problems that the Blue Ridge Parkway has faced in areas such as the Pisgah Inn, which has experienced significant trampling and other negative impact.

The overriding lesson to be learned from the Parkway for scenic byway programs even of a very small scale is: the projects are serious,

long term commitments which require extensive financial, organizational and human resources to initiate and to maintain. Both broad and strong support are critical to their long term success.

APPENDICES

APPENDIX A

MAJOR ISSUES

Changes in Traditional Land Uses

Traditional land uses adjacent to the Parkway are changing and local land use regulations and controls or the lack thereof, frequently permit or encourage land use that is incompatible with Parkway values. There is the potential conflict between off-Parkway development and land use versus the protection of the Parkway resources and values.

Access from Public and Private Roads

Access to the Parkway from public as well as private roads acts as a stimulus for off-Parkway development and can create increased traffic and congestion. Accesses can contribute to incompatible land use and create a visitor safety hazard.

Increased Visitation

Increased visitation over the past several years has resulted in over use of existing facilities and resource deterioration in several heavy visitor use areas along the Parkway.

Aging and Inadequate Facilities - Resource Deterioration

Although the Parkway as a whole has not reached its carrying capacity, many individual Parkway facilities and resources are becoming overcrowded and are in a condition that is beginning to reflect the adverse effect of age, visitor use, and maintenance attention. Most visitor facilities were designed and built before 1960 and, naturally, were built for a design load of 30% of existing level of use.

Lack of Base Line Data

There is a lack of base line data for the natural and cultural resources. Deficiency is resulting in the inability to ensure an accurate historic scene and to measure ecological changes objectively.

Lack of Demographic and Personal Information

There is a lack of demographic and personal information on the Parkway visitor. Lack of objective information inhibits management from being able to effectively provide for visitor wants and needs.

Declining Interest in Agricultural Lease Program

There is an apparent decline in participation and interest in the Agricultural Land Use Program. This program is essential in order to ensure the perpetuation of the cultural and traditional pastoral scene along the Parkway.

External Threats

External threats, including instances of forest decline, air and water pollution, exotic infestations, resource extraction, disposal of hazardous wastes, etc., are occurring adjacent to the Parkway and are threatening the natural resources.

Public Involvement

Public awareness on critical issues and management direction is increasing and, as this desirable public interest and concern grows, the Parkway must respond with an increasing commitment to create opportunities for public involvement.

Inadequate Visitor Services

Increases in visitor use are resulting in the inability to provide adequate visitor services and to adequately protect and interpret Parkway resources.

Deteriorating Facilities and Resources

Maintenance of Parkway facilities and resources is not keeping pace with established goals and standards.

APPENDIX B

MANAGEMENT OBJECTIVES

Long-Term Objectives

- Safeguard the scenic corridor and ensure cultural and natural resource conservation and use by skillful management of the Parkway in cooperation with other agencies, organizations, and private landowners.
- Cooperate with other Federal, State, and local agencies; private organizations and interests; and members of the public in helping ensure that land uses adjacent to the Parkway are compatible with long-term perpetuation of Parkway values.
- Cooperate with urban and non-urban areas along the Parkway to find innovative means of establishing a conservation and ecologic ethic that will create sound Parkway use patterns and foster understanding, appreciation, and protection of the Parkway and its resources.
- Work with local governments, adjacent landowners, and private interests along the Parkway to ensure ample accommodations and services for visitor use and enjoyment; helping to ensure that recreational opportunities, visitor services, and public facilities in the Park and its vicinity are complementary and efficiently serve the needs of park visitors and local and regional residents.
- Secure, through acquisition, boundary adjustment, or other means, a land base that is adequate to ensure long-term perpetuation of Parkway resources, efficient management, and provide diverse recreational opportunities for public use.
- Study trends that could eventually reduce reliance on private automobiles and still guarantee the leisure qualities of the Parkway.
- Encourage appropriate safe, year-round use of the Park's natural, cultural, and recreational resources in a manner that minimizes adverse effects on park resources and facilities.
- Provide appropriate visitor contact facilities and increase interpretation of significant natural and cultural features to help Parkway visitors understand, appreciate, and properly use and protect the park.

- Ensure that park and concession facilities are the minimum necessary to provide for efficient administration and essential services for visitors and that those facilities deemed to be necessary are maintained at a high standard.
- Promote public awareness of available recreational opportunities, interpretive programs, and visitor services, and of necessary safety considerations, by providing appropriate information to the public.
- Ensure that the needs of the handicapped are considered and provided for in current and proposed park developments as feasible.
- Develop, through research or other means, an adequate data base for the Blue Ridge Parkway which can be used in cultural and natural resource management.
- Inventory, document, and prioritize the natural, cultural, visual, and recreational resources into levels of significance in order to assure resource protection.
- Identify, protect, preserve, and maintain the park's cultural and natural resources in a manner consistent with legislation, management policies, and the purpose for which the park was established.
- Secure adequate information on historic resources of the Parkway to determine suitability for listing in the National Register of Historic Places and in the List of Classified Structures and Historic Landmarks.
- Ensure the perpetuation of cultural and traditional pastoral scenes by continuing the cooperative agricultural program of leasing Parkway lands to reflect adjacent and historical agricultural uses. Develop incentives to increase interest and motivate participation.
- Identify and inventory potential and active threats or encroachments to the park's resources and develop a process for monitoring and controlling these elements.
- Have an effective cyclic maintenance program that recognizes the need to repair or replace the Parkway's deteriorating infrastructure.

Short-Term Objectives

- Develop a comprehensive plan of access for the Parkway in coordination with local and State governments and the public to consolidate access points, to control hazardous crossings, and to reduce traffic congestion.
- Complete the parkwide General Management Plan.
- Secure Regional support, program funding, and initiate the parkwide Interpretive Prospectus.
- Initiate programming and secure funding for the preparation of a parkwide Cultural Landscape Plan.
- Immediately establish a mechanism within the park to assure that all developments being considered will meet current access standards.

APPENDIX C
STATUS OF PLANNING

<u>Name of Plan/Study</u>	<u>Preparer</u>	<u>Date Approved</u>	<u>Comment on Adequacy</u>	<u>Repository</u>
Statement for Management	RP&PS			
Master Plan	ESC	2/23/71	Inadequate Revised 1976 Not approved	
Parkwide Interpretive Prospectus	HFC		Needed	
Resource Mgmt. Plan	Hess/Teague	2/16/85	Adequate	N16
Trail Management Plan	Teague	3/20/86	Adequate	D30
Fire Management Plan	Teague/ Freeman	5/85	Revise	Y14
Boundary Management Plan	Freeman	3/85	Adequate	L24
Exotic Vegetation Plan	Teague	Underway		N50
Rare Plant/Habitat Management Plan	Teague	2/6/87	Adequate	N1621
Tree Management Plan	Teague	2/6/87	Adequate	Y1815
Wildflower Display Area	Teague	2/6/87	Adequate	N1617 D30
Agricultural Use Program	Freeman	12/3/85	Adequate	L30
Fishery Management	Teague	Underway		N1619
Statement for Interpretation	Peckham	4/87	Adequate	
Land Protection Plan	Hope	1/89	Adequate	Hq Lands
Moses Cone Estate (HRS)	Appalachian Consortium	11/87	Adequate	
Mabry Mill (HRS)	Appalachian Consortium	Underway		
Brinegar Cabin (HRS)	Appalachian Consortium	Underway		

Davey House (HRS)	Appalachian Consortium	Underway	
Moses Cone Estate (HSR)	Appalachian Consortium	11/87	Inadequate
Mabry Mill (HSR)	Appalachian Consortium	Underway	
Brinegar Cabin (HSR)	Appalachian Consortium	Underway	
Davey House (HSR)	Appalachian Consortium	Underway	
Craggy Gardens VC (IP)	HFC	1982	Inadequate
Humpback Rocks VC (IP)	HFC	1982	Inadequate
Museum NC Minerals (IP)	HFC	1982	Inadequate

A Bibliography listing the other projects and studies that have been conducted by sources other than the National Park Service relating to the Blue Ridge Parkway is available upon request from Parkway headquarters.

APPENDIX D

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APPENDIX E

TELEPHONE INTERVIEWS

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APPENDIX F

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