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New River Gorge National River
May 2003

Draft Climbing Management Plan
Environmental Assessment

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New River Gorge National River
West Virginia

UNITED STATES DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE
DENVER SERVICE CENTER

Contents

Introduction 4
Purpose and Need 5
Planning Goals 5
Regulatory Authority, Policy and Guidance 6
New River Climbing History 7
Overview of the Climbing Areas 8
Public Participation 10
Relationship of this Plan to Other Planning Efforts 11
Issues Beyond the Scope of this Plan 11
Issues Covered in This Plan 11
Impact Topics 14

Alternatives 19
Alternative A - No Action (Continue Existing Management) 21
Alternative B - Preferred Alternative 22
Alternative C 26
Environmentally Preferred Alternative 33

Affected Environment 35
A. Natural Resources 36
B. Cultural Resources 40
C. Visitor Use and Experience 43
D. Commercial Use 44

Environmental Consequences 46
Introduction 47
Environmental Consequences of Alternative A (Continue Existing Management) 51
Environmental Consequences of Alternative B (Preferred Alternative) 54
Environmental Consequences of Alternative C 57

Preparers, Consultants and References and Appendices 61
Preparers and Consultants 62
Agencies and Organizations 62
References 63
Appendix A – Definitions of Terms 66
Appendix B – Ethics & Education 69
Appendix C – Incidental Business Permit (Climbing) 73
Appendix D – Request for Permission to Use a Power Drill 81
Appendix E – Research Summary 84
Appendix F – US Fish and Wildlife Consultation 94
Appendix G – Peregrine Falcon Monitoring Protocol 97

INTRODUCTION

Purpose and Need

Rock climbing is one of the most popular recreational activities at New River Gorge National River. The extensive escarpment that rims much of the western portion of the gorge is composed of Nuttall sandstone, which is renowned among rock climbers as some of the finest quality climbing rocks in America. Since the establishment of the national river in 1978, the area's popularity has blossomed from a backwoods climbing area to become one of America's premier climbing destinations. More than 1,600 climbing routes are being used along the extensive cliffs, establishing New River Gorge National River as one of the largest climbing centers in the eastern United States. The number of climbers visiting the national river each year has grown significantly during the past decade.

The increased popularity and use of the New River climbing areas has resulted in identifiable impacts on such resources as soils, plant communities, and possibly wildlife species. In addition, the national river has received complaints indicating conflicts between commercial use groups, nonprofit groups (scouts, school groups, and church groups) and individual climbers. As climbing increases in popularity, so will the need for additional staff time to monitor and manage the activity of commercial, group, and individual use.

The purpose of this plan is to present a strategy for responding to the increasing visitor use, resource impacts, and user conflicts associated with rock climbing in areas within the boundaries of New River Gorge National River that are owned by the National Park Service. Climbing also takes place at the Gauley River National Recreation Area; however, not to the extent that it happens at New River, and most of the climbs are on private property. In the future, if the National Park Service acquires additional land, a climbing management plan for that area may be necessary.

The *Climbing Management Plan* for New River Gorge, which will provide management guidance for approximately the next five years, will be revised as monitoring and research data are acquired and updated or as use patterns change and new impacts are observed that may threaten national river values.

Planning Goals

The goal of this planning effort is to ensure the protection of the national river's natural and cultural resources while continuing to provide opportunities for a high- quality rock climbing experience. Specifically, this plan is intended to meet the following objectives:

- Create a management tool that will adequately address resource protection and visitor use issues related to climbing activities.
- Build partnerships with climbers, climbing groups and commercial organizations in managing climbing at the national river.
- Provide guidance on managing commercial and group use.
- Maximize input from the public and the climbing communities throughout the planning process.

The development of this climbing management plan, its subsequent implementation, and potential future revisions are intended to provide a forum for public involvement and collaboration. The National Park Service considers the long- term partnership with climbers and others interested parties to be a crucial component of an effective climbing management plan.

Regulatory Authority, Policy and Guidance

This *Climbing Management Plan / Environmental Assessment* is being prepared in accordance with federal law, regulation, and policy. The environmental assessment complies with the National Environmental Policy Act of 1969 (NEPA), and the plan complies with National Park Service (NPS) policy for implementation planning, as described in *Director's Order 2, Park Planning*. The environmental assessment and climbing management plan have been combined in this document to streamline the review process and facilitate understanding by the public.

Laws, regulations, and policies that govern the management of New River Gorge National River contain few specific references to climbing. Pertinent citations follow:

- National Park Service Organic Act of 1916

This act declares that the National Park Service is established to:

> . . . conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

- NPS *Management Policies 2001*

Section 8.2. of the Management Policies states, in part:

> To provide for enjoyment of the parks, the National Park Service will encourage visitor activities that:
>
> - Are appropriate to the purpose for which the park was established;
> - Are inspirational, educational, or healthful, and otherwise appropriate to the park environment;
> - Will foster an understanding of, and appreciation for, park resources and values, or will promote enjoyment through a direct association with, interaction with, or relation to park resources; and
> - Can be sustained without causing unacceptable impacts to park resources or values.

Unless mandated by statute, the Service will not allow visitors to conduct activities that:

- Would impair park resources or values;
- Create an unsafe or unhealthful environment for other visitors or employees;
- Are contrary to the purposes for which the park was established

Management controls must be imposed on all park uses to ensure that park resources and values are preserved and protected for the future.

Section 8.2.2 proceeds as follows:

> Examples of recreational activities that may be encouraged or allowed include, but are not limited to . . . mountain and rock climbing . . . However, not all of these activities will be appropriate or allowable in all parks; that determination must be made on the basis of park- specific planning.
>
> Restrictions placed on recreational uses that have been found to be appropriate will be limited to the minimum necessary to protect park resources and values, and promote visitor safety and enjoyment.

Other laws, regulations, and/or policies relevant to this plan are the following:

- Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision Making
- Council on Environmental Quality Regulations, 40 CFR 1500–1508
- Endangered Species act of 1973

New River Climbing History

Mountaineering and technical rock climbing have been recognized as legitimate activities in national parks for more than a century. Indeed, climbing began in areas such as Yosemite, Grand Teton, and Devils Tower before those lands officially became part of the national park system.

The New River Gorge area's climbing history, spanning little more than two decades, is rather short when compared to other national park system areas and eastern climbing destinations such as the Shawangunks of New York or even nearby Seneca Rocks. Serious climbing activities in the national river area began at the Bridge Buttress in 1974, when local climbers began climbing some of the moderate routes.

By the early 1980s climbing interest had begun to spread beyond the Bridge Buttress to Beauty Mountain, Junkyard Wall, and the extensive cliff that would later become known as Endless Wall. It was during the early 1980s that the first of the area's high standard climbs were established. By 1981 a handful of 5.10s had been established, and in 1983 the first 5.11 was climbed. (The rating ranges from 5.0 to a current maximum of 5.14, which indicates that the type of climbing is technical- free climbing, with 5.0 being easy and 5.14 being extremely difficult; see "rating" in appendix A.)

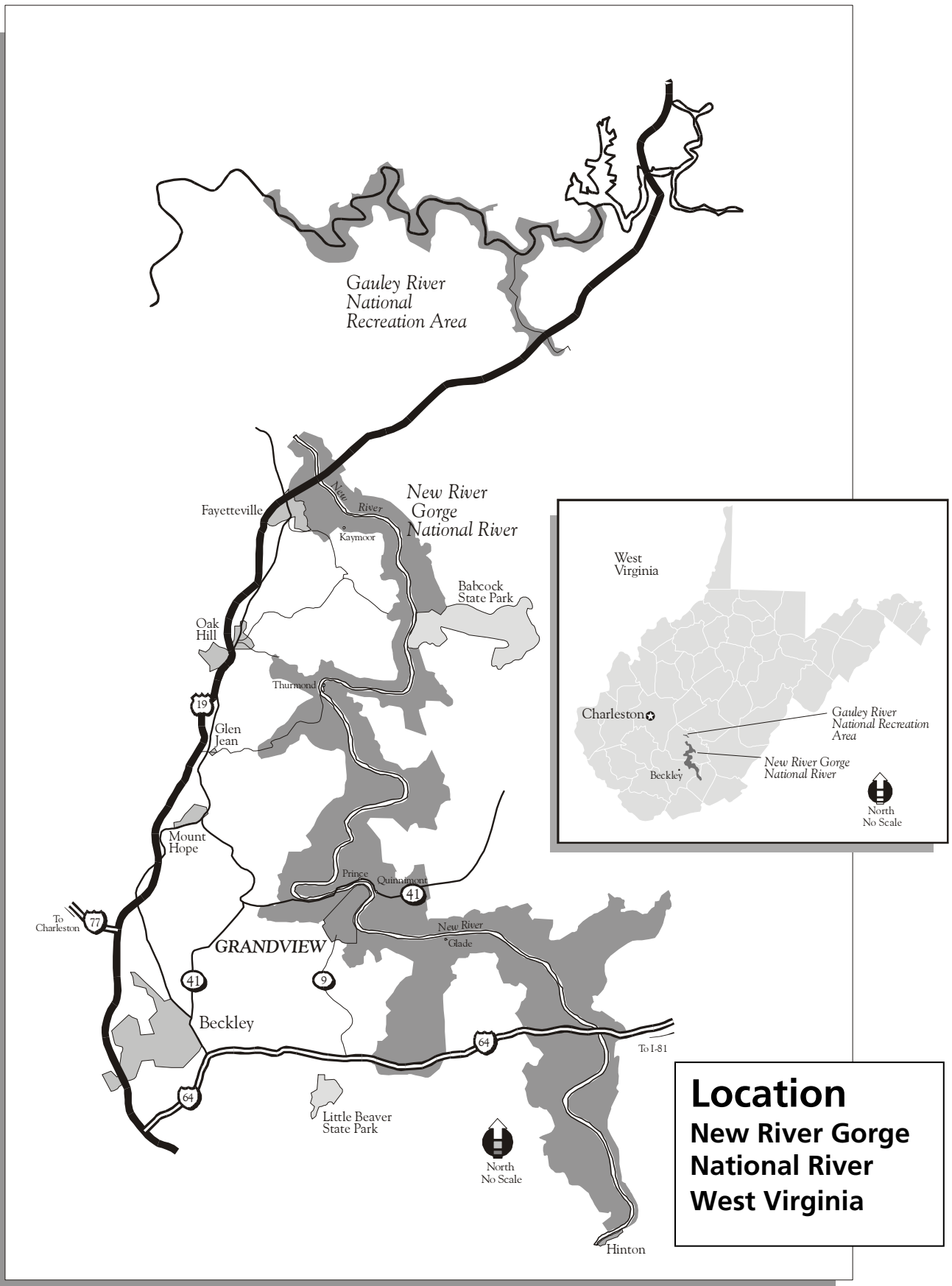
In the spring of 1984 the first compilation of routes was assembled, reflecting just more than 80 established climbs. It was also during 1984 that the national river received its first national media attention, when *Climbing* magazine featured a spectacular cover photo and article on this emerging climbing destination. The publicity soon attracted talented climbers from surrounding states.

The 1985 season brought one of the most significant periods of first ascent activity ever experienced at an area, as the core group of local climbers found many premium- quality climbs on the miles of cliff that rim the canyon. The two seasons that followed saw the number of routes grow exponentially, as did the area's reputation for excellent climbing. *New River Rock*, the first independent climbing guide to the area, first published in spring 1987, featured 465 climbing routes at four major areas. The number of visiting climbers soon grew well beyond the core group that had enjoyed the early years.

A movement to explore areas that previously had gone unnoticed, like the Ambassador Buttress and the sprawling cliffs of Bubba City, also started in 1987. During the first part of that season the 5.12 standard became firmly established, and that fall the first 5.13 in New River Gorge was climbed. The establishment of these high standard climbs also brought the first extensive use of fixed anchors as the primary means of protecting routes. The national spotlight focused on this blossoming mecca as the New River Gorge area quickly earned its well- deserved reputation for offering some of the best one pitch climbing in the country.

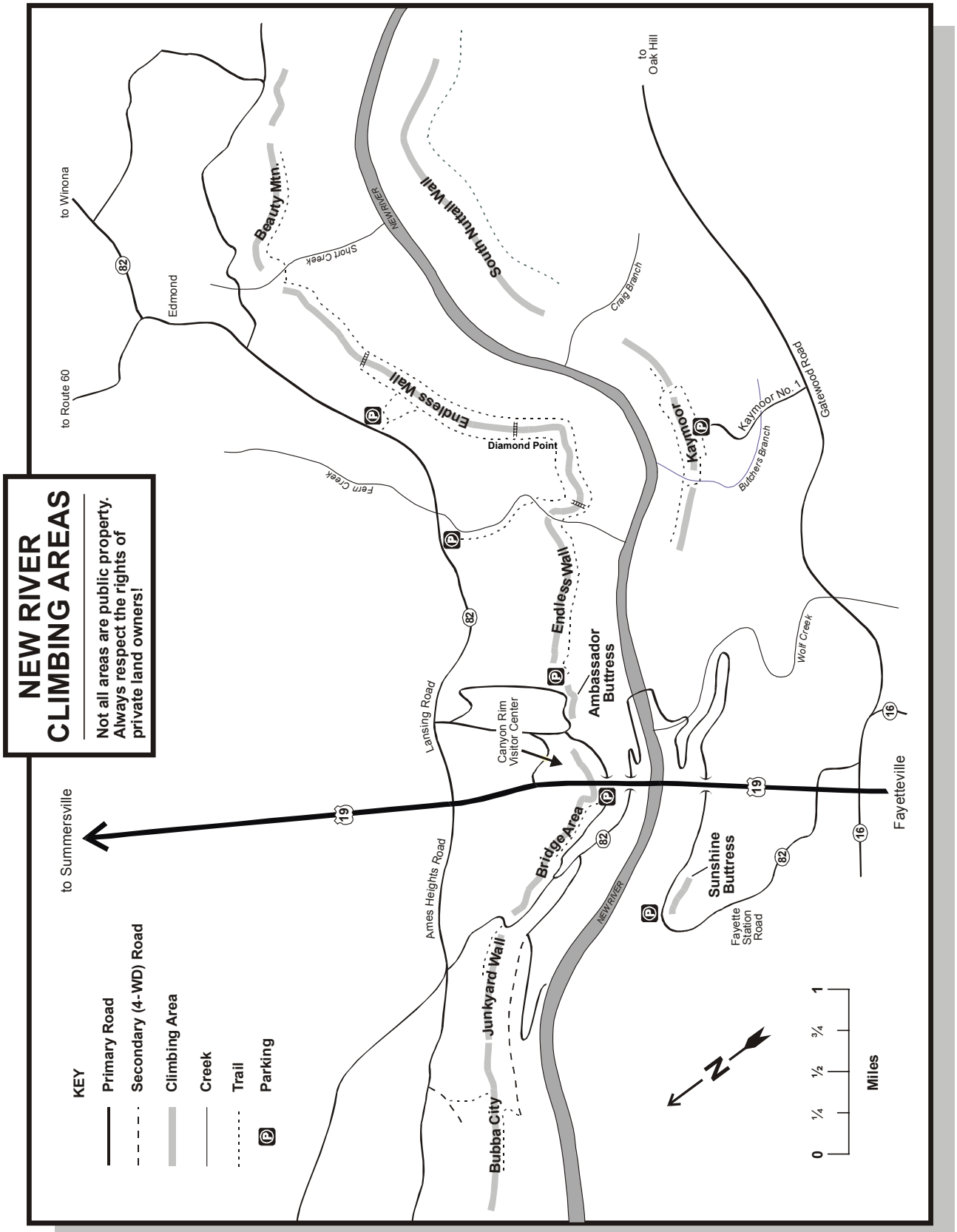
By 1990 the number of routes had grown to more than 1,200 as the park's popularity continued to grow. The first significant interest in the south rim area started in 1991, when Kaymoor became one of the area's more popular sites for sport climbing. Since that time the number of new routes being established has dwindled because most of the area cliffs have been explored. As climbing use began to increase, the National Park Service began to manage the use, providing an informational brochure and website information.

Today New River Gorge National River commands a world- class reputation as one of America's premier climbing destinations. The second edition of *New River Rock*, published in 1997, describes more than 1,600 routes, with a nearly equal number of traditional and sport climbs. Offering more than 1,600 routes, a balance of traditional and sport climbs, and a desirable climbing medium, the area is assured of continuing to attract climbers from around the world.



Location

New River Gorge National River West Virginia


NEW RIVER
CLIMBING AREAS
Not all areas are public property.
Always respect the rights of
private land owners!
KEY
Primary Road
Secondary (4-WD) Road
Climbing Area
Creek
Trail
Parking
to Summersville
to Route 60
to Winona
Edmond
Beauty Mtn.
Short Creek
NEW RIVER
South Nuttall Wall
Crag Branch
to
Oak Hill
Endless Wall
Diamond Point
Fern Creek
Kaymoor
Kaymoor No. 1
Butchers Branch
Gatewood Road
Endless Wall
Ambassador
Buttress
Lansing Road
Canyon Rim
Visitor Center
Wolf Creek
Bridge Area
Ames Heights Road
Junkyard Wall
Bubba City
NEW RIVER
Sunshine
Buttress
Fayette
Station
Road
Fayetteville
0
¼
½
¾
1
Miles
N

Overview of the Climbing Areas

The following information is a short summary of each major climbing area at New River Gorge National River covered by this plan. The number of climbs listed in each area is approximate.

Bridge Area: This is the most popular climbing area because of its easy accessibility and moderately easy routes. The area begins just upriver from the New River bridge and stretches downstream for about a mile. There are about 200 routes, and the rock outcrops are an average of 35 to 75 feet in this area.

Ambassador Buttress: This small crag is located between Bridge Area and Endless Wall. Though not heavily used, it provides about 30 short routes with relatively easy access.

Junkyard Wall: Within the national river boundary but under private ownership, Junkyard Wall provides more than 70 moderately easy routes. The cliff is about 0.5 mile long and reaches heights from 35 to 70 feet.

Bubba City: Downriver from Junkyard Wall, Bubba City cliffs are also in private ownership. There are more than 220 climbs in the area.

Endless Wall: With more than 675 routes and 4 miles of cliff, Endless Wall is the largest climbing area in New River Gorge National River. The cliff face mostly ranges between 60 and 100 feet, but some areas rise to nearly 150 feet.

Beauty Mountain: Beauty Mountain is upriver from Endless Wall. The cliff face in this area is about 0.75 mile long and 60–120 feet high. Beauty Mountain has about 120 established routes.

Sunshine Wall: Across the gorge from the Bridge area, Sunshine Wall is more than 1 mile long. There are only about 25 documented routes in the area.

Kaymoor Area: The Kaymoor climbing area is across the river from the Endless Wall and opposite the Diamond Point overlook. The area, with about 120 climbs, is popular with sport climbers.

South Nuttall Wall: This section of cliff, upstream of the Kaymoor Area, is the least developed climbing location in New River Gorge National River. There is not an established trail system for access to the cliffs, and a longer hike in is necessary than at most other sites. South Nuttall Wall has not been included in any of the published climbing guides. For many years this area did not contain any sport routes, although a number of sport routes were established in the late 1990s. There are an estimated 75 routes on this section of cliff.

Public Participation

Public involvement is required by law in the process of preparing and implementing management plans for units of the national park system. In particular, the National Environmental Policy Act requires that the public be given an opportunity to review any proposal for management action by a federal agency that is likely to have a significant effect(s) on the human environment, or if a proposal is a significant change of direction from existing plans.

The ultimate success of any management plan depends in large measure on support from the public. Therefore, a primary goal of the National Park Service is to engage the interested public at the outset of any planning effort and to build and sustain a cooperative, ongoing relationship between local citizens and businesses, public interest groups, and park managers. The development of a climbing management plan for New River Gorge National River is intended to be a collaborative process. National river values will be best protected and enjoyed if members of the public, including climbers, are incorporated into the planning process.

To promote this cooperation, the National Park Service conducted public meetings in October 2000 and April 2001 to gather input for the plan. The people who attended these meetings were primarily from the climbing community and local climbing guide services. In addition, a newsletter was mailed out in November 2000 to the national river's mailing list to explain the process and solicit input.

Relationship of this Plan to Other Planning Efforts

This *Climbing Management Plan* is the activity- specific document that will implement the general guidance outlined in the applicable *General Management Plan* of New River Gorge National River. The *Climbing Management Plan* will be revised as needed to conform with the management decisions reflected in the *General Management Plan*.

The *General Management Plan* for the New River Gorge National River published in 1982 mentioned that climbing activity was generally limited to the rocks and cliffs near Fayette Station and below the Beauty Mountain overlook. A statement in that document further indicated that the popularity of rock climbing was increasing and that several whitewater rafting companies had opened rock climbing schools to further serve their customers and to create more local interest in the sport. It said, "Levels of use or new or unusual forms of recreation (such as hang- gliding, rock climbing, dirt bicycling) will be managed to avoid problems of visitor safety, conflicts between uses, or resource impacts." Within the next few years, it is expected that the national river's Gorge *General Management Plan* will be revised.

Issues Beyond the Scope of this Plan

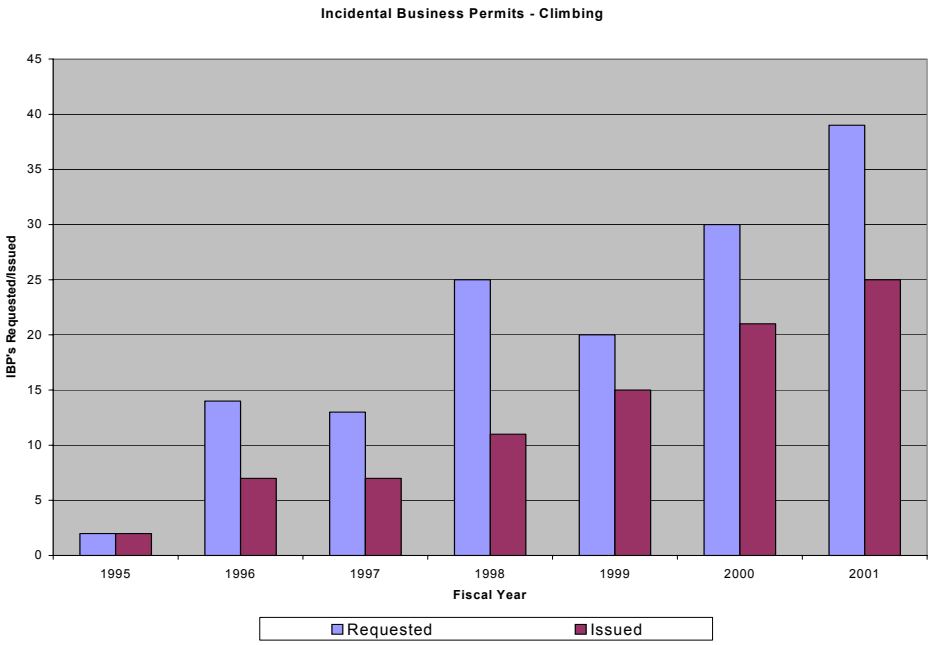
The climbing areas in New River Gorge National River and Gauley River National Recreation Area are situated on a mixture of public (NPS) and private lands. It is estimated that 60%–70% of the more than 1,600 climbing routes are on public lands. Most private landowners have permitted climbing on their property, but parking and trail access remain a problem at several key sites. The national river staff has worked with climbing groups to identify access needs and to develop short-term solutions, but continued access to the climbing sites on private property remains a primary concern of the climbing community.

The resolution of private landownership in the national river and the potential for access restriction is a major issue that is outside the scope of this plan. The issue of land acquisition will be addressed when the New River *General Management Plan* is revised, while the planners are considering appropriate recreational uses throughout the national river.

The general lack of parking, or inadequate parking, is an issue at all the national river's climbing areas. Another primary concern is a lack of restroom facilities and trail access to some popular climbing destinations. Parking for these locations is extremely limited, so that visitors often must park on the shoulder of the road. This can be dangerous, and climbers parking on private property can cause conflicts with local residents. Long- term solutions for recreational access must include consideration of other user groups and activities; thus, a better time for addressing that issue would be when the national river as a whole would be considered during the revision of the *General Management Plan* or in other future planning. Strategies for resolving the issue might include working with partners to suggest other feasible sites for recreational facilities and developing a site design to improve facilities, including parking and restrooms at climbing areas.

Issues Covered in This Plan

The National Park Service and the public identified issues during scoping for this project. After the issues were identified, they were used to help formulate the alternatives. Impact topics were then selected for detailed



analysis on the basis of substantive issues, environmental statutes, regulations, executive orders and NPS *Management Policies* 2001. A summary of issues is given below.

Group Use

The demand for business permits to conduct rock climbing instruction and guiding services has increased steadily since 1995, as shown in the graph above. At the same time, the number of large groups requesting permits to climb in the national river, including church, scouts, and school groups, has increased. National river staff and local climbers report that many large groups are found using the area without a permit. Use by commercial and noncommercial groups has grown, and that has increased the competition for the relatively few easy routes available. Such an increase in activity can lead to the perception of crowding and overuse, affecting not only client(s), guide(s), and groups, but also other climbers and recreationists. Members of the national river staff frequently have observed the difficulty that large groups have caused for individuals or small private groups trying to reach the easier climbs in the popular areas.

In addition, large groups and increased use of commercial guide services have led to overuse and adverse resource impacts. For example, the Bridge Buttress climbing area is now heavily eroded at the top and bottom of the cliff band. Large groups and nonaccredited guide services using that area have caused safety concerns, particularly with respect to the competency of guides and group leaders and guide/guest ratios.

Visitor Safety

The management policies of the National Park Service recognize that many natural, cultural, or recreational environments may be potentially hazardous to visitors. This is especially true of high- risk, high- adventure activities, such as rock climbing, which may pose a personal risk to the participants. Often these hazards are beyond the control of the National Park Service and require a certain assumption of risk by the visitors participating in such activities.

Although a unit of the national park system cannot remove or eliminate all hazards and risk, it will strive to recognize threats to public safety and take appropriate action to mitigate those threats where practical. Mitigation may

be in the form of warning signs, physical barriers, educational programs, and, in some instances, closure of all or part of an unsafe area. New River Gorge National River has worked with the climbing community to develop mutually beneficial solutions that address identified hazards, and this cooperation will continue.

Trails and Ladders to Climbing Areas

A network of trails leading to and from popular climbing areas and along the top and bottom of the cliffs has been established on public and private lands throughout the national river area. Ladders have been constructed at several locations to allow climbers quick access from the top to the bottom of the cliffs without the need to rappel. The creation, maintenance, and management of this trail network is an issue because many of the trails are poorly located (they may be in sensitive or critical habitat areas for plant or animal species) or they were built with no formal trail standards or are unnecessary duplicates. Many trails were created on private lands that have since become a part of the national river's lands, and now they need to be inventoried, upgraded, possibly relocated or closed, and formally incorporated into the national river's trail plan.

The multiple ladders along the Endless Wall were built and installed by climbers while the property was privately owned. After this area was acquired by the national river, the responsibility for the maintenance and repair of these ladders has become an issue.

Fixed Anchors

The use of power drills has permitted the relatively quick and easy placement of approximately 500 sport routes (all fixed anchors) and 200 mixed routes (some fixed anchors) at New River Gorge National River. Because of concern about possible resource impacts from the sudden increase of new routes, the superintendent of the national river implemented a ban on the use of power drills in 1995 on NPS- owned land, but the use of hand- drilled anchors is still allowed. The ban on power drills has proven highly effective in controlling the proliferation of fixed anchors on NPS property. At present there is no procedure for anchor replacement.

Chalk

The gymnastic chalk (magnesium carbonate) used by climbers to improve their grip while climbing can come off and leave a stain on the rock, which some may view as an objectionable visual impact. Most of the chalk used by climbers is white and is noticeable on the dark- colored sandstone rock formations from a considerable distance. In addition, there is concern that chalk alkalinity might affect the chemical balance of the parent rock and surrounding soils, resulting in adverse impacts on micro flora and fauna. Fungi are likely to be the species most vulnerable to impacts from chalk because of their growth requirements and sensitivity to climbing impacts. Decisions need to be made about whether chalk use should continue to be unrestricted, whether the national river should designate chalk- free zones, and whether chalk use is affecting the flora and fauna in the national river.

Resource Monitoring

As climbing has increased in popularity, the natural and cultural resources in the national river have been affected, including plant and animal species of concern. There has not been an overall program in place to monitor and document how these resources have been affected by increased climbing use.

Peregrine Falcons

Whether climbing activities have prevented peregrine falcons from nesting or whether peregrines have decided not to use the area for other reasons is not clear. The area known as the Endless Wall has potential as a nesting site for peregrine falcons in the New River Gorge (Stihler, biologist West Virginia De-

partment of Natural Resources, memorandum dated April 2000). On the basis of the presence of falcon habitat, the West Virginia Department of Natural Resources, Nongame Wildlife Division, decided in 1987 to use New River Gorge National River's Endless Wall for one of two peregrine falcon reintroduction sites in the state. Although a pair of falcons set up territory on the Endless Wall in 1991, they did not nest. An additional study (Britten 2001) has stated that the area is suitable for peregrines.

During the hacking period, between 1987 and 1990, 30 young peregrines were released at the Endless Wall. Since then, much debate has centered around the failure of the peregrines to establish nests in the area. Biologists have said they believe that human disturbance during the courtship season could be a contributing factor in the peregrines' failure to establish breeding territory and nests (Britten 2001; Richardson and Miller 1997; Stihler 2000).

During the period of reintroduction and for several years following the initial release, no effort was made to protect any part of the Endless Wall from human disturbance during the courtship period from mid- February to late April. The volunteer closures implemented during summer were restricted to protecting the hacked birds at the release site. Birds that returned to the hack site in early spring would have shared the same area with climbers and other visitors who prefer the warmer south aspects offered by the Endless Wall.

Although falcons have been observed along the Endless Wall since the hacking program, there is no evidence that any falcons have established nests in the area. Recreational activities, including rock climbing, have the potential to disrupt cliff bird communities because such activities overlap spatially and temporally with bird use of the cliffs (Knight and Cole 1995). Activities such as rock climbing can affect raptors, including peregrines during the courtship period, even when climbers do not come into direct contact with the birds (Richardson and Miller, 1997). More information about the current status of the peregrine can be found in the "Affected Environment" chapter.

Cultural Resources

Humans have occupied the New River Gorge area for at least 15,000 years. The rich record of human presence is represented throughout the national river in archeological resources, historic structures and districts, and cultural landscapes. There are numerous prehistoric archeological sites within the boundaries of the national river and at least 13 identified or potential cultural landscapes. In addition, the list of classified structures at New River Gorge National River includes 68 structures, many of which are in the northern part of the park. Climbing activities on the sandstone cliff faces in the lower gorge (or northern area) could directly and indirectly affect cultural resources at New River Gorge National River.

Impact Topics

After issues were identified and alternatives and mitigative measures were formulated, impact topics were selected for detailed analysis based on substantive issues, environmental statutes, regulations, executive orders and NPS *Management Policies 2001*. Specific impact topics are summarized in the following paragraphs, with an analysis of each, and the rationale for selection or dismissal is discussed.

Impact Topics Analyzed

A. Natural Resources

(1) Soils. Soils are being considered because there are concerns that climbers compact soils, especially at the tops and bases of cliffs. Soil compaction has been observed at the Bridge Buttress areas and at many of the other popular climbing areas such as Endless Wall and Beauty Mountain, although not to the same extent. The 1916 NPS Organic Act

mandates that the National Park Service conserve resources such as soil. NPS policy requires that all the components and processes of naturally evolving park ecosystems be preserved unimpaired.

(2) Wildlife and Vegetation. Climbing causes vegetation loss or degradation, and it also can cause habitat loss or degradation, as well as wildlife disturbance. NPS policy to preserve all the components and processes of naturally evolving ecosystems includes the natural abundance, diversity, and ecological integrity of plants and animals. Through surveys, a number of West Virginia Natural Heritage Program rare plant and animal species are known to exist at climbing areas in the national river.

(3) ***Species of Special Concern (Threatened, Endangered, Candidate, and Rare Species), including Peregrine Falcons.*** The Indiana Bat (*Myotis sodalis*) is listed as endangered in its entire range, which includes West Virginia. The National Park Service has consulted with the U.S. Fish and Wildlife Service, and that agency has indicated that there are no known hibernacula (roosting areas) for the bats in the immediate area and that the alternatives of this plan would not have an adverse impact on this species. There are no records that any other federally listed threatened or endangered species inhabit the climbing areas of the national river. (U.S. Fish and Wildlife Service, Towner, memorandum, October 2001 — also see appendix F). Occasionally, transient species such as the bald eagle could stop in the area briefly.

The peregrine falcon, a species of concern, has been recorded in the area. A hacking program to release young birds was accomplished between 1987 and 1992 in the Endless Wall area.

B. Cultural (Archeological, Historic Structures / Buildings, and Cultural Landscapes) Resources:

Cultural resources are archeological resources, cultural landscapes, historic structures and districts, and ethnographic resources. The following regulations require the consideration of impacts on cultural resources that are eligible for listing or are listed on the National Register of Historic Places (national register).

- National Historic Preservation Act, as amended in 1992(NHPA), (16 USC 470 *et seq.*)
- National Environmental Policy Act of 1969 (NEPA)
- NPS Organic Act of 1916
- NPS *Management Policies 2001*
- DO- 12 *Conservation Planning, Environmental Impact Analysis and Decision- making,* 2001
- DO- 28 *Cultural Resources Management Guideline* 1998

Evidence of archeological resources, historic structures and districts, and cultural landscapes can be found in abundance throughout New River Gorge National River.

(1) Archeological Resources: The National Park Service defines archeological resources as "any remains or physical evidence of past human life or activities which are of archeological interest, including the record of the effects of human activities on the environment" (DO- 28, 177). A phase one research archeological inventory and evaluation conducted at New River Gorge National River in fall and winter 1981 by Paul Marshall and Associates, under contract with the National Park Service, examined the entire national river for archeological resources. The National Park Service conducted subsequent archeological surveys in the 1980s and 1990s for specific development projects at Glen Jean in 1987, Sandstone Falls in 1989, Canyon Rim Visitor Center in 1990, Grandview Sandbar and Army Camp in 1997, and for the Fayetteville Trail in 2001. The state of West Virginia conducted archeological surveys in 1997 for a proposed New River Gorge Parkway between Hinton and Sandstone in 1991 and 1997. In addition, the National Park Service completed archeological clearances for projects to improve or relocate trails and parking lots in the northern part of the national river to facilitate

recreational access at Nuttall Trail 2000, Fern Point Trail 1998, and at Bridge Buttress in 2002.
New River Gorge National River is in the process of developing a predictive model for prehistoric and early historic archeological site locations at the national river (David N. Fuerst, NERI Cultural Resource Specialist, pers. comm., August 2002). Data will be recorded and analyzed with the use of the national river's geographic information system (GIS). Archeological resources that may be present in the area of potential effect will be addressed as an impact topic in this environmental assessment.

(2) Historic Structures / Buildings. The National Park Service describes historic structures as "material assemblies that extend the limits of human capability" (DO- 28, 8). New River Gorge National River has thousands of historic structures and buildings that are mostly associated with the coal mining industry and railroad transportation. These properties are located throughout the national river on river benches above the water, on the steep slopes of the gorge walls, and on the ridgetops. In 1992 the National Park Service developed a list of classified structures to evaluate structures acquired by the national river from 1982 to 1992. The list records 68 structures. The most prevalent property types are surface facilities associated with coal mining, including tipples, powerhouses, powder houses, cap houses, supply buildings, shops, and offices. Transportation facilities such as railroad tracks, sidings, and yards are found primarily along benches above the water level of the New River and its tributaries. Vestiges of incline tracks used to transport miners to the coal seams and coal to the railroad lines at bottom of the gorge can be seen clinging to the gorge walls. Historic properties listed on the National Register of Historic Places representative of the coal mining and transportation history of the New River Gorge are Kaymoor Mine Historic District, Thurmond Historic District, Bank of Glen Jean, Prince Brothers General Store, and the Hinton Historic District.

Properties relating to Euro–American settlement and agriculture during the last half of the 19th century and the first half of the 20th century are also represented. These properties are most commonly seen in the southern area of the national river near Hinton, West Virginia. One such property, roughly 2.5 miles from Hinton, is the Trump–Lilly Farmstead Historic District, which is listed on the national register.

Historic structures reports exist for the following structures in the national river: Bank of Glen Jean, 1988; Thurmond Depot, 1991; Thurmond Commercial Buildings, 1992; Trump–Lilly Farm, 1994; and Kaymoor Mine, 1997 (programmatic agreement among the National Park Service, the Advisory Council on Historic Preservation, the West Virginia State Historic Preservation Officer, New River Gorge National River, Gauley River National Recreation Area, and the Bluestone National Scenic River, 2002). Because they can be found throughout the national river, historic buildings and other structures are addressed as an impact topic in this document.

(3) Cultural Landscapes. The National Park Service defines cultural landscapes as "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values" (DO- 28, 179). Cultural Landscape reports or inventories have been completed for Camp Brookside, Harrah Homestead, Richmond- Hamilton Farm, Christina Vallandingham House, Trump–Lilly Farm, and Grandview. All these cultural landscapes are in the southern area of the national river, upstream from Meadow Creek (Nancy J. Brown, NPS Landscape Architect, Philadelphia Support Office, pers. comm. , September 2002).

The Trump–Lilly Farm Historic Structures and Cultural Landscape Report describes the 202- acre Trump–Lilly Farm in the southern part of the national river, near Hinton. The

Trump–Lilly farmstead represents a unique surviving example of late 19th century–early 20th century subsistence farming in the Mid-Appalachian region (John Nicely, Morgantown: Institute for the History of Technology and Industrial Archaeology, "The Trump–Lilly Farm: Historic Structures and Cultural Landscape Report" 1994). A cultural landscape report written by Land and Community Associates for EDAW, Inc. and the National Park Service in June 1994 determined that Grandview was not eligible for the national register as a cultural landscape (LCA 1994). Cultural landscapes have been inventoried in the southern part of the national river, and there is the potential for cultural landscapes to be evaluated in the northern part of the area, including Nuttallburg and Kaymoor. Because cultural landscapes can be found throughout the national river, that subject is addressed in this document.

C. Visitor Use and Experience

The increasing levels of climbing have affected the visitor experience, and concerns have been raised about visitor safety, crowding, and user conflicts. Alternatives presented in this plan would affect climbers and other visitors to the national river. Concern also has been expressed about the use of chalk and anchors and how they may affect visitors' views of the cliff. NPS policies state that the enjoyment of resources and values is part of the fundamental purpose of all parks, and the National Park Service is committed to providing appropriate high- quality opportunities for visitors to enjoy all national parks. The national river's enabling legislation also emphasizes managing the resources for public enjoyment.

D. Commercial Use

Under the alternatives in this plan, climbing services that operate in the national river would be affected.

Impact Topics Dismissed from Further Analysis

Natural Resources

Floodplains and Wetlands. Federal executive orders pertaining to floodplain management and the protection of wetlands require an examination of impacts on floodplains and wetlands, the potential risk involved in placing facilities within floodplains, and protecting wetlands. The NPS *Management Policies 2001* provides direction about developments proposed in floodplains and wetlands. There are no floodplains and no jurisdictional wetlands (National Wetlands Inventory, USFWS, 1990) in the climbing areas. However, some small wetlands are found in a few places where small intermittent and perennial streams intersect the cliff band. In these locations just upstream of the "cliff break" are found small wetlands. These areas have not been impacted by climbing activities and would not be under any of the alternatives. Therefore, floodplains and wetlands were dismissed as impact topics in this document.

Air Quality. The 1963 Clean Air Act, as amended (42 USC 7401 et seq.), requires that federal land managers protect the air quality, and the NPS *Management Policies 2001* address the need to analyze air quality during planning. New River Gorge National River was designated class II under the 1963 Clean Air Act, as amended. Class II areas can have changes in air quality if these changes are the result of moderate, well- controlled growth. None of the alternatives would permanently affect air quality. However, local air quality could be temporarily affected by dust and vehicle emissions during any construction of facilities. These effects would last only as long as construction occurred and the area's class II air quality would not be affected by the proposal. Therefore, air quality was dismissed as an impact topic in this document.

Water Quality. The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, is a national policy to

restore and maintain the chemical, physical, and biological integrity of the nation's waters and to enhance the quality of water resources and prevent, control, and abate water pollution. NPS *Management Policies 2001* provide direction for the preservation, use, and quality of water originating, flowing through, or adjacent to park boundaries. There are a minimal number of water sources in the climbing areas. It is not anticipated that any action of the alternatives in this plan would impact water quality in the area. Therefore, water quality was dismissed as an impact topic in this document.

Cultural Resources

Ethnographic Resources. The National Park Service defines ethnographic resources as any "site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it" (DO 28, *Cultural Resource Management Guideline*, 181). Information on the national river's ethnographic resources is being inventoried as part of a revision for a general management plan to be prepared in 2004. Since little information is available about ethnographic resources at New River Gorge, questions of impacts on such resources will not be addressed in this document.

Indian Trust Resources. Secretarial Order 3175 requires that any anticipated impacts on Indian trust resources from a proposed project or action by Department of the Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes.

There are no Indian trust resources at New River Gorge National River. The lands comprising New River Gorge National River are not held in trust by the secretary of the interior for the benefit of Indians due to their status as Indians. Therefore, Indian trust resources are dismissed as an impact topic in this environmental assessment.

Museum Objects. The National Park Service defines a museum object as "a material thing possessing functional, aesthetic, cultural, symbolic, and/or scientific value, usually movable by nature or design. Museum objects include prehistoric and historic objects, artifacts, works of art, archival material, and natural history specimens that are part of a museum collection" (DO- 28, 184). A climbing management plan does not address preservation and protection standards and requirements for museum objects; therefore museum objects are dismissed as an impact topic in this document.

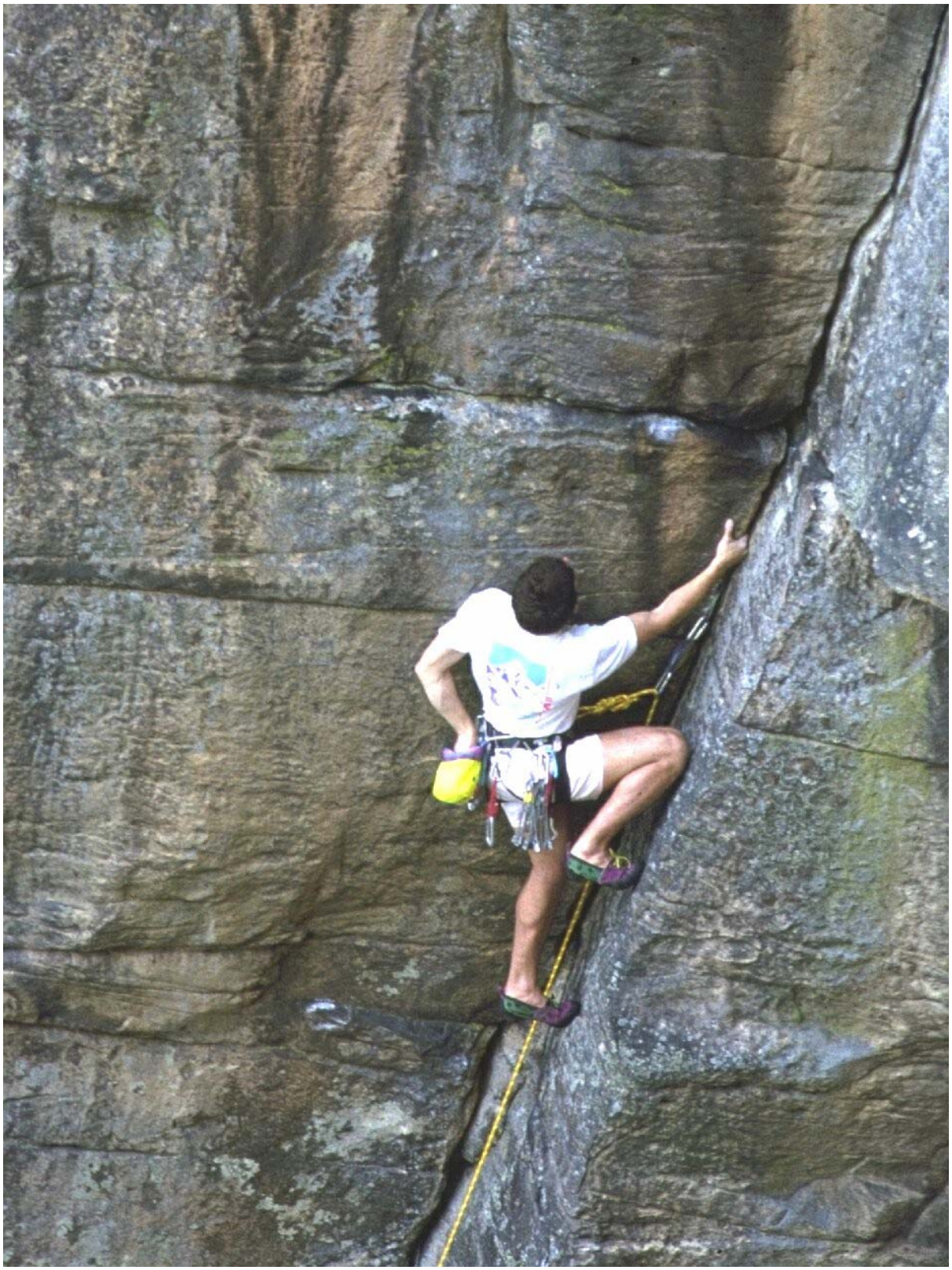
Socioeconomic Environment

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low- Income Populations" requires that all federal agencies incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects on minorities and low- income populations and communities. None of the actions of the alternatives would disproportionately affect minorities or low- income populations or communities; therefore, environmental justice has been dismissed as an impact topic.

Prime and Unique Agricultural Lands

In August 1980 the Council on Environmental Quality (CEQ) directed that federal agencies must assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture's Natural Resource Conservation Service as prime or unique. Prime or unique farmland is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. According to the Natural Resource Conservation Service, there are no prime farmlands associated with the climbing areas. Therefore, the topic of prime and unique farmland has been dismissed as an impact topic in this document.

ALTERNATIVES



The "Alternatives" chapter describes three alternatives for the climbing management. Alternatives for this project were developed to resolve pertinent visitor use, resource, and management issues.

Alternative A: Continue Existing Management (the No-Action Alternative)

Concept

This alternative describes the action of continuing the present management operation and condition. Its presence does not imply or direct discontinuing the present action or removing existing uses, developments, or facilities. The no- action alternative provides a basis for comparing the management direction and environmental consequences of the other alternatives.

Education, Outreach and Partnering

New River Gorge National River would continue to provide climbing information through the national river's Web site, maps, and by mail on a request basis, and it would continue partnering with local groups to improve trails and access.

Natural Resources

Monitoring. Monitoring of hemlock forest community (vegetation) and the associate birds species would continue in the area of Fern Creek and near Bridge Buttress. There is no current monitoring of soils or vegetation.

Peregrine Falcons. Peregrine falcon activity would continue to be monitored with the use of "Cliffwatch." This daylong survey carried out each March consists of observers placed at prominent outcrops at Diamond Point, Beauty Mountain, and Kaymoor Top. The program, coordinated by West Virginia Department of Natural Resources, has taken place each spring since 1991. The survey follows the protocols established by the department's endangered species biologists.

If falcons should begin courtship behavior in the area, then the recreational use of the area surrounding the confirmed peregrine nest site would be closed until two weeks after the young had fledged or until nest failure was proven (see Appendix G, "Peregrine Falcon Monitoring Protocol").

Other Species of Concern (Wildlife and Plants). Current monitoring of the state-listed Allegheny woodrats in the area of Endless Wall would continue as funding allowed.

Cultural Resources

The National Park Service would continue to inventory and evaluate all cultural resources under its jurisdiction and to manage historic properties in the national river to preserve and protect their values. The National Park Service also would develop and implement plans to mitigate known threats to cultural resources.

Group Use

Climbing guide services and instruction in the New River Gorge National River are administered under an incidental business permit (IBP) system. Permit applications, which are considered by the chief ranger's office, are issued for a period of one year. There are currently 25 permit holders. Renewal applications must include the names of all guides/instructors to be covered by the permit.

Commercial groups/IBP holders that provide climbing guide services are limited to four trips per day with no more than 15 persons per trip and a ratio of one guide for every four guests. Noncommercial groups that are required to obtain a permit (free of charge) but were not aware of the regulation

are personally contacted by rangers and informed of the procedures for obtaining a permit for future trips.

As the Bridge Buttress area becomes more crowded, smaller commercial groups (4–5 people) are using areas such as Endless Wall. Little information is available about this use, but it is beginning to be compiled.

Climbing activities in the national river are sporadically monitored by protection rangers. Most commercial guided trips and large noncommercial groups climb at the Bridge Buttress and Junkyard Wall areas. These areas lend themselves to larger groups and beginning climbers because of their easy access and "walk- up" cliff tops. No specific restrictions have been placed to limit the areas where groups may climb.

No accreditation or certification is required of companies providing climbing guide services. Only one commercial climbing guide holding a permit from the national river holds a certification. Terms of the incidental business permit include the submittal of monthly reports from permit holders, detailing the number of guests or climbers entering the national river each month. In addition, an annual report is to be submitted that summarizes the total number of visitors in the national river and includes gross revenues for the year.

Climber Data

Aside from the IBP information from the concessioners, little information is gathered about climber use.

Access Trails and Ladders

The planning that has begun to designate climbing trails and raise the construction standards for these trails would continue. In the past few years, the national river staff has partnered with local climbing organizations to relocate and minimize impacts on resources from informal climbing trails. Those trail projects have been completed and were covered by previous environmental assessments. The national river does not maintain ladders for access, and no formal agreement exists for maintenance or repairs to be performed by the climbing community.

Anchors

The use of power drills would continue to be banned per the superintendent's compendium. However, the use of hand drills for new route placement still would be allowed. There would not be a formal procedure for anchor replacement on existing routes.

Chalk

The use of chalk would continue to be unrestricted.

Alternative B: The Preferred Alternative

Concept

Alternative B would involve the use of a variety of approaches and tools to manage climbing, including education and outreach efforts, improvements to facilities, and the use of new and existing trails. This alternative would provide a balance between recreational use and resource protection. Climbing activities would be managed to a greater degree than at present to ensure that resources would be protected and that climbers would continue to have opportunities for a high quality experience.

Education, Outreach, and Partnering

The staff of New River Gorge National River has long understood that a successful resource protection program cannot be accomplished solely by enforcing regulations or filing reports. The prevention of resource damage is preferred to the apprehension of violators after the damage is

done. To this end, the national river will work with the climbing community to foster understanding, appreciation, respect, and a sense of ownership for the natural and cultural resources of the New River Gorge National River. A key element of the education, outreach, and partnering effort is to foster a leave- no- trace ethic that will develop attitudes and awareness consistent with protecting the integrity of the resources.

Education

The national river's climber education program would be two- tiered. The first tier would provide information and educational materials to climbers before they arrived. This would be accomplished through the development of climbing- specific educational literature that could be distributed at visitor centers, mailed, or posted on the national river's Web page. At present, climber- specific maps and brochures are mailed to people who request information. The national river's Web page also contains climber- specific educational information that includes leave- no- trace principles. Additional efforts would be made to distribute this information to climbing shops, guide services, and climbing gyms near or associated with the New River Gorge. The national river staff would work with journalists to develop articles for periodicals and guidebooks to provide educational information and foster a better appreciation of the resources.

The second tier of the educational program would involve a variety of onsite educational opportunities, including distribution of educational materials at visitor centers and trailheads. Displays and signs promoting safe climbing and the leave- no- trace ethic would be posted in prominent visitor/climbing contact areas. National river employees would be trained in the leave- no- trace ethic and be directed to contact climbers in the field where uninformed or careless behavior could be directly addressed and minimal impact climbing techniques reinforced.

Outreach

The staff of New River Gorge National River would participate in a variety of outreach efforts geared toward the climbing community. These efforts would focus on building relations with all climbers, including individuals, commercial guides and companies, and numerous climbing groups and organizations.

The national river would actively seek opportunities to solicit input from climbers on a wide variety of issues, including access, safety, climbing routes, and fixed protection (such as bolt installation and replacement), as well as issues involving visitor experience and resource protection. One key opportunity for reaching private climbers would be to continue a working relationship with climber advocacy groups and organizations such as the Access Fund and the New River Alliance of Climbers. Working with all these people, the national river would designate an employee to serve as the climber liaison for the national river management. In addition, climbing skills would be identified as a requirement for a protection ranger's position, and the primary climbing areas would be included in that ranger's area of responsibility.

A special use permit would be required for all commercial use, which would be coordinated through the national river. The national river would identify a special use coordinator to serve as a point of contact for commercial guides and users. This special use coordinator would be kept abreast of commercial and climbing issues and serves as an adviser on commercial climbing to the management.

Group use at New River Gorge National River covers a wide spectrum. Groups involved with climbing activities range from the local nonprofit youth groups to for-

profit nationally sanctioned competitions that draw both national and international participants. Through the national river's special use coordinator, climber liaison, and NPS rangers, New River Gorge National River would continue to manage and coordinate all these uses. Working with the groups, the national river would endeavor to minimize conflicts between user groups while continuing to protect its resources. This would be accomplished by maintaining and coordinating a group use schedule, establishing group use guidelines and permit conditions, and providing onsite monitoring of special uses and events. The national river staff would prepare and distribute leave-no- trace specific guidelines geared toward commercial and noncommercial groups of users.

Partnering

Partnering initiatives continue to be an effective way to protect NPS resources, provide a quality visitor experience, and further the mission of the National Park Service. New River Gorge National River would work with climber groups and organizations such as the Access Fund, the American Mountain Guide Association, and the New River Alliance of Climbers toward mutually beneficial goals of quality visitor experience and resource protection. For example, the national river would support partnering efforts for conservation and access projects by providing technical expertise, logistical backing, and mapping and geographic information system (GIS) services, as well as providing tools, equipment, and facilities where appropriate.

In addition, the national river would partner with private individuals, commercial guide services, and climbing groups to promote leave- no- trace principles. The national river would conduct leave- no- trace training annually, making the training available to the climbing community. Alternatives B and C of this document require commercial group leaders and guides to be trained in leave- no trace principles. Under either of these alternatives, the national river would offer leave-no- trace instructor training annually. The national river also would ensure that at least one employee was certified as a master leave- no- trace instructor and would partner with the climbing community to offer a variety of training and instructor opportunities.

The placement and replacement of fixed anchors would be allowed by permit from the superintendent. The national river would work cooperatively with climber groups such as the New River Alliance of Climbers to develop a systematic program for the assessment and replacement of fixed anchors. Other partnerships with climbing groups also might be developed where appropriate for the improvement, development, and maintenance of climbing areas in the national river.

Natural Resources

Monitoring. To make better- informed decisions about resource management and climbing, the National Park Service would determine the severity of impacts on natural resources such as soils and vegetation. To accomplish this goal, the National Park Service, with input from the scientific community, would develop techniques and collect data that would focus on the aspects of climbing that could affect the national river's resources, such as, the creation of social trails, adverse effects on soil and vegetation at the base of climbs, and impacts on microhabitats, including flora and fauna found on rock surfaces. The National Park Service and volunteers, including people from the climbing community, could help collect data.

Species of Concern. Expanded inventories for sensitive or rare species of vertebrate animals and vascular plants would continue. Where such species were identified, seasonal

or permanent closures would be defined in areas of critical habitat to protect sensitive or rare species and habitats.

Peregrine Falcons. During peregrine falcons' courtship and egg- laying season, peregrine habitat would be intensively monitored. From mid- February through April, national river staff would seek voluntary compliance for a reduction of recreational use of the areas from Diamond Point to the end of Beauty Mountain (see appendix G, "Peregrine Falcon Monitoring Protocol").

The staff of New River Gorge National River would work with partners to post signs and encourage visitors to use alternative areas. Roving employees and volunteers would contact climbers to advocate low impact climbing techniques that would promote noise reduction, minimizing visual disturbances and avoidance of clifftops. If peregrines were observed nesting, the site would be closed with an appropriate buffer until two weeks after the young had fledged or until nest failure was proven.

Cultural Resources

The National Park Service would continue to inventory and evaluate all cultural resources under its jurisdiction and to manage historic properties in the national river so as to preserve and protect their values. In addition, the National Park Service would incorporate cultural resource information and cultural resource stewardship values in educational materials developed for recreational users, including climbers. National river staff also would work with interested parties to develop cultural resource stewardship strategies and implement mitigation plans for known threats to cultural resources; such plans might include restrictions.

Group Use

Commercial guide services would remain under the incidental business permit (IBP) system, but additional training and certification would be required for the guides and companies. Climbing areas at Bridge Buttress and other suitable sites would be designated for both commercial and large group use. In other climbing areas in the national river, commercial and group use would be limited to two guides with two clients each (six people total). This action would help reduce resource impacts and make it possible for visitors to have a quieter, high- quality experience while also improving climber safety. There would be an annual commercial IBP meeting/workshop of NPS staff, owners, operators, and managers to discuss climbing issues and resource management issues pertaining to climbing.

The National Park Service would require that applicants for climbing incidental business permits (1) be accredited by the American Mountain Guide Association, the Association for Experiential Education, or an equivalent organization and (2) train guides in the leave- no- trace ethic. This would help ensure that commercial guide services operating in the national river would have a common level of training in climbing safety and would minimize potential resource impacts from climbing.

The national river would work with commercial guide services, youth groups, and climbing organizations to develop educational opportunities and partnerships.

Climber Data

To make better decisions in the future, the national river would begin to collect more information about climber numbers, routes, access points, and times when climbing is taking place.

Access Trails and Ladders

The National Park Service would continue to involve volunteer groups in planning, designing, and maintaining climbing access trails. Social trails also would be removed in partnership with these volunteer groups. Planning for climbing access trails would be included in future trail plans for the national river. The National Park Service would increase the involvement of volunteer groups to improve and maintain trails and ladders.

Fixed Anchors

At least twice a year, New River Gorge National River would arrange an open meeting to receive comments on the placement or replacement of fixed anchors, which would include the establishment of new routes. The replacement and addition of new anchors, with the use of manual or power drills, would be allowed after being approved by the superintendent of the national river. Top anchors would be encouraged in high- use climbing areas such as Bridge Buttress, to decrease impacts on clifftops. The practice of leaving quick draws and slings in place for later climbers would be prohibited.

Chalk Use

The national river would increase its efforts to educate people about the impacts of chalk use, especially through outreach to climbers. The leave- no- trace ethic would be encouraged in climbing literature throughout the national river; this also would encourage the minimal use of chalk. Chalk use would be monitored in areas with important cultural, natural, or scenic resources. If the national river determined that such action was necessary to avoid or minimize impacts, chalk- free areas would be designated.

Alternative C

Concept

Alternative C is similar to alternative B, except that concession contracts would be required for commercial use, and there would be a more restrictive preemptive closure for potential peregrine falcon nesting at Endless Wall.

Education, Outreach, and Partnering

All the strategies for education, outreach, and partnering described for alternative B would be employed under alternative C, including the following:

- Developing climbing- specific educational literature that could be distributed at visitor centers, mailed, or posted on the park's Web page
- Added onsite educational opportunities, including trailhead and visitor center signs and displays promoting the leave- no- trace ethic and safe climbing.
- Community outreach efforts geared toward the climbing community
- Partnering with organizations and individuals to provide a high- quality visitor experience and to improve resource protection

Natural Resources

Monitoring. As in alternative B, alternative C would entail the collection of resource data focused on the aspects of climbing that might affect the resources of New River Gorge National River.

Species of Concern. As in alternative B, inventory for sensitive or rare species of vertebrate animals and vascular plants would continue. Where identified, seasonal or permanent closures would be defined in areas of critical habitat to protect sensitive or rare species and habitats.

Peregrine Falcons. A preemptive closure of the part of the cliffs along the Endless Wall between Diamond Point and Beauty Mountain would be established during the peregrine falcons' courtship period. This closure would allow the birds to use their habitat free of human disturbance for a longer time. Closing the area and nearby cliffs would help eliminate disturbance caused by climbing, because such disturbance might exclude the birds from the area by interfering with nest-site selection and courtship.

The cliffs would be monitored during the courtship period for peregrines (mid-February through April) to determine if any birds were selecting nesting territories. If a nest was established, it might be possible to narrow the area of restriction, depending on location of the nest site. If breeding peregrine falcons were confirmed, the area immediately surrounding the nest would be closed, along with an adequate buffer. The closure of the nest site and buffer would remain in place until two weeks after the young had fledged (or the death of the eggs or chicks was confirmed). The remaining part of the Endless Wall not affected by the closure would be open to climbers and other recreationists. If there was no evidence of peregrine use of the area by the end of April, monitoring would be completed, and the cliff area would be opened to recreation.

Cultural Resources

The National Park Service would continue to inventory and evaluate all cultural resources under its jurisdiction and to manage historic properties in the national river to preserve and protect their values. In addition, cultural resource information and cultural resource stewardship values would be incorporated into NPS educational materials developed for recreational users, including climbers. The National Park Service would also work with interested parties to develop cultural resource stewardship strategies and to implement mitigation plans for known threats to cultural resources; such plans might include restrictions.

Group Use

Concession contracts would be developed to manage the number of commercial climbing operations inside the national river. No other commercial use related to climbing beyond these contracts would be allowed. These contracts would be awarded on a bid basis. Those not awarded a contract would not be allowed to operate within the park. For all concession contracts, both accreditation of the business and certification of all of the guides by either the American Mountain Guide Association or the Association for Experiential Education would be required. Concessioners would be required to provide leave- no- trace training for all guides and group leaders.

Noncommercial group use would be limited to two guides with two clients each (six people total). A special use permit (issued before the visit) would be required for noncommercial use by groups consisting of seven or more people.

Climber Data

To make better decisions in the future, the national river would begin to collect more information about climber use, including climber numbers, routes, access points, and the times when climbing was taking place.

Access Trails and Ladders

As in alternative B, in alternative C the National Park Service would continue to involve volunteer groups in planning, designing, and maintaining climbing access trails. Planning for climbing access trails would be included in future trail plans for the national river.

Fixed Anchors

As in the preferred alternative (B), the national river would arrange open meetings with the public at least twice a year to get input on route replacement and new routes. The replacement and addition of new anchors would be allowed following the approval of the superintendent of New River Gorge National River. The use of top anchors would be encouraged on all routes where possible, which would decrease impacts on clifftops. The leave- no- trace ethic would be emphasized in the national river's climbing literature, which would also promote the removal of slings and quick draws.

Chalk Use

The actions in alternative C regarding chalk use would be the same as those described for alternative B. More education and awareness of the impacts of chalk use would be encouraged through flyers and at informational kiosks throughout the climbing areas in the national river. The encouragement of the leave- no- trace- ethic and the monitoring of chalk use and identification of problem areas as they arose also would be as described for alternative B.

TABLE 1: SUMMARY OF ALTERNATIVES

	Alternative A – No Action (Continue Existing Management)	Alternative B – Preferred Alternative	Alternative C
Education, Outreach and Partnering	▪ Provide information on the national river's Web site, and maps and climber information by mail on a request basis ▪ Partner with interested groups to improve climber trails and access	▪ Development of climbing specific educational literature that may be distributed at visitor centers, mailed, or posted on the national river's Web page ▪ Development of onsite educational opportunities including trailhead and visitor center signs and displays promoting leave-no- trace ethic and safe climbing. ▪ Community outreach efforts geared toward the climbing community both commercial and non- commercial. ▪ Partnering with organizations and individuals to provide a quality visitor experience and increase resource protection	▪ Same as alternative B
Natural Resource Monitoring	▪ Continue existing monitoring of the Allegheny wood rat population near a few climbing areas.	▪ Implement an inventory and monitoring program for natural resources potentially affected by climbing (expanded to include all species of concern).	▪ Same as alternative B
Peregrine Falcons	▪ Continue the daylong "Cliffwatch" survey each spring ▪ Eliminate recreational use of the area immediately surrounding a confirmed peregrine nest site and maintain the closure until weeks after the young have fledged or until nest failure is proven.	▪ This alternative would rely on education and outreach for compliance with the park's monitoring plan for peregrine falcons (see appendix F) ▪ Initiate voluntary compliance with monitoring efforts of Endless Wall during nesting season and encourage use of alternative climbing areas. ▪ Increase monitoring and documentation of peregrine in the New River Gorge during nesting season. ▪ Closure of cliff areas, with appropriate buffer only after peregrine courtship behavior is observed	▪ Preemptive closure of climbing areas that have been identified as suitable peregrine habitat (Diamond Point to upstream end of Beauty Mountain) for the peregrine courtship period (mid- February through mid- April). This would be extended in the area of any nesting peregrines. ▪ Increase monitoring and documentation of peregrine in the New River Gorge during nesting season. ▪ Closure of cliff areas, with appropriate buffer only after peregrine courtship behavior is observed

	Alternative A – No Action (Continue Existing Management)	Alternative B – Preferred Alternative	Alternative C
Cultural Resources	▪ Continue inventory and evaluation of cultural resources. ▪ Develop and implement mitigation plans for known threats	▪ Continue survey and evaluation of cultural resource ▪ Incorporate cultural resource values in educational materials developed for climbers ▪ Identify potential threats and work with interested parties to develop cultural resource management strategies that may include restrictions	▪ Same as Alternative B
Group Use **(Commercial and Noncom-mercial)**	▪ Continue to issue incidental business permits or a similar management option for commercial use ▪ Group size is limited to fifteen.	▪ Continue use of IBPs ▪ Require accreditation of commercial guide services (includes guide training in leave- no- trace ethic) ▪ Special use permits (organized non- commercial use) for climbing groups fifteen or larger ▪ Designate Bridge Buttress and other suitable sites (pending acquisition) for group use. ▪ Designation of other climbing areas for small groups (six or less) to insure a more intimate climbing experience ▪ Conduct annual commercial IBP meeting/workshop of owners, operators, and managers ▪ Collect additional information on group including use areas, climber numbers, days, and time	▪ Manage climber numbers through the use of concession contracts ▪ Require accreditation of commercial guide services (includes guide training in leave- no- trace ethic) ▪ Designate Bridge Buttress and other suitable sites (pending acquisition) for group use ▪ Designation of other climbing areas for small groups (six or less) to insure a more intimate climbing experience ▪ Collect additional information on commercial use including use areas, climber numbers, days, and time ▪ Annual concession review per NPS guidelines
Climber Data	▪ No active data gathering on climber information	▪ Gather additional data on climbers (such as numbers, routes, access points, and when they are climbing)	▪ Same as alternative B

	Alternative A – No Action (Continue Existing Management)	Alternative B – Preferred Alternative	Alternative C
Access Trails and Ladders	▪ Maintain existing climbing access trails	▪ Inventory existing trails and ladders ▪ Involve recreational users to evaluate existing trails for improvements, maintenance or closure with a goal of developing a climbing access trail network	▪ Same as alternative B
Fixed Anchors	▪ Continue to prohibit motorized drills ▪ Continue to permit fixed anchors using manual installation	▪ Semi- annual public meetings to gather recommendations for bolt replacement and potential new anchor routes ▪ After superintendent approval, allow use of motorized drills for replacing and adding new anchors ▪ Encourage top anchors on high- use routes ▪ Prohibit leaving slings and quick draws on routes	▪ Same as alternative B
Chalk Use	▪ Continue unrestricted use of chalk	▪ Encourage leave- no trace ethic that promotes minimal chalk use. ▪ Monitor chalk use and identify problem areas as they arise. Designate chalk free areas as deemed necessary to protect cultural and natural resources	▪ Same as alternative B

Table 2: Summary of Impacts

Impact Topics	Alternative A – No Action (Continue Existing Management)	Alternative B – Preferred Alternative	Alternative C
Soils	▪ Soil compaction would continue resulting in an adverse, minor and long – term impact.	▪ With new management strategies impacts to soils would be beneficial, minor and long term.	▪ Same as alternative B
Vegetation	▪ Vegetation impacts including trampling would result in adverse, long- term, and minor impacts.	▪ Better designated trails and other actions impacts to vegetation would be beneficial, minor and long term.	▪ Same as alternative B
Wildlife	▪ Habitat loss and degradation would impact wildlife in an adverse, minor and long-term way.	▪ In areas where climbing takes place impacts to wildlife would be reduced in a minor and long- term way.	▪ Same as alternative B
Species of Concern – including Peregrine Falcons	▪ Minor to moderate, adverse, long- term, impacts to species of concerns, including the peregrine.	▪ With reduced use of the Endless Wall and increased monitoring during the late-winter/early- spring the impacts to peregrine falcons would be beneficial, long-term and minor. Other species of concern would benefit in long- term, minor way with increased resource monitoring.	▪ With a recreational closure of the Endless Wall during the courtship and mating period there would be beneficial, moderate long- term impacts to peregrine falcons. Other species of concern would benefit in long- term, minor way with increased resource monitoring.
Cultural Resources	▪ Minor long- term adverse impacts (archeological resources, historic structures, and cultural landscapes). Minor long- term adverse cumulative impacts.	▪ Minor long- term beneficial impacts (archeological resources, historic structures, and cultural landscapes). Minor long- term beneficial cumulative impacts.	▪ Minor long- term beneficial impacts (archeological resources, historic structures and cultural landscapes). Minor long- term beneficial cumulative impacts.
Visitor Use and Experience	▪ Impact to climbing and other visitors would minor to moderate, adverse and long-term	▪ Both climbing and non-climbing visitor would benefit in a minor, long- term way.	▪ Same as alternative B.
Commercial Use	▪ As climbing continues to grow in popularity the financial impact to commercial use would be beneficial, minor to moderate and long term.	▪ Required accreditation of IBP holders would result in beneficial, minor, long- term impacts. There may be some adverse, negligible short-term impacts as a result of the cost of accreditation for each of the permittees.	▪ Impacts to commercial use would vary depending on the guide service. If a service were selected as a concession contractor then the impact would be beneficial, minor to moderate and long- term if not selected the impacts would be adverse.

Environmentally Preferable Alternative

The environmentally preferable alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which is guided by the Council on Environmental Quality (CEQ). The CEQ regulations direct that "[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in section 101 of the National Environmental Policy Act, as follows:

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
5. achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The no- action alternative would continue the existing management of climbing in the national river. Overall, this alternative would not fully meet national policies 1–6.

The preferred alternative (alternative B) is also the environmentally preferable alternative. Overall, the preferred alternative would result in long- term beneficial effects on visitor use and experience, national river operations, and natural resources. It would more fully meet national policies 1–6, increasing visitor safety through commercial accreditation, increasing resource protection for possible peregrine falcon nesting (with increased monitoring), focusing heavy use into areas that have previously been affected, and continuing climber education about resource values and leave-no- trace ethics. These actions would help to meet policies 2–6, as listed above. Implementing the preferred alternative would more fully meet policies 2,3, and 5 than would alternative A or C.

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AFFECTED ENVIRONMENT

Background

The New River Gorge National River is a 53- mile long, 70,000- acre river corridor that runs from the town of Hinton, West Virginia, in the south to just north of the U.S. Highway 19 bridge near Fayetteville. The national river was created on November 10, 1978, by Public Law (PL) 95- 625 "for the purpose of conserving and interpreting outstanding natural, scenic, and historic values and objects in and around the New River Gorge and preserving as a free-flowing stream an important segment of the New River in West Virginia for the benefit and enjoyment of present and future generations."

A. Natural Resources

(1) Soils

Soils in the area of the cliffs are primarily coarse and shallow, derived mainly from the sandstone bedrock.

The soils found in the climbing areas of the lower New River Gorge were surveyed in December 2001 by Tony Jenkins, a soil scientist with the Natural Resources Conservation Service, U.S. Department of Agriculture. There are distinct differences between the soils and vegetation found on the north- facing and south- facing slopes of the Lower Gorge. No prime or unique farmland soils are known to be in the climbing areas.

North- facing Areas (examples: Kaymoor and South Nuttall). Along the top of the north- facing areas the soils vary in depth from bare sandstone outcrop to in excess of 100 cm. Collectively, O and A horizons (forest floor and topsoil) were generally from 10 to 15 cm deep. Generally, the Matewan soil series probably fits many of these areas where the soils are greater than 50 cm to rock. The combination of north aspect and the attenuate species and vigor of trees and other vegetation probably are responsible for the relatively thick upper soil horizons.

Along the bottom of the north- facing areas is a mixture of fragmental (insufficient fines to fill voids) soils best described as boulder piles and rubbly areas of very deep (>150 cm) soils best described by the Handshoe series. These soils generally had thicker surfaces as well, with O and A horizons in excess of 15 cm being common. The soils generally are composed of 35%–70% rock fragments (> 2 mm), and are well drained.

South- facing Areas (examples: Diamond Point and Junk Yard Wall). Along the top of the south- facing areas, the soils are as described above, but generally with thinner surfaces (from 2 to 7 cm thick) and shallower soil depths (usually less than 50 cm). An established series for these soils has not been determined, but in essence it would be a shallower version Matewan, with thin topsoil and organic layers. The subsoil of these areas appears to be more highly weathered than on the north- facing side, which is to be expected. Thus, the fertility and droughtiness is greater.

At the base of the south- facing slopes are soils similar to those of the north- facing side, but with thinner topsoil and O horizons on Handshoe series. Nonnatural erosion is prevalent in these areas, which have thin organic horizons. They occur top, bottom, and in between, wherever a surface is sufficiently stable for soil formation to proceed. These areas usually have a moss surface layer underlain by a few to up to 20 cm of variably decomposed organic matter, with varying degrees of plant colonization. They would be classified as some sort of acid Folists in soil taxonomy, but more pertinent is the sensitivity of such areas to repeated traffic, which is high, particularly when they are wet or very dry.

Soil Sensitivity. The south- facing side exhibits more rutting and bare areas from

foot travel of climbers and hikers. It is less resilient than soils on the north- facing slopes in terms of fertility and drought tolerance of mitigating vegetation, as well as more desirable for recreation in terms of more sunlit, dry slopes on average. Throughout the national river, north- facing soils have deeper topsoil and higher fertility than south- facing ones.

Erosion of the soils is evident throughout the climbing areas. Erosion tends strongly to work its way upslope. Therefore, it is unlikely to worsen significantly by itself at the bottom (where it is most prevalent), since the cliff is upslope. The slope lengths above the clifftops are short, so significant worsening (by itself) of the eroded conditions is unlikely there as well.

(2) Vegetation

The following general vegetation description relates to all climbing areas; conditions vary little between areas.

The national river's overstory vegetation includes eastern hemlocks, beech, black gum, sassafras, oak species, and Virginia pines. The understory is predominantly rhododendron, blueberry, and witch- hazel.

In 1998 the national river initiated a multi-year project to sample, classify, and map all the plant communities within its boundaries. The project is now approximately 70% complete. Before this study, botanical research in the national river consisted primarily of species- based floristic inventories and rare plant surveys. These surveys described a few plant communities, with special effort given to pioneer communities along the river and cold coves of the tributary canyons. None of these previous studies used quantitative or statistical methodologies for plant community classification or description.

Mapping of plant communities in the national river to date includes preliminary inventories of areas of the national river used for rock climbing and access. Work on these inventories will continue to complete the characterization of the unique rimrock plant communities. There are approximately four forest communities that cover 84% of the Lower Gorge section of the national river. The sugar maple/yellow buckeye/wood nettle forest of the lower slopes of the gorge; the chestnut oak/red oak (white oak)/tulip poplar/red maple/Virginia creeper forest is the matrix forest of the surrounding plateau. A white oak/black oak (chestnut oak)/late low blueberry (mountain laurel) forest is a large patch community that occupies the upper slopes of the gorge, mostly on southerly aspects; and an eastern hemlock/sweet birch/big rhododendron forest is a large patch community that can be found in linear zones along many tributaries and also extends up slopes with northern exposures. Stands of these communities are among the largest protected occurrences of these associations in West Virginia and perhaps the world (Vanderhorst 2001).

About 6% of the mapped area is occupied by the river and riparian plant communities. Riparian vegetation includes floodplain forests and woodlands, riverside herbaceous communities, sparsely vegetated flatrock communities, and aquatic herbaceous communities. These are probably the most diverse and most highly impacted communities in New River Gorge National River.

About 7% of the mapped area is developed or exhibits disturbance by humans, so that vegetation bears little resemblance to natural communities and contains a high percentages of exotic species. Examples would include strip mines, railroads, utility rights-of- way, residences, industrial sites, and farms.

About 1% of the mapped area is occupied by miscellaneous small patch communities, including shrub and herbaceous wetlands, forested seeps, rimrock and plateau pine forest and woodlands, tributary riparian vegetation, and old fields.

Two unique forest communities have been characterized in the rimrock area; the Virginia pine/low blueberry/teaberry and pitch pine/scarlet oak/black huckleberry. These communities occupy narrow zones of rimrock with southerly and westerly aspects on the edge of plateaus in the Lower Gorge. The very shallow soils overlying sandstone bedrock are rapidly drained, acidic, and nutrient poor. Common species found in these rimrock communities are Catawba rhododendron, mountain laurel, black huckleberry, round- leaf serviceberry, several species of blueberry, sourwood, trailing arbutus, greenbrier, flame azalea, black oak, chestnut oak, and sprouts of American chestnut. Rare plant species tracked by the West Virginia Natural Heritage Program that can be found in these communities are spring coralroot (*Corallorhiza wisteriana)* and a species of poverty grass (*Danthonia sericea*).

(3) Wildlife

The area supports abundant populations of groundhogs, rabbits, gray squirrels, white-tailed deer, skunks, raccoons, opossums, and various small rodents. A small number of amphibians and reptiles are found in the area: eastern garter snake; the redback, slimy and mountain dusky salamanders; and the eastern box turtle. At least 39 bird species have been documented for the immediate area (Pauley 1997).

Systematic biological surveys of the climbing areas have never been conducted. However surveys were conducted along several stream corridors in 1996, as well as in proposed development sites in the Lower Gorge. This was carried out as part of a larger resource survey conducted throughout New River Gorge. Several of the survey sites were along streams and near climber access routes, parking areas, and staging areas. The cliff areas of the Lower Gorge offer refuge to diverse wildlife.

Numerous small mammals inhabit the area, including the Allegheny woodrat, gray squirrel, eastern chipmunk, raccoon, skunk, fox, rabbits, and opossum, and various small rodents. Nests of the rare woodrat can be found below the clifftops in rock crevices. White- tailed deer are common to the area. Black bears, although they are sighted less often, also occupy the area. Occasional bobcat tracks along dirt roads and trails indicate that the cats may hunt along area clifftops. Bats occupy the cracks and crevices of the sandstone outcrops.

Songbirds are significant inhabitants of the Lower Gorge area. Species such as the Swainson's warbler, Carolina wren, ovenbirds, eastern bluebird, Acadian flycatcher, various warblers, sparrows, and ravens often can be seen here. In early spring, peregrine falcons return to the area, and other raptors are sighted, including red-shouldered hawks, Cooper's hawks, ospreys, broad- winged hawks, sharp- shinned hawks, turkey, and black vultures. A few owl species heard in the area are the barred owl, screech owl, and great horned owl.

Some of the more abundant faunal species are amphibians and reptiles, including salamanders, frogs, toads, lizards, and snakes. Recent and previous surveys of the Lower Gorge area near the clifftops have found timber rattlesnake, copperhead, eastern garter snake, the green, redback, slimy, and mountain dusky salamanders, as well as the eastern box turtle. As expected, the reptile species are more frequently encountered in sunny areas near the rim of the gorge; amphibians are commonly found around the streams and floodplains, in moist undisturbed forested areas, and along rock

crevices and cracks, especially on moister north- facing aspects.

(4) Species of Concern, including Peregrine Falcon

During a five- year period ending in 1992, more than 50 peregrine falcons were hacked from a site along the Endless Wall. To date, none of the falcons have returned to the hack site to nest. Vertebrate surveys of the Fern Creek area conducted in 1993 discovered the Swainson's warbler and green salamander, which are listed as species of concern by the West Virginia Division of Natural Resources (Pauley 1993). Other species of concern in the climbing area may include the following:

Rare Plant Species in the Climbing Areas	
Spring Coralroot	*Corallorhiza Wisteriana*
Poverty grass	*Danthonia sericea*
Rare Plant Species That May Be Found in the Area	
Smoke Hole Bergamot	*Monarda fistulosa* var. *brevis*
Allegheny Cliff Fern	*Woodsia scopulina*
Rare Animal Species That May Be Found in the Area	
Cherrystone Drop (snail)	*Henersonia occulta*
Rare Animal Species Found in or Adjacent to the Climbing Areas	
Green salamander	*Aneides aeneus*
Allegheny woodrat	*Neotoma magister*
Raginesque's big- eared bat	*Corynorhinus rafinesquii* (documented in 2002)
Small- footed bat	*Myotis leibii* (documented in 2002)
Northern long-eared bat	*Myotis septentrionalis*
Swainson's warbler	*Limnothlypis swainsonii*
Federally Endangered Species Found in or Adjacent to the Climbing Areas	
Virginia big- eared bat	*Corynorhinus townsendii virginianus*
Indiana bat	*Myotis sodalis*

The peregrine falcon (*Falco peregrinus*) is of special concern in this document. Beginning in 1970, a series of listing actions was carried out for various subspecies of peregrine falcon, culminating in 1984 with listing of all peregrines as endangered in the lower 48 states. One recovery plan task assigned to the National Park Service and other agencies was the operational release of captive- bred falcons to the wild. In cooperation with the Peregrine Fund and the state of West Virginia, peregrine falcons were reintroduced to cliff areas of the New River Gorge National River in the late 1980s. Reintroduction efforts greatly aided this species' recovery and helped lead to delisting. The removal of the falcon from the list of endangered and threatened species on August 25, 1999, removed all protections provided to the species under the Endangered Species Act; however, section 4(g)(1) of that act requires monitoring after delisting for not less than five years. This allows detection of the inability of the species to sustain itself without the protective measures afforded by the act. If the species is found not to be maintaining its recovered status during the monitoring period, it could be relisted under the Endangered Species Act. The monitoring program would begin in the spring of 2001 and end in 2013. Following delisting, each state assumed responsibility from the U.S. Fish and Wildlife Service for recovery of this species. The closest documented nesting activity has been recorded on the North Fork Mountain, Grant County, West Virginia, approximately 200 miles northeast of New River Gorge National River.

B. Cultural Resources

Climbing activity at New River Gorge is primarily associated with sedimentary rock outcrops of the Pennsylvania period New River formation Nuttall sandstone, which is found in the northern area of the national river adjacent to the New River Gorge bridge and south to Beauty Mountain (Unrau 1996). These sandstone cliffs, towering above the Lower Gorge of the New River, are the center of climbing activity in the park and constitute the affected environment for cultural resources.

(1) Archeological Resources

Archeological evidence suggests that the northern area (Lower Gorge) of New River Gorge National River was used by prehistoric nomadic hunter- gatherers and subsistence farmers approximately 11,000 to 12,000 years ago. An archeological inventory and evaluation conducted by Paul D. Marshall and Associates in 1980–1981 identified 248 prehistoric archeological sites in the national river and surrounding area and indicated that the national river's northern area, corresponding to the climbing area, may contain archeological resources, particularly at streamside upland settings and at rock overhangs (Fuerst 1981). Five prehistoric occupation traditions are represented at New River Gorge, the Paleoindian, Achaic, Woodland, Late Prehistoric, and the Proto- Historic.

Focusing on landforms along New River, in upland hollows near springs or streams, and along the twelve major tributaries to the New River, the Marshall survey indicated that prehistoric use of the gorge differed from north to south. The rugged canyon wall landforms in the northern area probably were used for mobile, seasonally scheduled hunting and gathering camps; the gentler topography and wider river corridor in the southern area were more suitable for horticulture and community patterns of settlement (Fuerst 1981).

Most of the prehistoric archeological sites (220, or 76%) in Marshall's survey were found in streamside upland settings and consisted primarily of rock overhangs. Rock overhangs are common in upland settings along tributary streams in the northern part of the national river (Fuerst 1981). Rockshelter sites were most often found where south- facing overhangs or openings intersected the grade of downcutting upland streams. The location of rockshelter sites is related to suitable geologic formation, solar orientation, and proximity to water. Bench, low gap, and ridgetop settings accounted for a relatively small portion of upland sites. (Fuerst, 1981).

A lesser number of sites (68, or 24%) described in the Marshall study were in lowland settings. The largest proportion of lowland sites was on the upper terraces and floodplain of the New River. Village sites were situated on alluvial soils along the river, and the few village sites examined were found entirely in lowland settings in the upper gorge where the bottomland is widest. Benches along the New River and its tributaries and stream terraces accounted for 26% of lowland sites (Marshall 1981). All the sites except the limited activity ridgetop sites were closely associated with level landforms near water either at springs, at the New River itself, or at New River tributaries. Very few sites were found on rocky or gravelly ground.

Hunting and gathering site types in the Lower Gorge represent Early Archaic to early Late Woodland traditions, from about 10,000 years ago to about 3,000 years ago. In the Late Woodland period, larger and more concentrated village sites suggest that the inhabitants of the New River Gorge area were organized at a tribal level (Fuerst 1981).

(2) Historic Structures

A special history study / historic context study prepared by the National Park Service in 1996 for the New River Gorge identified five historic contexts incorporating most of the national river's historic properties. These historic contexts are from the coal, railroad, and lumber industries; Euro–American settlement/agriculture; and recreation / state parks (Unrau 1996). Historic contexts are intended to provide a framework for the evaluation of historic properties and the subsequent preparation of determinations of eligibility to be listed on the National Register of Historic Places.

Because the topography of the Lower Gorge is rough, the area was not extensively used by Euro–American settlers until extraction of resources, primarily timber and coal, became economically viable with the completion of railroads through the gorge in the late 19th century. The completion of the Chesapeake and Ohio (C&O)Railroad along the river in 1873 opened the New River Gorge to resource extractive industries and made the development of coal mining economically possible in the gorge.

New River Gorge National River lies within the New River coalfield, one of ten major coalfields identified in West Virginia. Mining was actively pursued in the New River Gorge from the early 1870s through the first half of the 20th century, and evidence of the coal mining industry, including abandoned mines, tipples, coke ovens, and associated townsites and railroad facilities can be found throughout the national river (Unrau 1996).

In the southern area, New River coal seams crop out closer to the valley floor. This made extraction of coal easier than in the northern part of the gorge. Coal seams near the town of Hinton were exploited early in the 1870s, immediately after the railroad was completed. Historic structures associated with the railroad development and mining in the upper gorge are settlements and rail transit facilities. Prominent among these are the Thurmond Historic District, the Prince Brothers General Store, and Hinton Historic District, all of which are listed on the national register.

In the northern area of the national river, New River coal seams, interbedded in sandstone, siltstone and shale, crop out above the river floor. The location of these coal seams halfway up the cliff face challenged early efforts to retrieve or mine the coal seams. The mining district of the Lower Gorge of New River below Thurmond was referred to in the late 19th and early 20th centuries as the Nuttall and South Nuttall area. The Nuttall area offers significant historic resources. Four mining operations — Ballinger Coal Company (Keeney Creek), Brown Coal Company (South Nuttall), Kaymoor Mines, and Nuttallburg Coal and Coke Company — were active in this area. The Nuttallburg Mine was the largest mine in the New River coalfields in the late 1800s, but Kaymoor Mines #1 and #2 employed more miners. Eventually all the Nuttall mining interests were acquired by the Maryland New River Coal Company (Marshall 1981).

Because of the area's isolation, coal camps or towns were developed to accommodate miners. The location of these company towns was determined both by nearness to the coal seam outcrop and by the location of the basic facilities for mining. Associated transport features were determined by accessibility to the railroad. Towns typically were plotted along benches above river level, although in many cases towns in the gorge existed at two or more levels, — the river edge and one or more benches or ridges above the New River (Unrau 1996).

Kaymoor is an example of a company mining town existing at two or more levels. The Kaymoor mine, started by the Low Moor Mining Company in the late 1890s,

was one of the largest coal operations in the lower New River Gorge. The mine, located near the Endless Wall about 2 miles upstream from the New River Gorge Bridge on the west side of the river, operated for almost 60 years, but it has been abandoned since 1963. The Kaymoor Mine consisted of two drift mines, Kaymoor #1 and #2. These drift mines penetrated the Sewell coal seam, which in this location cropped out several hundred feet above the river. The logistics of mining this difficult coal seam included constructing and operating three incline rail systems.

At its peak in the early 1900s, Kaymoor mine employed 1,200 to 1,500 miners. Today several old mine structures and mine openings are found on the canyon floor along the river, halfway up the cliff face and at the top of the cliff wall. The Kaymoor mining complex is listed on the national register and contributes 30 structures to the list of classified structures at New River Gorge National River, many of which are examples of engineering adaptations to mining coal from steep- sloped outcrops. Hiking trails lead to Kaymoor historic structures on the bench or between the bench and the top, including the concrete staircase, the safety board, a steel I- beam, a lamp house / a superintendent's house, water tanks, and the monitor incline. All these structures are near cliff faces used by rock climbers.

Identified on the *New River Climbing Areas* map as a climbing site, Kaymoor cliff is one of three popular climbing destinations on the west side of New River in the Lower Gorge. Known historic structures in this area are those associated with the Kaymoor Mine Historic District, which is listed on the National Register of Historic Places. Climbing activities focus on the steep rock faces of the Kaymoor cliffs and do not directly intrude on the historic properties. However, climbing routes and climbing staging areas are near or do pass through historic properties at the Kaymoor Mine Historic District.

Just south of Kaymoor Mine Historic District and within the Lower Gorge climbing area are structures associated with Nuttallburg that may be eligible for listing on the national register. One of the earliest coal miners in the Lower Gorge, John Nuttall began mining operations in 1873 along Keeney Creek just south of Beauty Mountain. This mine became known as the Ballinger Coal Company. A few years later Nuttall opened a second mine known as the Nuttallburg Mine, and later as the Nuttallburg Coal and Coke Company, in the Lower Gorge between the Keeney Creek operation and the Kaymoor Mine. By 1880 the Nuttallburg mine was the largest coal producer in the Fayette area. A few years later Nuttall opened a third mine near Fern Creek (Marshall 1981). Following the commercial success of his mining ventures, John Nuttall bought more land in the Lower Gorge, eventually acquiring almost 4 miles of river frontage, as well as lands extending away from the river to encompass the bluffs above. Nuttallburg structures are situated on both sides of the New River in the climbing areas identified as south Nuttall Wall, Endless Wall, and Beauty Mountain.

At its peak the Nuttallburg enterprise, which consisted of the main mining and coke processing operation and two towns (one at the top of the cliff and a company town at the valley floor), employed 120 miners. The company town had about 110 houses (Marshall 1981). A second town across the river became known as South Nuttall. The towns were connected by a suspension bridge. Also on the valley floor near the rail line transport were 80 coke ovens to process the coal. Today the location of this large mining operation is marked by the remains of Nuttallburg at two locations on the valley floor, on the benches above the river, and on the ridgetop. As in the Kaymoor Mine area, climbing activity is focused on the cliff faces; however, access to climbing routes may pass through or near Nuttallburg historic structures.

The mining structures at both Kaymoor and Nuttallburg were located where it was practical. Precipitous cliff faces were avoided where possible, and structures were placed where they could sensibly be located while still contributing to a successful economic mining venture.

(3) Cultural Landscapes

The early history of Euro–American landownership in New River Gorge is one of conflicting land surveys and claims. In the mid 18th century the New River Gorge was claimed by both British and French colonial interests. The settlement of the area slowed during the French and Indian war, and even after the conflict, the settlement of the New River watershed was sparse. The first pioneers were subsistence farmers who supplemented their meager crops with wild game. As valley floor settlements slowly grew, settlers pushed farther up the tributaries of the New River to settle in smaller hollows and glens. The southern, or upper gorge area, with its less precipitous gorge walls, was more conducive to agricultural pursuits and was settled first. Prominent among the agricultural historic properties in New River Gorge is the Trump- Lilly Farmstead near the town of Hinton in the south area of the national river. The Trump- Lilly Farmstead is listed on the national register.

The National Park Service has completed both cultural landscape inventories and cultural landscape reports for cultural landscapes at New River Gorge National River. Cultural landscape inventories are baseline documentation for landscapes. Cultural landscape reports have more information than cultural landscape inventories; they include treatment recommendations. Cultural landscape reports have been completed for the Trump- Lilly Farm and for Grandview, both of which are in the southern part of the national river. Level I cultural landscape inventories have been completed for Camp Brookside, Harrah Homestead, the Richmond- Hamilton Farm, and the Christina Vallandingham House. All these cultural landscapes are in the upper gorge (southern) area of the national river. A cultural landscape inventory is planned for Nuttallburg and Thurmond in fiscal year 2003 (Brown, NPS, Philadelphia Support Office, pers. comm., September 2002).

There is a potential for cultural landscapes to be identified, inventoried, and evaluated for any or all of the historic contexts (coal industry, railroad industry, lumber industry, Euro–American settlement / agriculture, and recreation / state parks) identified in the *New River Gorge Special History Study / Historic Context Study*. Potential cultural landscapes identified at New River Gorge National River by the National Park Service are the Thurmond Historic District, Kaymoor, Cochrane Farm, Quinnimont, Cunard Mine Site, and Thayer Church. All these potential cultural landscapes except Kaymoor are in the middle gorge upriver from Beauty Mountain or in the southern part of the national river.

C. Visitor Use and Experience

About 1.1 million people visited New River Gorge National River in the year 2000. The national river's monthly public use reports indicated that visitation has been steady at about 1.1 to 1.2 million visitors per year for several years. July is the peak month for visitation, with the high season running from June through October. Somewhat fewer than half of these visitors arrive via Interstate Highway 64 (I- 64). Little valid information is available about climbing in the national river. The national river's geology and topography result in nearly all climbing in the area taking place in the areas previously mentioned. No permit is required for an individual to climb in the national river.

A limited survey conducted from April through August 1997 indicated that visitors

climbing in the national river came from 22 states and 4 foreign countries.(Attarian 1998). Most climbers traveled an average of 448 miles, with 41.15% of the climbers coming from the south (Florida to West Virginia) and 41.15% from the northeast (Ohio to Maine). Most of the climbers (87%) stayed overnight. Climbers spent an average of 24 days per year climbing in the national river. The climbing experience of visiting climbers averaged six years. About 30% of the climbers rated their climbing skill level as beginning to intermediate (5.0–5.9), and about 70% considered themselves advanced to expert (5.10–5.13).

Dr Attarian's survey found that 73% of the climbers in the national river said they thought group size should be limited, with 70% agreeing that large commercial groups detracted from their climbing experience. A total of 48% of the climbers said that groups should climb in designated areas, and 92% reported that they were satisfied to extremely satisfied with their climbing experience. The climbers surveyed indicated overall positive agreement with the leave-no- trace ethic. Most climbers (71%) agreed that permits should be required for all commercial groups. An overwhelming number of climbers (96%) said they believed that group leaders should be qualified to teach rock climbing, with 80% supporting the submission of credentials as part of the permitting process.

D. Commercial Climbing Services

A total of 25 incidental business permits exist at present for climbing guide services in the national river. Of these permits, 9 have been issued to specific climbing outfitters that specialize in climbing; 16 are held by companies that have climbing as a secondary activity for their customers. More than 90% of the commercial group use takes place at climbing areas near the bridge. All permit holders must fill out an application that states the rules and regulations (see appendix C).

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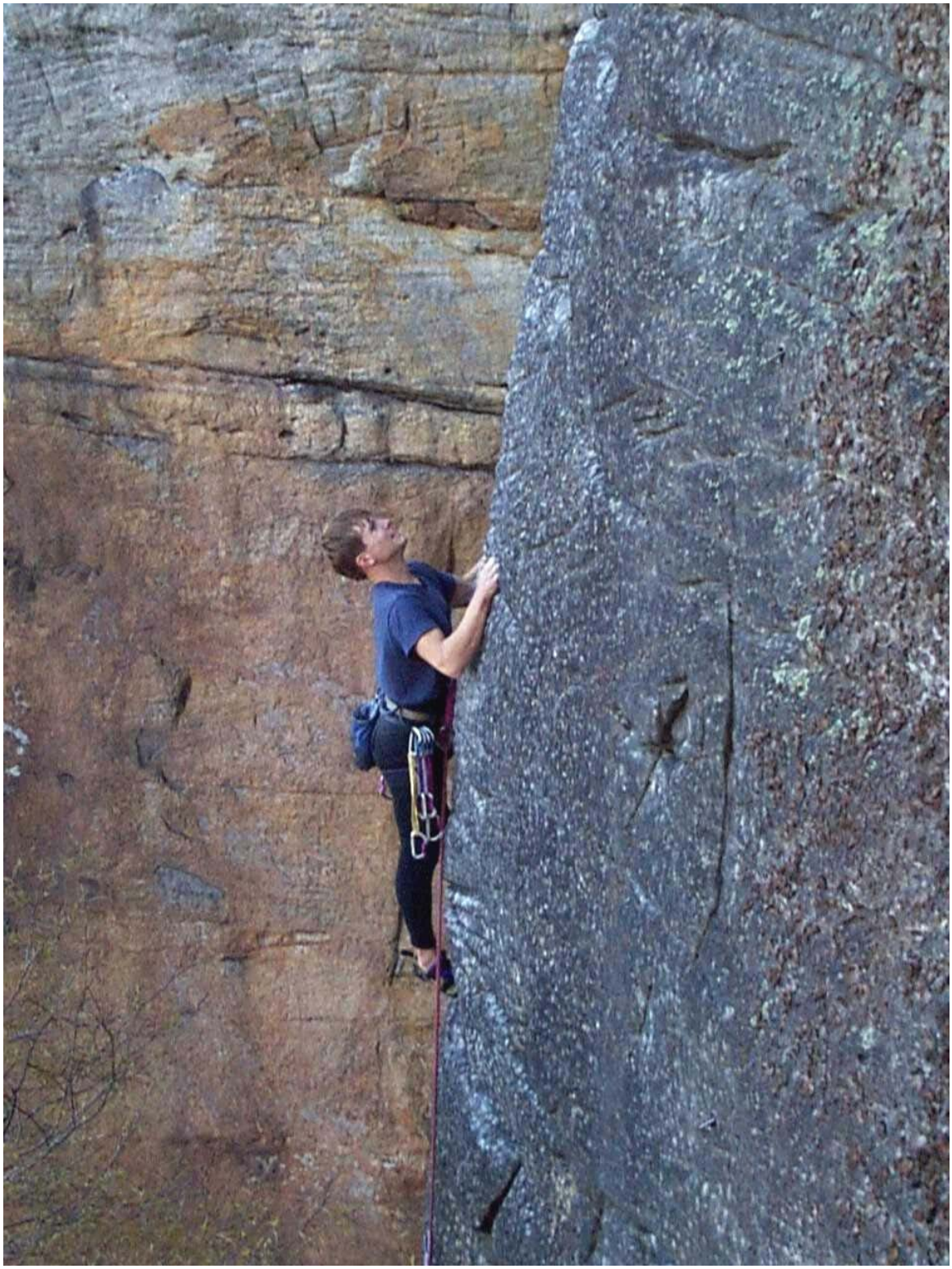
Environmental Consequences



Introduction

This chapter describes the environmental consequences associated with the alternatives. It is organized by impact topics, which distill the issues and concerns into distinct topics for discussion and analysis. These topics focus on the presentation of environmental consequences and allow decision-makers to compare the alternatives on the basis of the most relevant topics. The National Environmental Policy Act requires consideration of the context, intensity, and duration of impacts, as well as consideration of indirect effects, cumulative effects, and measures to mitigate the adverse environmental consequences. NPS policy also requires that *impairment* of resources be evaluated in all environmental documents.

General Definitions: The following definitions were used to evaluate the context, intensity, duration, and cumulative nature of the effects associated with project alternatives:

Intensity
The potential environmental consequences on natural and cultural resources, visitor use and experience, and operations are described in terms of type (would the effects be beneficial or adverse?), context (would the effects be site-specific, local, or regional?), duration (would the effects be short- term, lasting less than one year, or long- term, lasting more than one year?), and intensity (would the effects be negligible, minor, moderate, or major). Because definitions of intensity (negligible, minor, moderate, or major) vary by impact topic, intensity definitions are provided separately for each resource impact topic analyzed in this environmental assessment of effect.

Impact Topic	Intensity Definition			
	Negligible	Minor	Moderate	Major
Natural Resources				
Soils	Soils would not be affected, or the effects on soils would be below or at the lower levels of detection. Any effects on soil productivity or fertility would be slight.	The effects on soils would be detectable. Effects on soil productivity or fertility would be small, as would the area affected. If mitigation was needed to offset adverse effects, it would be relatively simple to implement and would be likely to be successful.	The effect on soil productivity or fertility would be readily apparent and probably long term, and it would result in a change in the soil character over a relatively wide area. Mitigative measures probably would be necessary to offset adverse effects, and they probably would be successful.	The effects on soil productivity or fertility would be readily apparent and would substantially change the character of the soils over a large area in and out of the national river. Extensive mitigating measures to offset adverse effects would be needed, and their success could not be guaranteed.
Vegetation	No native vegetation would be affected, or some individual native plants could be affected by the actions of the alternative, but there would be no effect on native species populations. The effects would be small scale, and no species of special concern would be affected.	The alternative would affect some individual native plants and a relatively minor portion of that species' population. Mitigation to offset adverse effects, including special measures to avoid affecting species of special concern, could be required, and such measures would be effective.	The alternative would affect some individual native plants and a sizable segment of the species' population over a relatively large area. Mitigation to offset adverse effects could be extensive, and it probably would be successful. Some species of special concern could be affected.	The alternative would have a considerable effect on native plant populations, including species of special concern, and it would affect a relatively large area in and outside of the national river. Extensive mitigative measures to offset the adverse effects would be necessary, and their success would not be guaranteed.

Impact Topic	Intensity Definition Negligible	Minor	Moderate	Major
Wildlife	Wildlife would not be affected, or the effects would be at or below the level of detection. Changes would be so slight that there would not be any measurable or perceptible consequence on the wildlife species' population.	Effects on wildlife would be detectable, although the effects would be local, small, and of little consequence to the species' population. Mitigative measures, if needed to offset adverse effects, would be simple and successful.	Effects on wildlife would be readily detectable and local, with consequences on the population level. Extensive mitigative measures, if needed to offset adverse effects, probably would be successful.	Effects on wildlife would be obvious, with substantial consequences on wildlife populations in the region. Extensive mitigating measures would be needed to offset any adverse effects, and their success would not be guaranteed.
Species of Concern, including Peregrine Falcons (*although not federally listed the same criteria apply)*	No federally listed species would be affected, or the actions of the alternative would affect an individual of a listed species or its critical habitat, but the change would be so small that it would not be of any measurable or perceptible consequence to the protected individual or its population. A negligible effect would equate with a "no effect" determination in U.S. Fish and Wildlife Service terms.	The actions of the alternative would affect individual(s) of a listed species or their critical habitat, but the change would be small. A minor effect would equate with a "may effect" determination in U.S. Fish and Wildlife Service terms, and it would be accompanied by a statement of "likely" or "not likely to adversely affect" the species.	An individual or population of a listed species, or its critical habitat would be noticeably affected. The action would cause some consequences to the individual, population, or habitat. A moderate effect would equate with a "may effect" determination in U.S. Fish and Wildlife Service terms, and it would be accompanied by a statement of "likely…" or "not likely to adversely affect" the species.	An individual or a population of a listed species, or its critical habitat would be noticeably affected, with vital consequences on the individual, population, or habitat. A major effect would equate with a "may effect" determination in U.S. Fish and Wildlife Service terms and would be accompanied by a statement of "likely…" or "not likely to adversely affect" the species.
Cultural Resources				
Archeological Resources	The effect would be at the lowest levels of detection — barely measurable, with no perceptible consequences, either adverse or beneficial, on archeological resources. For section 106 purposes, the determination of effect would be *no adverse effect*.	**Adverse effect —** disturbance of a site(s) would result in little, if any, loss of significance or integrity, and the National Register eligibility of the site(s) would not be affected. For section 106 purposes, the determination of effect would be *no adverse effect*. **Beneficial effect** — maintenance and preservation of a site(s). For section 106 purposes, the determination of effect would be *no adverse effect*.	**Adverse effect —** disturbance of a site(s) would not diminish the significance or integrity of the site(s) to the extent that its national register eligibility would be jeopardized. For section 106, the determination of effect would be *adverse effect*. **Beneficial effect —** stabilization of a site(s). For section 106 purposes, the determination of effect would be *no adverse effect*.	**Adverse effect —** disturbance of a site(s) would diminishes the significance and integrity of the site(s) to the extent that it no longer would be eligible for listing on the national register. For section 106 purposes, the determination of effect would be *adverse effect*. **Beneficial effect —** active intervention to preserve a site(s). For section 106 purposes, the determination of effect would be *no adverse effect*.

Impact Topic	Intensity Definition			
	Negligible	Minor	Moderate	Major
Historic Buildings and Other Structures	Effect(s) would be at the lowest levels of detection — barely perceptible and not measurable. For section 106 purposes, the determination of effect would be *no adverse effect*.	**Adverse effect** — action would not affect the character- defining features of a building or other structure eligible for listing or listed on the National Register of Historic Places. For section 106 purposes, the determination of effect would be *no adverse effect*. **Beneficial effect** — stabilization/ preservation of character defining features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For section 106 purposes, the determination of effect would be *no adverse effect*.	**Adverse effect** — action would alter a character defining feature(s) of the building or other structure but would not diminish the integrity of the resource to the extent that its national register eligibility would be jeopardized. For section 106 purposes, the determination of effect would be *no adverse effect*. **Beneficial effect** — rehabilitation of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For section 106 purposes, the determination of effect would be *no adverse effect*.	**Adverse effect** — the action would alter a character defining feature(s) of the building or other structure, diminishing the integrity of the resource to the extent that it no longer would be eligible for listing on the national register. For section 106 purposes, the determination of effect would be *adverse effect*. **Beneficial effect** — restoration of a building or other structure in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For section 106 purposes, the determination of effect would be *no adverse effect*.
Cultural Landscapes	Effects would be at the lowest levels of detection — barely perceptible and not measurable. For section 106 purposes, the determination of effect would be *no adverse effect*.	**Adverse effect** — the action would not affect the character defining patterns and features of a cultural landscape eligible for listing or listed on the National Register of Historic Places. For section 106 purposes, the determination of effect would be *no adverse effect*. **Beneficial effect** — preservation of character defining patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*. For section 106 purposes, the determination of effect would be *no adverse effect*.	**Adverse effect** — the action would alter a character defining pattern(s) or feature(s) of the cultural landscape but would not diminish the integrity of the landscape to the extent that its national register eligibility would be jeopardized. For section 106 purposes, the determination of effect would be *no adverse effect*. **Beneficial effect** — rehabilitation of a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*. For section 106 purposes, the determination of effect would be *no adverse effect*.	**Adverse effect** — the action would alter a character defining pattern(s) or feature(s) of the cultural landscape, diminishing the integrity of the landscape to the extent that it no longer would be eligible for listing on the national register. For section 106 purposes, the determination of effect would be *adverse effect*. **Beneficial effect** — restoration of a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*. For section 106 purposes, the determination of effect would be *no adverse effect*.

Impact Topic	Intensity Definition			
	Negligible	Minor	Moderate	Major
Visitor Use and Experience	Visitors would not be affected, or changes in visitor experience or safety would be below or at the level of detection. Visitors probably would not be aware of the effects associated with the alternative.	Changes in visitor experience or safety would be detectable, although the changes would be slight. Visitors would be aware of the effects associated with the alternative, would not be motivated to express an opinion.	Changes in visitor experience or safety would be readily apparent. Visitors would be aware of the effects associated with the alternative and probably would be able to express an opinion about the changes.	Changes in visitor experience or safety would be readily apparent. Visitors would be aware of the effects associated with the alternative and probably would express a strong opinion about the changes.
Commercial Operations	The effect of the action would be at the lower levels of detection.	The effect of the action would be slight but detectable.	The effect of the action would be readily apparent.	The effect of the action would be severely adverse or exceptionally beneficial.

Duration

The durations of the effects in this analysis are defined as follows:

- *Short- term* — a short- term effect would last less than one year.
- *Long- term* — a long- term effect would last longer than one year.

Cumulative Effects

A cumulative effect is described in regulations developed by the Council on Environmental Quality (40 CFR 1508.7), as follows:

> a "cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non- federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cumulative impacts were determined by combining the effects of each alternative with potential effects from other past, present, and reasonably foreseeable future actions. For the purpose of this plan, the only other action considered is the climbing that takes place at Summersville Lake, managed by the U.S. Army Corps of Engineers.

Impairment of Resources

The NPS Organic Act and the General Authorities Act prohibit an impairment of resources in a national park or other unit of the national park system. NPS *Management Policies 2001* indicate that an effect would be more likely to constitute an impairment to the extent it affects a resource or value whose conservation is: (1) necessary to fulfill a specific purpose identified in the establishing legislation or proclamation of the park system unit; (2) key to the natural or cultural integrity of the national river or to opportunities for its enjoyment; or (3) identified as a goal in the unit's general management plan or other relevant NPS planning documents.

Impairment is an effect that, in the professional judgment of the responsible NPS manager, would have a major adverse impact on the integrity of resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact would be less likely to constitute impairment to the extent that it would be an unavoidable result that could not reasonably be further mitigated or an action necessary to preserve or restore the integrity of park resources or values.

NPS management policies use the terms "resources and values" to mean the full spectrum of tangible and intangible attributes for which the park units have been established and are being managed, including the Organic Act's fundamental purposes (as supplemented), and any additional purposes as stated in a park's legislation.

The New River Gorge National River was established by an act of Congress for the purpose of

> conserving and interpreting outstanding natural, scenic, and historic values and objects in and around the New River Gorge and preserving as a free- flowing stream an important segment of the New River in West Virginia for the benefit and enjoyment of present and future generations.

Impairment is analyzed in this document for natural and cultural resources. There would be no effects on resource- based visitor experiences.

Effects on Cultural Resources and Section 106 of the National Historic Preservation Act

The impact analyses for cultural resources are intended to comply with the requirements of both the National Environmental Policy Act and section 106 of the National Historic Preservation Act. In accordance with the regulations of the Advisory Council on Historic Preservation implementing section 106 of the National Historic Preservation Act (36 CFR 800, *Protection of Historic Properties*), effects on archeological resources and the cultural landscape were identified and evaluated by (1) determining the area of potential effects, (2) identifying cultural resources present in the area of potential effects that were either listed on or eligible for listing on the National Register of Historic Places, (3) applying the criteria of adverse effect to affected cultural resources either listed on or eligible for listing on the national register, and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations, a determination of either *adverse effect* or *no adverse effect* must also be made for affected national register eligible cultural resources. An *adverse effect* occurs whenever an action alters, directly or indirectly, any characteristics of a cultural resource that qualify it for inclusion on the National Register, such as diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the actions of the preferred alternative that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there would be an effect, but the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion on the national register.

A "section 106 summary" is included in the impact analysis sections for cultural resources under the preferred alternative. These summaries are intended to meet the requirements of section 106, and they are assessments of the effects of the undertaking (implementation of the alternative) on cultural resources, based upon the criteria of effect and the criteria of adverse effect found in the Advisory Council's regulations.

Environmental Consequences of Alternative A: No Action (Continue Existing Management)

A. Natural Resources

(1) Soils. Soil compaction would continue to be local in the areas where climbing takes place and along social trails. This effect would be adverse, minor, and long term. Soil compaction would continue to occur at the bases and tops of the cliffs as climbers continued to seek out climbing opportunities without the benefit of designated trails. Mitigative measures such as trail relocation or construction would be implemented on individual basis.

(2) Vegetation. As with soils, the effects of alternative A on vegetation would be adverse, minor, and long term. These adverse impacts would result from vegetation clearing and trampling at the base and top of cliffs, where climbers attempt to make climbs (social trails). The effects would be local and associated with the climbing areas.

(3) Wildlife. There would continue to be minor long- term adverse effects on wildlife. There would be habitat loss or degradation from vegetation trampling and clearing by climbers at the base of the cliffs, and wildlife species occupying cliff habitat would be disturbed by noise and other

climbing activities. The habitat loss and degradation would be local, occurring primarily at the bases of cliffs or at the tops of cliffs. Areas being affected make up a relatively small proportion of the available habitat. Wildlife disturbance by climbers occurs primarily on spring and autumn weekends. Wildlife disturbance by humans at other times is limited because there is less climbing activity at other seasons.

(4) Species of Concern, including Peregrine Falcons. There could be long- term minor to moderate adverse effects on peregrine falcons in the national river because nesting might be prevented by noise and disturbance from recreational activities in and around the Endless Wall. However, continued monitoring and research would help to determine the effects on peregrines (see appendix H) and other sensitive species.

Cumulative Effects on Natural Resources. With minimal climbing activity in the region outside the national river, in comparison with the amount of climbing taking place inside the national river's boundaries, there would be long- term minor adverse overall cumulative effects on natural resources. These impacts would be the same as those mentioned above.

Conclusion. The no- action alternative would result in continued long- term minor adverse effects on natural resources like the effects that are occurring now. There would be soil compaction, vegetation trampling, wildlife disturbance, and habitat degradation. Some individual mitigation to reduce adverse effects observed on vegetation and soil impacts would be carried out as needed.

B. Cultural Resources

(1) Archeological Resources: Continued climbing activity as at present under alternative A on all identified climbing areas in the northern area of the national river could affect rock overhangs that are near or on some identified climbing cliff walls, where the overhangs potentially are prehistoric archeological site locations. Climber congestion on identified cliff faces would continue, possibly resulting in inadvertent discovery and disturbance of prehistoric archeological resources. Minor long- term adverse impacts on archeological resources that may be eligible for the national register could be expected to persist. The National Park Service would continue to inventory and evaluate all archeological resources under its jurisdiction and would continue to manage archeological properties in the national river to preserve and protect their values in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (36 CFR 68). The National Park Service also would develop and implement mitigation plans for known threats to archeological resources.

Cumulative Effects. Some archeological resources at New River Gorge National River have been adversely affected by past actions, including site disturbance related to Euro–American settlement and the lumber and mining industries. Such resources also have been affected by past actions that occurred before the national river was established or that resulted from collecting before there were legal requirements for archeological survey, site protection, and mitigation. In addition, visitor pressures and natural erosional processes have contributed to past archeological impacts. The no- action alternative, continuing climbing activities on all rock faces in the northern part of the national river, in conjunction with the impacts of past and reasonably foreseeable future actions, would result in minor long- term adverse cumulative impacts on the area's archeological resources. If adverse impacts could not be avoided, the National Park Service would develop and implement mitigative measures for known threats to archeological resources.

Conclusion. Alternative A would result in a minor long- term adverse effect on archeological resources and would also contribute to minor long- term adverse cumulative impacts on archeological resources.

(2) Historic Structures. With climbing activity continuing in New River Gorge National River under alternative A, and with climbing continuing near historic structures and buildings and staging of climbs at or near historic buildings, minor long- term adverse effects would continue on historic structures that are either listed or eligible

for listing on the national register. The National Park Service would continue to inventory and evaluate all historic structures under its jurisdiction and would continue to manage historic structures to preserve and protect their values in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. If adverse impacts on historic structures could not be avoided, mitigation plans for known threats to historic structures would be developed and implemented .

Cumulative Effects on Historic Structures. Some historic resources at New River Gorge National River have been adversely affected by past actions, including deterioration of buildings related to abandonment and weathering of structures. Pressures from visitors' use of the area also have contributed to past impacts on historic structures. These impacts, in conjunction with the impacts of the no- action alternative, would result in minor long- term adverse cumulative impacts on historic structures.

Conclusion. Long- term minor adverse effects on historic structures would result from alternative A, which also would contribute to minor long-term adverse cumulative impacts on historic structures.

(3) Cultural Landscapes. There is a potential for cultural landscapes to be identified and inventoried in the northern area of the national river that corresponds to the New River climbing area. Under alternative A, climbing would continue at all identified climbing sites in the Lower Gorge, and minor long- term adverse effects on cultural landscapes that may be eligible for the national register could be expected to persist. These impacts would include chalk residue on rock faces and climber activity in and around cultural landscapes that may be eligible for the national register. The National Park Service would continue to inventory and evaluate all cultural landscapes under its jurisdiction and would continue to manage these resources to preserve and protect their values in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. If adverse impacts on cultural landscapes could not be avoided, the National Park Service would develop and implement mitigation plans for known threats to cultural landscapes.

Cumulative Impacts on Cultural Landscapes. Some cultural landscapes at New River Gorge National River have been adversely affected by past actions, including disturbance related to weather, deterioration of historic structures, and invasive exotic vegetative cover. Pressures from visitors' use of the national river also have precipitated the development of access trails, contributing to impacts on cultural landscapes. The no- action alternative, in conjunction with the impacts of past and reasonably foreseeable future actions, would contribute to a minor long- term adverse cumulative impact on cultural landscapes. If adverse impacts could not be avoided, the National Park Service would develop and implement mitigative measures.

Conclusion. Long- term minor adverse effects on cultural landscapes would result from alternative A, which also would contribute to minor long-term adverse cumulative impacts.

Impairment of Natural and Cultural Resources

Because there would be no major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of New River Gorge National River; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of the park's resources or values.

C. Visitor Use and Experience

As time goes on, the growing frustration of visiting climbers is likely to increase as climbing pressures in the national river intensify, and without the guidance of a management plan, some climbers might decide to climb elsewhere. Longer waits for climbing routes would result in a long- term minor adverse impact. A few examples of impacts on the scenic quality of the area already have resulted from climbing. Some quick draws have been left in place, and chalk residue remains in the climbing areas of the national river. These actions

would lead to long- term moderate beneficial effects on visitors who want to climb. Voluntary compliance with protective measures for peregrine falcons by avoiding the survey area from February through April through the year 2007 would affect about 500 climbing routes. These long- term adverse effects would continue to be minor to moderate.

Cumulative Effects on Visitor Use and Experience. The New River Gorge National River would continue to attract most of the climbing in the area. The cumulative long- term adverse effect on visitor use and experience would be minor, because climbing outside of the national river is minimal compared to that inside the national river.

Conclusion. The long- term adverse impacts on visitor use and experience from alternative A would be minor.

D. Commercial Climbing Services

The increase in guided climbing services in the region would be expected to continue, continuing the economic benefit to commercial climbing services. This would be a long- term minor to moderate beneficial effect on commercial climbing businesses.

Cumulative Effects on Commercial Climbing Services. Other commercial opportunities exist besides those in and outside of the national river. The long- term cumulative beneficial effect on those businesses would be minor.

Conclusion. The no- action alternative would result in long- term minor to moderate beneficial effects on commercial climbing services.

Environmental Consequences of Alternative B (The Preferred Alternative)

A. Natural Resources

(1) Soils. Under alternative B, soil compaction would be reduced at the tops of the cliffs as top anchors were installed, so that climbers would not be "topping out" on climbs. With improved climbing trail access, impacts on soils from braided and informal trails would decrease. Focusing commercial use on hardened areas such as Bridge Buttress and Junkyard Wall would reduce soil impacts at other climbing areas in the national river. These actions would result in long-term minor beneficial effects on soils in the climbing areas.

(2) Vegetation. Better designated climbing trails, top anchors, and improved commercial guide service management under alternative B would reduce trampling of vegetation at and near climbing areas. This would result in long- term minor beneficial effects on vegetation.

(3) Wildlife. Alternative B would include better trail management, increased climbing awareness and education, and increased resource monitoring. These actions would help develop better resource protection and decrease wildlife disturbance and habitat degradation. This would result in long- term minor beneficial effects on wildlife in climbing areas.

(4) Species of Concern, including Peregrine Falcons. With the management strategies of recommending climbing and recreational use areas other than those near Endless Wall, noise and other disturbing factors would be reduced, so that peregrine falcons might have more opportunities to establish nests. Adding restrictions in nest areas if peregrines began to nest along the cliffs would remove any disturbance to the birds until the young were fledged. Therefore, alternative B would result in long- term minor beneficial effects on peregrine falcons if the birds decided to nest in the area.

Designated trails and increased education to reduce resource impacts would result in decreased habitat degradation, a long- term minor beneficial effect on other species of concern. In addition, expanded resource monitoring would lead to better protection strategies, and this also would be beneficial.

Cumulative Effects on Natural Resources. Under alternative B, the long- term beneficial cumulative effects on climbing activity outside of the national river, in areas that are used by far fewer climbers than the national river, combined

with the effects inside the national river, would be minor. If peregrine falcons began to nest in the national river, there would be a moderate overall beneficial effect on that species in the region, which is not known to be nesting in the region now (the closest documented nesting pair is approximately 200 miles to the northeast).

Conclusion. Alternative B would result in long-term minor beneficial effects on natural resources and would contribute to long- term minor cumulative beneficial effects. There would be no major adverse effect on archeological resources that are (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the national river, (2) key to its natural or cultural integrity, or (3) identified as a goal in its general management plan or other relevant NPS planning documents; therefore, there would be no impairment of archeological resources.

B. Cultural Resources

(1) Archeological Resources. Under alternative B, designating specific uses and group size for climbing sites such as Bridge Buttress would result in long- term minor beneficial effects on archeological resources that may be eligible for the national register. Inventorying, evaluating, and protecting areas with the potential to contain archeological resources in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* would contribute to these beneficial effects, as would identifying threats to archeological resources and working with interested parties to develop management strategies for archeological resources, which might include restrictions. Also contributing to the effects would be NPS efforts to incorporate cultural resource values in educational materials developed for climbers and other recreational users.

Cumulative Effects on Archeological Resources. Some archeological resources at New River Gorge National River have been adversely impacted from past actions, including site disturbance related to Euro–American settlement and the lumber and mining industries. Past actions that took place before New River was established as a national river or from artifact collection before legal requirements were established for archeological survey also may have affected archeological resources at New River Gorge. In addition, pressures from visitors' use of the area, inadvertent discovery, and natural erosional processes have contributed to past effects on archeological resources. In conjunction with the impacts of past, present, and reasonably foreseeable future actions, alternative B would contribute to minor beneficial long- term cumulative impacts on archeological resources.

Conclusion. Alternative "B" would have minor long- term beneficial impacts to archeological resources and would contribute minor beneficial long- term cumulative impacts to archeological resources.

Section 106 Summary. After applying the criteria of the Advisory Council on Historic Preservation for adverse effects (36 CFR 800.5, *Assessment of Adverse Effects*) the National Park Service finds that implementing alternative B would have no adverse effect on archeological resources, nor would it alter, directly or indirectly, any of the characteristics of archeological resources that may qualify these resources for inclusion on the national register. The integrity of archeological resources, their location, design, setting, materials, workmanship, feeling, or association would not be diminished.

(2) Historic Structures. Designating specific uses and group sizes for climbing sites in the northern area of the national river (such as Bridge Buttress) under alternative B would result in minor long-term beneficial effects on historic structures, as would avoiding structures that may be listed on or eligible for listing on the national register through identifying climbing cliffs and access routes. The National Park Service would continue to inventory and evaluate all historic structures under its jurisdiction and would continue to manage historic structures to stabilize, preserve and protect their values in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The National Park Service would identify threats to historic structures and would work with interested parties to develop management strategies for such resources, which might include restrictions. In

addition, cultural resource values would be added to educational materials that the National Park Service would develop for climbers and other recreational users.

Cumulative Effects on Historic Structures. Some historic resources at New River Gorge National River have been adversely affected by past actions, including deterioration by abandonment and weathering and pressures from visitors' use of the national river. The effects from alternative B, including designating climbing areas and regulating group size, added to the effects from past, present, and reasonably foreseeable future actions, would contribute to minor long- term cumulative beneficial effects on historic structures.

Conclusion. There would be minor long- term beneficial effects on historic structures from alternative B, which also would contribute to minor long- term beneficial cumulative effects on regional historic structures.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effects, the National Park Service finds that alternative B, the preferred alternative, would result in no adverse effect on historic structures. Implementing this alternative would not alter, directly or indirectly, any of the characteristics of historic structures that may qualify these resources for inclusion on the national register, and the integrity of historic structures, their location, design, setting, materials, workmanship, feeling, or association would not be diminished.

(3) Cultural Landscapes. Cultural landscapes may be identified and inventoried in the northern part of the national river. Climbing areas would be designated and group sizes managed by regulations under alternative B, and the character-defining patterns and features of the cultural landscapes that may be eligible for the national register would be preserved and protected. The National Park Service would continue to inventory and evaluate all cultural landscapes under its jurisdiction and would manage these resources to preserve and protect their values in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The National Park Service would identify threats to cultural landscapes and would work with interested parties to develop management strategies for cultural landscapes; such strategies might include restrictions. In addition, cultural resource values would be incorporated into educational materials developed for climbers and other recreational users. As a result, alternative B would produce minor long- term beneficial effects on cultural landscapes.

Cumulative Effects on Cultural Landscapes. Some cultural landscapes at New River Gorge National River have been adversely affected by past actions, including disturbance by weather, deterioration of structures, and invasive exotic vegetative cover. In addition, pressures caused by visitors' use of the national river, including the development of access trails, have contributed to past impacts on cultural landscapes. Alternative B, the preferred alternative, in conjunction with the effects from past and reasonably foreseeable future actions, would result in long- term minor cumulative beneficial effects on cultural landscapes.

Conclusion. Alternative B would cause minor long- term beneficial effects on cultural landscapes and would contribute to a cumulative long- term minor beneficial effect.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effects, the National Park Service finds that implementing the preferred alternative would have no adverse effect on cultural landscapes, and it would not alter, directly or indirectly, any of the characteristics of cultural landscapes that may qualify these resources for inclusion on the national register. The integrity of cultural landscapes, their location, design, setting, materials, workmanship, feeling, or association would not be diminished.

Impairment of Natural and Cultural Resources

Because there would be no major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of

New River Gorge National River; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of the park's resources or values.

C. Visitor Use and Experience

As management actions under alternative B were implemented, independent climbers would notice that trails and climbing routes were designated better and maintained better. Climbers using commercial guide services would be guaranteed an accredited guide service that would provide a minimum level of safety. These actions would lead to long- term moderate beneficial effects on national river visitors who climb. When voluntary compliance was requested to avoid the peregrine falcon survey area from February through April (through 2007), about 500 climbing routes would be affected, but other opportunities for climbing would be available elsewhere in the national river at that time of year. Other visitors would see less evidence of climbing (such as chalk residue and quickdraws) because climbers would be more educated in the leave- no- trace ethic.

Cumulative Effects on Visitor Use and Experience. Because most climbing in the area takes place within the boundaries of New River Gorge National River, the cumulative effect on visitor use and experience would come primarily from the effects resulting from this plan. Therefore, the cumulative long- term effect on the visitor experience under alternative B would be beneficial and moderate.

Conclusion. Alternative B would result in long-term moderate beneficial effects on visitor use and experience.

D. Commercial Climbing Services

As guide services continued to increase, better management and required accreditation under alternative B would result in a long- term minor beneficial effect on commercial climbing services. A short- term negligible adverse economic effect might result from the cost of accreditation for each permittee.

Cumulative Effects. In the diverse regional economy, implementing alternative B would contribute to a negligible long- term cumulative beneficial effect on commercial climbing services in the region.

Conclusion. The long- term effects on commercial climbing services from alternative B would be minor and beneficial.

Environmental Consequences of Alternative C

A. Natural Resources

(1)Soils. As in alternative B, the long- term effects on soils in the climbing areas would be beneficial and minor to moderate. The benefits from alternative C would be similar to those from alternative B, including reduced soil compaction at the tops of the cliffs as top anchors were installed, and new climbing access trails would reduce soil impacts associated with braided and informal trails.

(2)Vegetation. Better designated climbing trails, top anchors, and improved education of commercial guides all would all help to reduce adverse effects on vegetation at and near the climbing areas. The long- term effects on vegetation from alternative C would be beneficial and minor to moderate.

(3)Wildlife. The effects on wildlife in climbing areas from alternative C would be similar to those described for alternative B. There would be better trail management, increased climbing awareness and education, and more resource monitoring, which would help develop better resource protection and reduce the disturbance of wildlife and degradation of habitat. The long- term beneficial effects would be minor.

(4) Species of Concern, including Peregrine Falcons. The disturbance of peregrine falcons by recreational activities could be reduced under alternative C by increased monitoring of peregrines and preemptive climbing closures in nest areas, which would reduce disturbance during the critical times of nest site selection and courtship.

This could result in improved nesting success. If the falcons nested, the results from alternative C would be slightly more favorable than from alternative B, causing a long- term minor to moderate beneficial effect.

As in alternative B, the long- term effects from alternative C on other species of concern would be beneficial and minor, with new designated trails and more visitor education to reduce resource impacts from habitat degradation. In addition, more resource monitoring could lead to better protection strategies; this also would be beneficial.

Cumulative Effects on Natural Resources. Far more climbing excursions take place within the boundaries of the national river than outside of the national river. The effects from alternative C on natural resources within the boundaries of the national river would combine with effects outside of the national river to produce a long- term cumulative minor beneficial effect. The exception would be for peregrine falcons — if peregrines began to nest in the national river, there would be an overall moderate beneficial effect on this species in the region, because at present peregrines are not known to nest in the area, and the closest documented site is about 200 miles away.

Conclusion. As in alternative B, the long- term effects on natural resources from alternative C would be an improvement from current conditions. The effects would include less soil compaction, less vegetation trampling, less degradation of and disturbance of wildlife.

B. Cultural Resources

(1) Archeological Resources: The regulation of group sizes and the designation of climbing sites such as Bridge Buttress for specific uses under alternative C would benefit archeological resources, as would NPS efforts to inventory, evaluate, and protect areas with the potential to contain archeological resources according to the *Secretary of the Interior's Standards for the Treatment of Historic Properties.* NPS efforts to identify threats to archeological resources and to work with interested parties to develop management strategies, which might include restrictions, also would benefit archeological resources, and the National Park Service would incorporate cultural resource values in educational materials developed for climbers. All these actions would result in long- term minor beneficial effects on archeological resources that may be eligible for the national register.

Cumulative Effects on Archeological Resource. Some archeological resources at New River Gorge National River have been adversely affected by past actions, including site disturbance related to Euro–American settlement and the lumber and mining industries. Archeological resources also have been affected by past actions that took place before the area was established as a national river, along with artifact collection before legal requirements were established for archeological survey, site protection, and mitigation. In addition, pressures from visitors' use of the national river and natural erosional processes have contributed to past archeological impacts. Alternative C, in conjunction with the impacts of past, present, and reasonably foreseeable future actions, would contribute to long- term cumulative minor beneficial effects on archeological resources.

Conclusion. Alternative C would result in long-term minor beneficial effects on archeological resources and would contribute to long- term cumulative minor beneficial effects on the region's archeological resources.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effects, the National Park Service finds that implementing Alternative C would not adversely affect archeological resources. Implementing the preferred alternative would not alter, directly or indirectly, any of the characteristics of archeological resources that may qualify them for inclusion on the national register. The integrity of archeological resources, their location, design, setting, materials, workmanship, feeling, or association would not be diminished.

(2) Historic Structures. Designating specific uses and group sizes for climbing sites in the northern area of the national river (such as Bridge Buttress) under alternative C would result in minor long-term beneficial effects on historic structures, as

would avoiding structures that may be listed on or eligible for listing on the national register through identifying climbing cliffs and access routes. The National Park Service would continue to inventory and evaluate all historic structures under its jurisdiction and would continue to manage historic structures to stabilize, preserve and protect their values in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The National Park Service would identify threats to historic structures and would work with interested parties to develop management strategies for such resources, which might include restrictions. In addition, cultural resource values would be added to educational materials that the National Park Service would develop for climbers and other recreational users.

Cumulative Effects on Historic Structures. Some historic structures at New River Gorge National River have been adversely affected by past actions, including weathering of structures and pressures from visitors' use of the national river. The effects from alternative C, including designating climbing areas and regulating group size, added to the effects from past, present, and reasonably foreseeable future actions, would contribute to minor long- term cumulative beneficial effects on historic structures.

Conclusion. There would be minor long- term beneficial effects on historic structures from alternative C, which also would contribute to minor long- term beneficial cumulative effects on regional historic structures.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effects, the National Park Service finds that alternative C would result in no adverse effect on historic structures. Implementing this alternative would not alter, directly or indirectly, any of the characteristics of historic structures that may qualify these resources for inclusion on the national register, and the integrity of historic structures, their location, design, setting, materials, workmanship, feeling, or association would not be diminished.

(3) Cultural Landscapes. Cultural landscapes may be identified and inventoried in the northern part of the national river. Climbing areas would be designated and group sizes managed by regulations under alternative C, and the character-defining patterns and features of the cultural landscapes that may be eligible for the national register would be preserved and protected. The National Park Service would continue to inventory and evaluate all cultural landscapes under its jurisdiction and would manage these resources to preserve and protect their values in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The National Park Service would identify threats to cultural landscapes and would work with interested parties to develop management strategies for cultural landscapes; such strategies might include restrictions. In addition, cultural resource values would be incorporated into educational materials developed for climbers and other recreational users. As a result, alternative C would produce minor long- term beneficial effects on cultural landscapes.

Cumulative Effects on Cultural Landscapes. Some cultural landscapes at New River Gorge National River have been adversely affected by past actions, including disturbance by weather and invasive exotic vegetative cover. pressures caused by visitors' use of the national river, including development of access trails, have contributed to past impacts on cultural landscapes. Alternative C, in conjunction with the effects from past and reasonably foreseeable future actions, would result in long- term minor cumulative beneficial cumulative effects on cultural landscapes.

Conclusion. Alternative C would result in minor long- term beneficial effects on cultural landscapes and would contribute to a cumulative long- term minor beneficial effect.

Section 106 Summary. After applying the Advisory Council on Historic Preservation's criteria of adverse effects (36 CFR Part 800.5 *Assessment of Adverse Effects*) the National Park Service finds that implementing alternative C would have no adverse effect on cultural landscapes, and it would not alter, directly or indirectly, any of the characteristics of cultural landscapes that may qualify these resources for

inclusion on the national register. The integrity of cultural landscapes, their location, design, setting, materials, workmanship, feeling, or association would not be diminished.

Impairment of Natural and Cultural Resources

Because there would be no major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of New River Gorge National River; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents, there would be no impairment of the park's resources or values.

C. Visitor Use and Experience

As management actions under alternative C were implemented, independent climbers would notice that trails and climbing routes were designated better and maintained better. These actions would lead to long- term minor to moderate beneficial effects on national river visitors who climb. Other visitors would see less evidence of climbing (such as chalk residue and quickdraws) because climbers would be more educated in the leave-no- trace ethic. There would be a minor, short-term adverse effect on climbers de to the closures of the cliffs during peregrine nesting and courtship period.

Cumulative Effects on Visitor Use and Experience. Because most of the climbing in the area takes place within the boundaries of New River Gorge National River, the cumulative effect on visitor use and experience would come primarily from the effects resulting from this alternative. Therefore, the long- term cumulative effect on the visitor experience from alternative C would be beneficial and moderate.

Conclusion. Alternative C would result in long-term moderate beneficial effects on visitor use and experience.

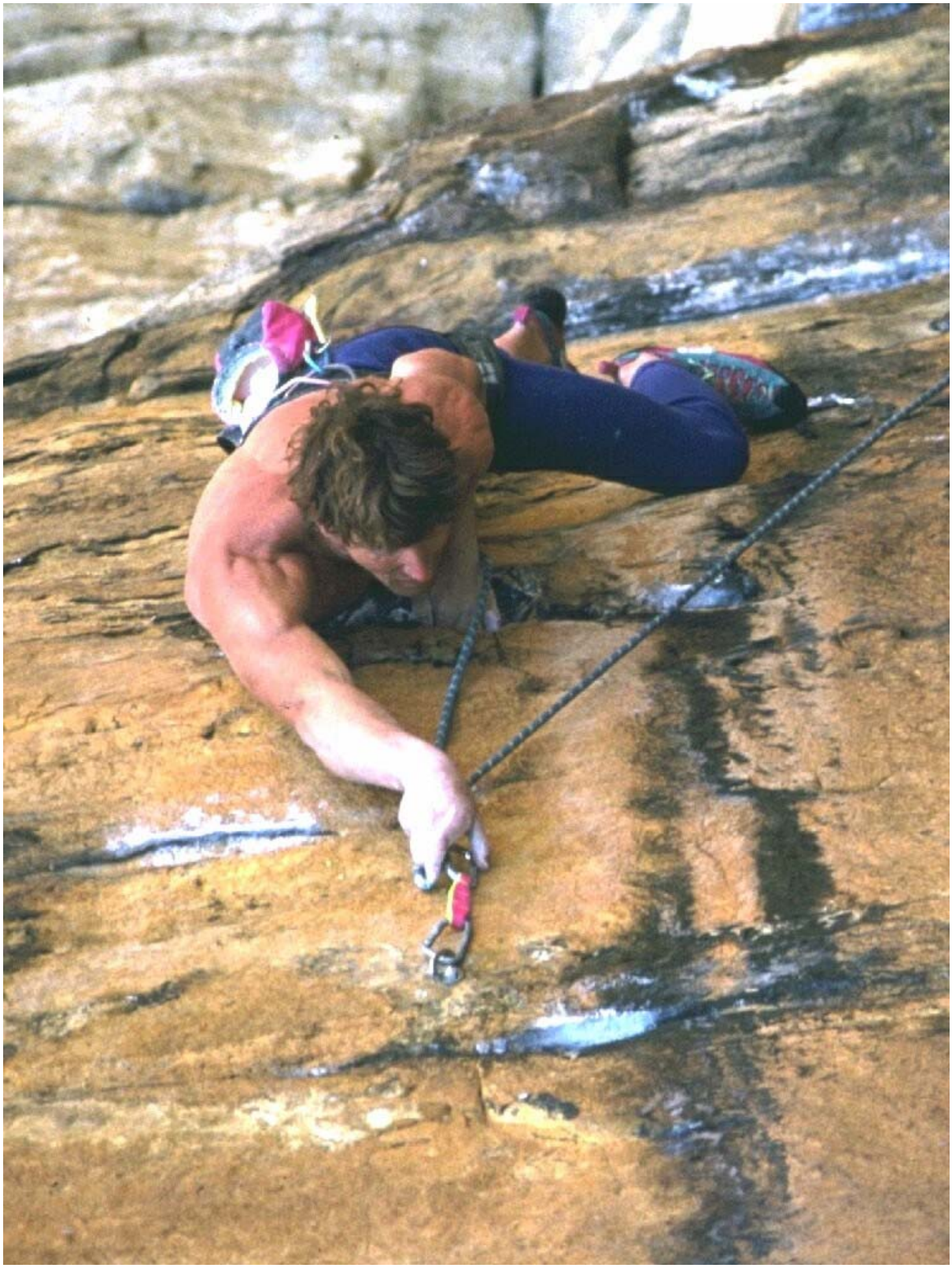
D. Commercial Climbing Services

In alternative C, commercial use in the national river would be managed under a concession contract. This would limit the number of guide services operating in the national river to far fewer than at present, but the number of clients would remain about the same. This would lead to a long-term moderate adverse effect on some climbing businesses that would not be selected. However, there would be long- term moderate beneficial effects on a few commercial climbing services that were selected to provide service.

Cumulative Effects. The overall cumulative effect on commercial climbing services from alternative C would be minor because many businesses in the area cater to a diverse group of clients other than climbers.

Conclusion. The long- term effects on commercial climbing services from alternative C would vary, depending on the guide service. The long- term beneficial effect on services selected as concession contractors would be minor to moderate and beneficial; the long- term adverse effects on those not selected would be moderate.

Preparers, Consultants and References and Appendices



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Agencies and Organizations

Agencies and Organizations contacted for information; or that assisted in identifying important issues, developing alternatives, or analyzing impacts include:

Federal Agencies

US Fish and Wildlife Service
Advisory Council on Historic Preservation

State Agencies

West Virginia Division Natural Resources
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Appendix A – Definitions of Terms

Aid climbing/aid route: refers to a method of recreational climbing performed with the aid of any number and various forms of artificial devices employed by the climber to obtain leverage in order to ascend. "Clean" aid climbing involves the use of removable protection only, but not pitons or other permanent types of protection.

Anchor: any method used to attach oneself to the rock. Common types of anchors are natural, removable, and fixed. This term is generally used to indicate anchors placed at belay locations.

Aspect: a view in a certain direction. The direction that a certain slope faces. Rock faces at NERI generally have either a southwest facing aspect or a northeast facing aspect.

Bolt: a type of permanent, fixed anchor commonly used for both protection and belay/rappel anchors. To place this fixed protection, a hole is drilled by hammering a hand- turned drill, or by use of a battery charged power drill. The bolt is then inserted and affixed to the rock. The placement of bolts allows climbers to attempt extremely difficult and previously unprotected rock faces, and to place fixed anchors for descent via rappel.

Camming Devices: are mechanical devices, typically spring loaded, used for protection from falling. They are designed to expand once placed in a crack and are removed by manually retracting the spring. Friends™ and Camalots™ are examples of brand name camming devices.

Carabiners: are aluminum alloy snap- links used to connect a climber•s rope to intermediate protection and anchors.

Chains: metal links sometimes used in place of slings. Chains are left in place at the anchor bolt and are used for climbers to descend from the top of a route.

Chipping: the act of creating, sculpting, or enhancing a hold by using a drill, chisel, or hammer to alter the natural surface of the rock.

Chopping: removing a bolt, or entire route, that is already in place.

Chalk: chalk is used as a friction aid in climbing and enhances the climber's ability to ascend difficult rock climbs. White chalk is widely used and contrasts with the natural color of the rock. Traces of chalk can often be found around the base of rock climbs.

Clean Climbing: is a climbing method that uses no permanent fixed protection to ascend a route. Only removable protection such as nuts and camming devices are used, which are then removed by the last climber in the party. Clean climbing is considered minimum impact climbing that does little or no harm to the rock.

Cold Shuts (anchor): permanent rings attached to bolts at the top of a climb, with the rings being large enough to accommodate a climbing rope. Cold shuts are used to facilitate descent via rappel, and are used in place of slings or chains. Typically made up of two bolts.

Crack Climbing: refers to climbing using natural fractures in a rock surface Accomplished by jamming fingers, hands, feet, toes, arms, legs, or entire bodies into a crack. Generally protected using removable protection.

Endangered species: a species that is in immediate danger of extinction throughout much or all of its range.

Expansion bolts: are 2 to 4 inch long metal rods that are typically threaded on one end and machined on the other end so that the end expands with great force when the rod is either twisted or hammered into a drilled hole ("bolting"). After the bolt is placed in a hole in this fashion, a "hanger" can be secured to the threaded end by use of a nut. Some varieties of bolts have hangers or eyes that are permanently pre- attached. Bolts are considered permanent fixed protection.

Fixed protection: is permanently placed protection left in the rock, typically a bolt or a piton intended to be permanently placed. Fixed protection is usually applied when no "clean" or removable protection is available.

Free climbing: is the sole use of the body and physical power to ascend; rope and equipment are used only as a backup should a climber fall.

Free soloing: ascending a rock face or cliff with no rope, belayer, or intermediate protection.

Habitat: the area where an animal or plant lives and finds nutrients, water, shelter, and living space.

Hanger: is an L- shaped piece of metal that is attached to a bolt with a threaded nut and bears an eye or hole capable of accommodating a carabiner. A hanger attached to a placed bolt is usually considered to be as permanent as a bolt.

Hardware: climbing equipment placed in cracks or on faces to protect climbers from falling including chock, nuts, friends, pitons, and bolts.

Holds: are ledges, cracks, depressions, or protrusions on the rock surface that are used to support a climber's weight when grasped by a hand or stepped onto by a foot.

Mixed route: refers to a climbing route where there is a mixture of natural, clean, and fixed protection. (Approximately 200 of the 1500 routes identified at NERI are mixed routes).

Natural protection: Protection offered by the natural attributes of the rock, chockstones, trees, or bushes.

Pitch: The distance a lead climber ascends before he or she stops to belay the second climber's ascent. The distance of a pitch is limited by the length of rope used by climber's and the location of ledges and anchor stations.

Piton: a type of semi- permanent, fixed protection. Pitons are placed by hammering metal "spikes" into already existing cracks in the rock. They are not commonly used at the New, though there are still some in place.

Power drill: battery operated tool used by climbers to drill holes into rock for the installation of bolts. Power drills can bore a hole into rock in less than a minute. Hand drills are manually operated, metal drill bits driven into the rock when stuck repeatedly with a hammer. A bolt installed with a hand drill can take up to 30 minutes to place.

Protection: any form of intermediate anchor used to protect a climber. It can be natural, removable, or fixed.

Rappel: is the method by which a climber descends a rope, usually by using a mechanical device that allows a controlled descent with little effort. Ropes are generally doubled or tied together and retrieved by pulling all the way through on one end after the rappel is finished.

Rare species: a species that has a small number or individuals or has a limited distribution. May or may not be endangered or threatened.

Rating (standard of difficulty): is a numerical index used to indicate the difficulty of free climbing a particular route. The rating or standard is set by the first ascensionist then revised by subsequent parties if necessary. The index ranges from 5.0 to a current maximum of 5.14. The •5" indicates that the type of climbing is technical free climbing. Whereas virtually any able- bodied person can climb 5.0 with little practice, only Olympic- caliber trained athletes can climb 5.14.

Retro- bolting: is the practice of bolting an existing route after the first ascent to make it safer or more convenient to lead. Generally permitted only with the permission of the first ascent party.

Rock alteration: involves the physical modification of the rock surface and may

include filing off rough edges, reinforcing loose hand and foot holds with epoxy glue, removing loose rocks, or creating new holds with hammers, chisels, or drills.

Route cleaning: the removal of soils and vegetation from new and existing climbing routes, including wire brushing lichens from the rock face. Loose rocks are also removed for safety reasons. Effects of route cleaning are greatest with new route development.

Slings: are knotted or sewn loops of nylon webbing that are occasionally left behind when a climber descends from the top of a route, typically by rappelling or being lowered off by the belayer. Sometimes metal chains or cold-shuts are used for the same purpose rather than slings because they are easier to use once in place, last longer, and may be less conspicuous than webbing.

Software: refers to slings, webbing, and rope that attaches to climbing hardware.

Sport climbing: is a style of climbing typically involving short (less than a rope length) routes with fixed bolt protection. Previewing and practicing a climb is common and the emphasis is on technical difficulty. Sport climbs tend to involve less physical risk (due to the regular spacing of bolted protection points) and rarely continue to summits. Sport climbing routes generally end at top fixed anchors where the sustained difficulty of the climb diminishes or the character of the rock changes. (Approximately 500 of the 1500 routes identified at New River are sport routes).

Threatened species: a species whose numbers are low and declining and will likely become an endangered species in the foreseeable future throughout much or all of its range if not protected.

Top rope: a method of protection in which climber's place a rope on a fixed anchor point at the top of the cliff to use for belaying a climbing partner. Belaying can be done at the top or bottom of the cliff.

Traditional Climbing: is a style of climbing where the climber uses only natural or removable protection. Crack climbing is one example of traditional climbing. The majority of routes at New River are traditional (800+ routes).

Appendix B – Ethics & Education

American climbers have historically been a group with a high standard of environmental care. However, the ethic that carried us through the early days of climbing is not enough anymore due to the combined effects of ever-growing numbers of climbers and ever-changing technologies. As an area's popularity increases, impacts to the land and to other visitors accelerate and become difficult to reverse. Litter, fire scars, and poorly planned trails are some of the unfortunate signs of carelessness that exist at some of our nation's climbing areas.

We are appealing to all climbers to accept personal responsibility for the care of our fragile resources. Toward this goal, we offer the following principles developed through the collaborative efforts of climbers, land managers, and climbing organizations including the Access Fund.

The General Principles of Leave No Trace are:

Plan Ahead and Prepare
Camp and Travel on Durable Surfaces
Pack It In, Pack It Out
Properly Dispose of What You Can't Pack Out
Leave What You Find
Minimize Use and Impact from Fires

And for climbers they all add up to the seventh principle

Minimize Climbing Impacts

These principles are applicable to the numerous crags and rock routes across North America. Success in decreasing the impacts created by climbers depends on understanding how these principles apply to different types of climbing in various environments.

Leave No Trace depends more on attitude and awareness than on rules and regulations. Minimum- impact techniques continually evolve and improve. Consider variables such as rock type, typical forms of protection, vegetation, wildlife, and the use the area receives—then determine the best way to leave no trace. Your climbing will be even more rewarding if you help to reduce changes to the land and foster relations with other recreationists, land managers and land owners.

Plan ahead and Prepare

You've probably done a bit of research on routes, their difficulty, and the kinds of protection you might need on your next climbing day. But what about the aspects of planning that allow you to improve your Leave No Trace efforts? Make a decision to decrease your impact on the next visit to the crag.

Discarded tape and cigarette butts are unsightly so consider bringing along a small plastic bag in your pack for trash. If all you do so pick up a bit of litter, you will have improved your own Leave No Trace habits.

Camp and Travel on Durable Surfaces

Climbing areas may lie above steep slopes that can be easily eroded or along riparian zones with fragile vegetation. With the huge increase in the number of climbers, random access creates serious erosion and trampling problems.

At easy- access crags or areas that see frequent traffic, the natural impulse is to make a beeline through the brush to the base of the climb. Instead, take a moment longer to seek out and follow established paths and trails. A few footsteps off the trail may cause significant damage to the vegetation and attract further trampling and erosion, so remaining on existing paths is crucial. Try not to use trails that have been closed and respect rehabilitation efforts.

Choose campsites carefully. Camp in existing sites, if possible, to center your activities on already barren areas. Consider sites where either the vegetation is very resilient (e.g. grasses), or the ground is bare (e.g. rock, gravel, or sand). Avoid cooking and congregating on

delicate flowers and woody ground cover that can be easily crushed. Try not to "improve" campsites by moving things around. If you move a few rocks to make a flat place to sleep, put 'em back before you leave. Choose a slightly raised site that will drain water so you won't need to dig trenches in the soil.

Wherever you climb, try and unload your gear and take breaks on large, flat rock or other durable ground to avoid damaging vegetation. During mud seasons and after rain, soft trails and roads are easily rutted and damaged, accelerating erosion during future runoff. Try and avoid these soft areas or use an alternate approach.

The choice is ours: We can help preserve the natural feel of our favorite crag or let incremental change lead to an ugly maze of erosion.

Pack It In, Pack It Out

Stick to the old adage: "Take only pictures and leave only footprints." Pack out what you bring in. All food waste, including orange peels and apple cores should be carried out, not buried or scattered. Food scraps left behind attract insects, rodents and other animals, which can become a nuisance or even a danger, especially in established or popular areas.

Please pick up trash when you find it. Consider taking a trash bag along with you every day. Recently, climbing rangers removed over 50 pounds of slings from the West Ridge of Forbidden Peak in the North Cascades. Keep a knife handy to remove the old, unsafe slings you find littering rappel and belay sites.

Properly Dispose of What You Can't Pack Out

When you are beyond access to outhouses, urinate on bare ground away from vegetation, climbing routes, and trails. Though not a health hazard, urine smells bad and can attract animals to the salts it contains.

Dispose of solid, human waste in a "cathole" at least 200 feet away from trails, the base of climbs, water sources or campsites. Avoid small depressions that may be drainages during the next wet spell. This helps prevent human waste from leaching into potential water sources. Be sure your disposal site is not a likely pathway or at the base of a boulder problem.

Dig into the top, dark organic layer of soil, make your deposit, stir in soil until the hole is completely filled, and disguise the spot thoroughly. Pack your toilet paper out in a ziplock. Human waste left in alcoves, overhangs, under rocks and in other dark, cool environments will not breakdown readily.

Leave What You Find

Climbers are adventurers. When you climb, give others the same sense of discovery by leaving unique artifacts and features in place.

Trampling vegetation at the base of climbs or removing it from rock can be minimized if you're careful. Vertical walls represent unique biological communities. Some of the plant and lichen species may be quite rare so if at all possible, don't disturb them.

Reduce disturbance to animals. Try to keep all animals from getting human food. It's usually unhealthy for them and certainly teaches them to become pests in search of handouts. The presence of raptors, such as peregrine falcons, and many hawks and owls, are indicators of the health of any ecosystem. Avoid nesting sites on or near the crag in the spring and early summer. Watch the birds as they circle and land near their nests to identify places to avoid. If you encounter nests on a climb, don't touch them. Human contact may cause the adults to abandon the nest and its eggs or young. Adhere to seasonal closures; you can always find another climb.

Minimize Use and Impact of Fires

Fire rings and pits at the base of any crag are unacceptable. Fires are often considered

inappropriate in populated areas and have caused access problems for climbers. Check with local land managers so you can comply with regulations. Warm clothes and hot food can keep you as warm as a toasty fire (on both sides at once!) Consider using a stove instead of a fire for cooking. They consume no wood, leave no scars, and rarely get out of control.

If you decide a fire is necessary, build it in a pre-existing fire ring and keep current fire danger in mind. Collect your wood from a wide area, away from camps, trails and crags to disperse impact. Gather only small pieces—wrist diameter or less—that are already dead on the ground. This makes it easier to burn your fire down to pure ash and eliminates half- burned logs. Before leaving, make sure the ash is cold. Dispose of excess ash by dispersing it widely, well away from camps, trails, cliffs and roads.

Minimize Climbing Impacts

Treat the rock with care! Although there still seems to be plenty of room for new routes and new climbing areas, the rock resource is limited.

Impacts to natural resources. Chipping and drilling holds destroys the rock. And besides, it's against NPS regulations. While cleaning loose and friable rock from faces is sometimes necessary for safety on new routes, avoid changing the rock to make a route easier or more comfortable.

Use removable protection and natural anchors wherever practical. Before placing bolts or other fixed anchors consider local ethics and regulations affecting their placement as well as the validity and quality of the route. Above all, if you place a bolt, make sure it is secure.

If you are considering establishing routes at new cliffs, weigh whether the local ecology can withstand the increased traffic a set of new routes will create. Climbing activities focus use in specific areas. Once the new area becomes known changes such as barren ground, new trails and disturbance to wildlife follow quickly. Is the new route or area you have found really adding diversity to the local climbing scene, or is it more of the same? Before you document a new route or crag, or place fixed anchors, ask whether its quality and uniqueness justifies the impact that will inevitably follow once people learn about it.

Impacts to other people. Most non- climbers fail to understand the importance and the various and vital ingredients of safe enjoyable climbing, and are sensitive and concerned about the presence of slings, bolts, or human caused changes they see at climbing areas. These changes are often perceived as ugly or disruptive to the general surroundings. It is up to us to be sensitive to other people's perspectives and to take every opportunity to educate climbers and non- climbers about Leave No trace techniques. Consider the following ideas when climbing; you may come up with others as well.

To lessen the visibility of sport climbs, use discreet anchors at the tops of climbs. Colorful slings are easily seen from the ground and they bother hikers and other users.

Use dull or painted bolt hangers to better disguise those that are easily seen by other recreationists on nearby trails. Many climbers are now carrying a small stencil to keep paint off the rock when they camouflage their hangers—a little retro- camouflaging never hurts and might do your own crag some good!

Rather than rappel with ropes directly around tree trunks, leave a sling instead. Pulling ropes around trees damages them permanently. The sling can be removed later when it becomes unsafe. If you do leave a sling, choose a color that is difficult to see from a distance.

If you use chalk, try and use it sparingly. A Leave No Trace attitude means that we should at least consider our use of chalk and how it affects the experiences of others. Maybe you will choose to use colored chalk or none at all.

Maintain a low profile by removing equipment at the end of each day. Sometimes climbers leave ropes in place overnight to make better time the

next day, but protocol varies with the areas, so check local trends. Either way, the practice should not be abused; try not to let those ropes stay up for multiple days.

Protecting access through courtesy. Noise—from the volume of your boom box to the words you let fly out of your mouth when you fail on a red point attempt—can have a huge impact on other people and on wildlife. Consider who else is around and try and keep your decibel level within reason.

Another practice that can result in access problems is parking. Park only in designated areas or along roadways that are not posted. Carpool when it is practical.

Contact the climbing group in your areas and see how you can help. Be active in planning management of climbing areas. Volunteer for clean up efforts, trail maintenance, and rehabilitation efforts, or organize them for your local area.

Help maintain positive relationships between climbers, other recreationists, local residents, land managers and landowners by obeying the regulations that apply to all users of these lands. Make a decision to ***Leave No Trace*** during your next climbing trip.

Appendix C – Incidental Business Permit (Climbing)

INCIDENTAL BUSINESS PERMIT - EXAMPLE

IBP Number CLI- NERI- XXXX- XXX

In accordance with National Park Service regulations as contained in C.F.R. Title 36, Chapter 1, Section 5.3, permission is granted to:

xyz Climbing
987 Main Street
Fayetteville, WV 25840
Attn.: John R. Climber
304- 555- 1212

to conduct the following commercial activities in the above- named area (or specified portion thereof):

1. Teach and guide beginning, intermediate and lead rock climbing within the New River Gorge National River;

2. Teach and guide beginning and intermediate rappelling within the New River Gorge National River; for a period of One Year from January 1, 1997 through December 31, 1997, subject to annual payment in advance to the Government of the United States the sum of ONE HUNDRED DOLLARS ($100.00) to cover the one- year duration of this permit.

The permit is granted subject to the following conditions:

1. This permit is applicable only for the use of the area(s) and terms designated below.

2. The rates of the permittee will not be approved by the National Park Service.

3. The permittee will have none of the rights or privileges of P.L. 89- 249 and will not be considered a concessionaire to the National Park Service.

4. The permittee must obtain all permits or licenses of State or local governments, as applicable, necessary to conduct the business activities specified above and must operate in compliance with all pertinent Federal, State, and local laws and regulations.

5. The permittee and all participants authorized herein must comply with all of the conditions of the permit including all exhibits or amendments or written directions of the Park Superintendent.

6. The area(s) authorized for use under this permit must be left in substantially the same condition as it was prior to the activities authorized herein, with all refuse properly disposed of or otherwise as required by the Superintendent.

7. The permittee shall be liable for any damages to any Government property resulting from these activities.

8. This permit does not authorize the permittee to advertise, solicit business, collect any fees, or sell any goods or services on lands owned and controlled by the United States.

The permittee, in his advertisements, signs, statements, circulars, brochures, letterhead, and like materials, both oral and written, must not misrepresent in any way either the accommodations provided, the status of its permit, or the area covered by it or tributary thereto. Prior approval of advertising is required by the National Park Service. The permittee shall not use advertising that attempts to portray them as agents of the National Park Service, or to use National Park Service symbols, seals, or other items of identity.

9. PAYMENT. An IBP will require the advance payment, by the permittee, of a minimum application fee of $100.00, notwithstanding the length of the permit.

10. INDEMNIFICATION. The permittee shall save, hold harmless, defend and indemnify the United States of America, its agents and employees for losses, damages or judgments and expenses on account of fire or other peril, bodily injury, death or property damage, or claims for bodily injury, death or property damage of any nature whatsoever, and by whomsoever made, arising out of the activities of the permittee, his employees, subcontractors or agents under this permit.

    a. The permittee shall purchase at a minimum the types and amounts of insurance coverage as stated herein and agrees to comply with any revised insurance limits the Superintendent may require during the term of this permit.

    b. The permittee shall provide the Superintendent with a Statement of Insurance and Certificate of Insurance at the inception of this permit and annually thereafter, and shall provide the Superintendent thirty (30) days' advance written notice of any material change in the permittee's insurance program hereunder.

    c. The Superintendent will not be responsible for any omissions or inadequacies of insurance coverage and amounts if such prove to be inadequate or otherwise insufficient for any reason whatsoever.

    d. Public Liability. The permittee shall provide comprehensive general liability insurance against claims occasioned by actions or omissions of the permittee in carrying out the activities and operations authorized hereunder. Such insurance shall be in the amount commensurate with the degree of risk and the scope and size of such activities authorized herein, but in any event, the limits of liability shall not be less than $500,000.00 per occurrence covering both bodily injury and property damage. If claims reduce available insurance below the required per occurrence limits, the permittee shall obtain additional insurance to restore the required limits. An umbrella or excess liability policy, in addition to a comprehensive general liability policy, may be used to achieve the required limits.

    e. All liability policies shall specify that the insurance company shall have no right of subrogation against the United States of America or shall provide that the United States of America is named an additional insured.

11. ASSIGNMENT. The IBP may not be transferred, extended or assigned under any circumstances.

12. NONDISCRIMINATION. See Attachment "A".

13. REVOCATION. The IBP may be revoked at any time at the discretion of the Superintendent without compensation to the permittee or liability to the United States.

14. ANNUAL REPORT. Within sixty (60) days after the end of each year from the effective date of this permit, the permittee shall submit an annual report that summarizes total in- park visitor use and includes gross revenues for the year. For the purpose of this permit, gross revenues are defined as:

The total amount received, realized by, or accruing to the business operator for all sales of goods and services provided by the business operator for payment by cash, barter, or credit pursuant to the privileges granted by the permit. This includes income from subsidiary or other operations located outside of lands administered by the National Service to the extent that they support operations authorized by the permit.

Gross receipts generated from subsidiary or other operations located outside of the park that do not participate in the provision of the service will not be included in the calculation of revenues generated under this permit. (Use of the current OMB approved survey form will be required until such time as a new form is approved. See Exhibit A.)

15. It is expressly understood that the permittee is subject to any and all special conditions (if any) attached.

16. GENERAL PROVISIONS.

a. Operations under this permit shall be subject to the laws of Congress governing the area and rules and regulations promulgated thereunder, whether now in force or hereafter enacted or promulgated; provided, however, that this permit does not constitute a concession contract or permit within the meaning of 16 U.S.C. 20 et seq., and, specifically, that no preferential right of renewal attaches to this permit.

b. Reference in this permit to "Superintendent" shall mean the Service official executing this permit and the term shall include his duly authorized representatives and reference to "Service" herein shall mean the National Park Service.

c. No member of, or delegate to, Congress shall be admitted to any share or part of this permit or to any benefit that may arise herefrom, but this restriction shall be construed to extend to this permit if made with a corporation or company for its general benefit.

17. SOIL EROSION. The permittee shall take adequate measures, as directed and approved by the Superintendent, to restrict and prevent soil erosion on the lands covered hereby and shall so utilize such lands as not to contribute to erosion on adjoining lands.

18. NON- EXCLUSIVE AUTHORIZATION. This permit shall not be construed as limiting the obligation of the Superintendent to issue similar permits at the request of all other persons seeking to conduct the same or similar activities in the area.

19. CAMPING. Camping is allowed only in commercial campgrounds.

CAMP FIRES. Campfires are prohibited except at designated campgrounds and picnic areas in Government- provided grills or fireplaces or personally- owned grills; and at designated campsites along the New River in existing fire rings or grills in conjunction with authorized overnight camping.

21. ALCOHOL. The consumption and/or possession of alcoholic beverages within the park by individuals under this permit are prohibited.

22. NON- ACCREDITATION. It should be explicitly understood by the permittee that issuance of this permit does in no way constitute recognition or certification by the National Park Service of the permittee as a climbing or backpacking instructor.

23. MONITORING. The permittee may be monitored periodically by the National Park Service to insure the information provided to customers is accurate and appropriate. The permittee shall, upon notification by the National Park Service, immediately correct all deficiencies noted.

24. NATIONAL PARK SERVICE REGULATIONS. Customers must be advised of safety concerns and National Park Service Laws and Regulations. In instances of non- compliance, either observed or reported, the permittee will immediately notify the National Park Service at 304- 465- 0508. These laws and regulations will include, but not be limited to:

a. Commercial operators and customers shall refrain from drilling (power or manual) equipment to support the placement of climbing aids or otherwise to directly support a climb.

b. Commercial operators and customers shall refrain from the gluing or chipping of rock, or the gluing, affixing, or placement of artificial hand holds on rock, or other damaging practices such as forcibly prying off rock or destroying vegetation to enhance a climbing route.

c. Any and all climbing equipment shall not be set up and left at a site. All climbing equipment shall be actively in use or it will be removed from a site.

d. Commercial operators shall not sell and shall provide only non- glass containers for use in the park.

e. Due to the increasing number of non- English speaking visitors to the area that may use this Service in the Park, appropriate actions must be initiated by the permittee to insure the orientation/introduction is effectively communicated.

f. All injuries requiring medical attention must be reported to NPS within 24 hours at telephone number 304- 465- 0508

g. The NPS maintains a lost and found system and items must be reported with 24 hours at telephone number 304- 465- 0508.

h. All trash must be hauled out to the nearest access and placed in proper receptacles.

i. Only down and dead wood can be used for fires. The use of chainsaws in the park is prohibited.

j. It is a violation to urinate or defecate within 100 feet of the river or any water source. Fecal material must be placed in a hole and covered with not less than six (6) inches of soil.

k. Loud audio devices and fireworks are prohibited. Quiet hours are from 10:00 pm to 6:00 am.

l. Destroying, digging, removing or possessing any tree, shrub, or other plant is prohibited.

m. Camping and fires are prohibited within 100' of the top or bottom of any cliff or other recreational climbing area.

Intoxication is a violation and services must be provided to anyone who is obviously intoxicated or under the influence of drugs.

o. The Permittee and his employees will adhere to all park laws and regulations, including motor vehicle and traffic regulations. When a vehicle, regardless of ownership, is used to conduct business under this permit, the permittee will make an effort to assure that all laws and regulations are adhered to by all employees.

PUBLIC USE REPORT. The permittee will insure that a public use report detailing the number of climbers using the Park is submitted to the office of the Superintendent by the 25th of each month.

26. GUIDE LIST. The permittee will provide a list of guides and instructors to the office of the Superintendent each year when applying for or renewing this license, and notify the park of any changes to the permittee's guide staff within fifteen days of the change.

27. COMMERCIAL USE LIMITS.

a. In order to limit the impact to a particular site, all commercial trips will be limited to a maximum of 16 persons, including the guide(s) per trip, with guide- to- guest ratio not to exceed a ratio of 1 guide to 3 guests.

b. Commercial operators are limited to four trips per day with a maximum of 16 persons per trip (including guides).

28. COST RECOVERY. The cost of any search and rescue or of evacuation of sick or injured members of the permittee's party may be charged to the permittee.

Dated this day of 19 _____

Permittee

Dated this day of 19 _____

Superintendent, New River Gorge NR

ATTACHMENT A
CONTINUATION OF CONDITIONS OF THIS PERMIT

The following provisions constitute Condition 4 in accordance with Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967.

Nondiscrimination. If use of the resource covered by the permit will involve the employment by the Permittee of a person or persons, the Permittee agrees as follows:

1. The Permittee will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Permittee will take affirmative action to ensure that applicants are employed, and the employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Permittee agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Superintendent setting forth the provisions of this clause.

2. The Permittee will, in all solicitations or advertisements for employees placed by or on behalf of the Permittee, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

3. The Permittee will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Superintendent, advising the labor union or workers' representative of the permittee`s commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, as amended, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. The Permittee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

5. The Permittee will furnish all information and reports required by Executive Order No 11246 of September 24, 1965, as amended, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto and will permit access to his books, records, and accounts by the Superintendent and the Secretary of Labor, for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

ATTACHMENT B

CLARIFICATION OF CERTAIN CONDITIONS

1. Concerning Condition #5, directions from the Superintendent will be in writing.

2. Concerning Condition #7, permittee shall only be held responsible for actions of customers while under his/her direct supervision and control.

3. Concerning Condition #10, add words: "Permittee will carry adequate liability insurance to protect customers and employees at his/her own expense. Said insurance shall be purchased from a responsible company in a sufficient amount to indemnify losses connected with or occasioned by activities and operations authorized by the permit." A copy of the permittee's certificate of insurance with coverage dates and limits of liability insurance must be provided to the Superintendent before the permittee may conduct business within the Park.

4. Concerning Condition #13, it is understood and agreed that the permit may be revoked at any time at the discretion of the National Park Service without compensation to the permittee or liability to the United States. However, the permit may be revoked by the Service for noncompliance or breach of its terms and conditions which are a direct result of the permittee's method of operation, only under the following procedures;

   4.1 The decision to revoke an incidental business permit will be made by the Superintendent only after such action is considered and recommended by representatives of the National Park Service having knowledge of the noncompliance or breach of the terms and conditions of the permit.

   4.2 The incidental business permittee being proposed for revocation will have the right to appear before these representatives to present his/her case.

   4.3 Each representative shall provide whatever views he/she deems appropriate to the Superintendent, within one week after a meeting of these representatives after which time the Superintendent will make a final determination and notify, in writing, the affected permittee.

   4.4 Any decision by the Superintendent to revoke a permit is subject to review by the Field Director, Northeast Field Area, National Park Service upon request of the permittee within 90 days of the notice of revocation. The Field Director shall make a final decision within 30 days of receipt of an appeal. All permitted activities are revoked during the period of appeal.

EXHIBIT A

Department of the Interior
National Park Service
Incidental Business Permit Survey

Park Name

Permittee Name

Company Name

Address

Expiration Date IBP Number

1. What service do you provide to the park visitor?

2. How many visitors do you serve per year within the park area?

3. How much time do you or your customers spend in the park (days/hours)?

Is the park or its resources a primary or exclusive destination?

5. Is the park only incidental to the service you provide? Yes No

If the answer is yes, why?

What percent of the activity actually takes place in the park overall?

6. What are the annual gross receipts generated as a result of being in the park? $

How is the answer to #6 calculated?

Appendix D – Request for Permission to Use a Power Drill

New River Gorge National River

I. Applicant Information

Applicant's Name _____

Mailing Address _____

Date of Birth _____

Telephone number (work) _____ (home) _____

II. Proposal

Purpose of Request (check one)

New Route ____ Bolt Replacement ____ Bolt Addition _____

Location of Route (map attached _____)

Area _____ Formation _____ Route _____

If new route, describe location as specifically as possible.

_____

_____

Drill Use Requested

Estimated Time Required _____ Number of days _____

Total Number of holes to be drilled _____ Size ____ x _____

Equipment to be installed _____

Equipment (other than drill) to be used _____

III. Map and/or Illustration

A request for the use of a power drill must be accompanied by a diagram or photograph which clearly illustrates the applicant's proposal. A map should also be included if the area is difficult to locate. The diagram must include the numbers and locations of holes to be drilled.

Applicant's Signature _____ Date _____

FIELD EVALUATION WORKSHEET

Date of Field Review	
Land Ownership Involved	
Management Zone	
Type & Level of Use in Area	
Type & Level of Use of Route	
Proximity to Other Climbs	
Route Features & Length	
Trailhead & Route Proximity	
Approach Trail	
Staging Area	
Descent Route	
Existing Fixed Anchors	
Potential for Removable Protection	
Geology & Surface Condition	
Vegetation Present & Condition	
Wildlife Habitat or Presence	
Area Slope, Soils, Erodability	
Conflicting Uses or Values	
Existing Resource Impacts	
Impact Mitigation Needs	

Notes:

Recommendation:

Prepared By:_____ Date: _____

Title: _____

Appendix E – Research Summary

An Overview of Rock Climbing in New River Gorge National River

Aram Attarian, Ph.D.
North Carolina State University

Introduction

This study explores a variety of characteristics and perceptions exhibited by rock climbers visiting New River Gorge National River, West Virginia (NERI). The study period was initiated in April 1997 and continued through August 1997. Data were collected by contacting climbers entering or exiting climbing areas at three access points inside NERI. These sites included the Bridge Area, Fern Creek, and Kaymoor. A combination of on- site interviews and mail questionnaires were used to gather relevant data. The on- site interviews were conducted by interviewers and took approximately five to ten minutes to complete.

Interviewers completed an On- site Interview Form for each climber contacted. Climbers were asked to provide their name, mailing address, age, previous climbing experience at NERI, group size, travel information (distance traveled from place of residence to NERI, travel time to NERI), and visitation information (overnight stay?, length of visit, accommodations). In addition, the interviewer recorded the date, time of day, weather, temperature, and location of the interview. During this period, 297 climbers in 181 groups were contacted (16 years of age and older) by interviewers. From these face to face contacts, 287 usable mailing addresses were collected.

Data collected from on- site interviews suggested that NERI is a national and internationally known climbing area. Climbers visiting NERI came from 22 states and four foreign countries. Most climbers traveled to NERI an average of 448 miles from their place of residence. Climbers from the South (41%) and Northeast (41%) accounted for more than three- fourths of all visits. Climbers from the Midwest accounted for 9 percent, and the remaining 7.1 percent of climbers were from foreign countries (Table 1). Returning climbers made up 94 percent of all visits during this period and spent an average of 14 days climbing in NERI during the previous 12 months. Visitation for these groups lasted an average of 3 days. The majority of climbers (87%) visiting NERI stayed overnight, primarily in private campgrounds (70%), or camping in primitive or undeveloped sites (11%). Climbers also stayed with family and friends, in local hotel and motels, rented homes, or stayed in state parks (Table 4).

Climbers who were interviewed (N=287) were sent a mail questionnaire within one week of their NERI visit. A modified Dillman (1978) method using an initial mailing and two follow- up mailings (a postcard reminding climbers to return their questionnaire, and a new questionnaire two weeks later) to non-respondents was employed to help achieve an acceptable response rate. Ten questionnaires were returned by the Postal Service as “non- deliverable”, leaving a total of 277 mailed questionnaires. Reminder post cards and follow- up questionnaires were sent through the month of September to complete the data collection process. Usable returns numbered 148, or 53.4 percent.

Table 1. Visitation by Region
N = 294

Region	N	Percentage
South*	121	41.15
Northeast**	121	41.15
Midwest***	26	8.84
Canada	16	5.44
West****	5	1.70
Other*****	5	1.70

* = AL, GA, FL, KY, NC, SC, TN, VA, WV
** = DC, MA, MD, NJ, NY, OH, PA
*** = IL, IN, MI
**** = CO, ID, NV
***** = Ireland, Germany, Venezuela

In the following sections descriptive statistics are used to summarize the data collected from the 148 returned questionnaires.

Characteristics of New River Gorge Climbers

Respondents (rock climbers) visiting NERI traveled an average of 375 miles (sd=453, median=300, mode=300) from their place of residence. Rock climbers visiting NERI have been climbing for an average of 6 years (median =4, mode= 3). Climbers spent an average of 24 days per year climbing in the Gorge and 54 days per year climbing in other areas. An average climbing trip to NERI lasted 3.6 days. The average age for a NERI climber is 27.8 years of age. Most climbers are male (67%) and unmarried (80%). Over one half (51%) of climbers have completed college and almost one fourth (23%) have graduate degrees. When asked if they carried cell phones, 11.5 percent responded "yes".
Climbers were asked to rate their skill level. Over one fourth (30%) of the climbers rated themselves beginning to intermediate climbers (5.0 - 5.9) and approximately three fourths (70%) considered themselves as advanced to expert (5.10- 5.13). The high number of advanced to expert climbers reflects the character of the rock climbing routes available in NERI. The majority of the 1660 climbing routes in NERI are rated 5.10 and higher (Cater, 1995), therefore attracting mostly experienced climbers.

Climbers' Activity Preferences

Respondents were asked to identify the climbing activities *they have ever engaged in*. In addition to climbing outdoors, bouldering (94%) and climbing indoors (91%) were the activities engaged in most frequently. Climbing and bouldering competitions (46%), mountaineering (38%), ice climbing (35%) and alpine climbing (34%) were also reported. When asked to estimate *how many times during the last 12 months* participation took place in these activities, results indicated that climbing outdoors (56%), bouldering (46%) climbing indoors (43%), and ice climbing (5%) were activities engaged in most frequently.

Attribute Preferences for Rock Climbing Settings

Respondents were asked to consider a variety of factors or attributes (1- 4=extremely undesirable, 5=neutral, 6- 9=extremely desirable) when selecting a rock climbing site. Categories focused on the physical, social/psychological, management, and activity attributes (Schreyer & Beaulieu, 1986). This list of attributes was developed by the researcher based on interviews with experienced climbers and colleagues. Climbers to NERI identified the following attributes that they considered important when choosing *any climbing site*. Quality of rock climbs, the natural surroundings, variety of climbs, weather, the availability of protection, availability of camping, access to climbs, area ethics, the difficulty of climbs, and the availability of parking were identified by climbers as highly desirable attributes when selecting a climbing area. Least desirable attributes to climbers when choosing a site were the presence of other climbers, presence of park rangers, regulations governing use, and the presence of other recreationists (Table 2).

Table 2. Rank Order of Attribute Preferences for Rock Climbing Settings

Attribute	Mean	Standard Deviation
Quality of climbs	8.2	1.0
Natural surroundings	7.9	1.3
Variety of climbs	7.5	1.3
Weather	7.4	1.4
Availability of protection	7.3	1.8
Availability of camping	7.1	1.6
Access to climbs	7.0	1.7
Area ethics	7.0	1.5
Difficulty of climbs	6.9	1.4
Parking availability	6.6	1.9
Number of sport climbs	6.5	2.1
Proximity to home	6.5	1.8
Number of traditional climbs	6.4	1.9
Presence of other climbers	4.9	1.7
Presence of park rangers	4.7	2.1
Regulations governing use	4.2	2.3
Presence of other recreationists	4.1	1.8

The Climbing Experience

Climbers were asked to respond to questions related to the importance of rock climbing and the satisfaction of their climbing trip to NERI. Eighty six percent of the respondents indicated that rock climbing was important to extremely important to them. Ninety two percent said that they were satisfied to extremely satisfied with their trip to NERI on the day they were interviewed.

Rock Climbing Behavior

Climbers were asked to agree or disagree with 25 questions regarding their rock climbing behavior (using a scale of 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5- strongly agree). These questions centered around their knowledge of Leave No Trace ethics for rock climbing. Questions were developed from information found in the publication *Leave No Trace (LNT) Outdoor Skills and Ethics: Rock Climbing* (1996) produced by the National Outdoor Leadership School and earlier research conducted on re- establishing a clean- climbing ethic (Attarian, 1991). Questions centered around appropriate climbing behaviors, acceptable practices, and safety concerns (Table 3).

Overall, climbers were in positive agreement with the majority of the Leave No Trace practices listed. Climbers tended to pack out their waste, access climbs through official trails, respect vegetation efforts, and avoid trails that have been closed. They disagreed with the negative practices of chiseling handholds and removing vegetation to create new rock climbs. Climbers remained neutral on the issue of bolting.

Table 3. Rock Climbing Behavior

Behavior	Mean	Standard Deviation
I should always pack out waste	4.8	0.4
I should always access climbs via official trails	4.6	0.5
I respect revegetation efforts	4.5	0.5
I avoid trails that have been closed	4.4	0.6
I should always plan ahead when I climb	4.4	0.8
I avoid trails that have been closed	4.4	0.6
I should leave no trace when I climb	4.4	0.7
I should camp in existing campsites rather than create new ones	4.4	0.7
I should comply w/local climbing regulations	4.3	0.6
I usually try to keep my noise level down	4.3	0.6
Old slings should be removed from belay/ rappel sites	4.2	0.8
It is okay to use chalk when I climb	4.2	0.7
I park my vehicle in designated areas	4.2	0.5
I should carry a first aid kit when I climb	4.1	0.7
I always consider area ethics when I climb	4.1	0.7
I use removable protection whenever possible	3.9	0.9
Discrete anchors should be used at the top of climbs	3.7	0.9
It is wrong to climb in a park after closing time	3.7	0.9
It is alright to climb w/o helmet	3.6	0.9
It is better to leave a rappel sling around a tree rather than rappel with the rope directly around it	3.6	1.0
Campfires are unacceptable at the base of any crag	3.6	1.1
I would walk 1/4 mile to use a toilet facility	3.4	1.1
Bolting should be allowed in all climbing areas	2.9	1.2
It is okay to remove vegetation to establish a route	2.5	1.0
Chiseling handholds is an acceptable practice	1.5	1.0

Volunteerism

Respondents were asked a series of questions on their knowledge and involvement in climbing area maintenance projects that are conducted by NERI personnel and other agencies.
Over one half of the climbers contacted (52.7%) were familiar with NERI climbing area clean- up projects. Almost one fourth (22.3%) of the respondents indicated that they had participated in a NERI climbing area maintenance project, while almost half (43.2%) indicated participation in other climbing area maintenance projects. Almost all of the respondents (98.6%) indicated that climbers should share the responsibility of maintaining climbing areas.

Table 4. Respondents' Participation in Climbing Area Maintenance Projects

Site	Volunteer		Non- Volunteer	
	N	%	N	%
New River Gorge	33	22.3	115	77.7
Other	64	43.2	84	56.8

Attitudes on the Commercial Use of Climbing Areas

In this section, climbers were asked to respond to 11 questions associated with the use of *any climbing area* by commercial groups. Commercial groups include educational organizations, youth groups, and other leisure service organizations that solicit clients and charge a fee. Almost one third (30%) of the climbers surveyed did not feel that the commercial use of climbing areas was a problem. However, 73 percent of the respondents indicated that group size should be limited, while 48 percent felt that groups should climb only in specifically designated areas. Damage to the environment by commercial groups was a concern reported by 40 percent of the respondents.

70 percent agreed that large commercial groups detracted from their climbing experience, while over half of the climbers surveyed (54%) noted that too many groups caused conflicts with other recreationists. Over one third of respondents (37%) suggested that commercial groups were not a safety issue.

Several questions focused on the use of permits. The majority of respondents (71%) indicated that all commercial groups be required to obtain the appropriate permits. An overwhelming number of climbers (96%) felt that group leaders be qualified to teach rock climbing. 80 percent supported the submission of credentials as part of the permitting process. Over one half (58%) of the respondents felt that commercial permits should be limited.

Membership in Rock Climbing Organizations.

Respondents were asked to identify all rock climbing and environmental organizations they belonged to. 44.5 percent of the respondents identified themselves as being a member of a climbing or environmental organization. Almost one third (30.4%) are members of the Access Fund and another 13.8 percent belong to other national and regional organizations (Table 5).

Readership of Climbing Publications.

Respondents were asked to indicate the number of times they read the following publications *in the past twelve months* (Table 6). These publications represent popular international, (*Climbing, Rock and Ice, Summit, High Mountain Sports*) and regional rock climbing publications (*Crux, Boulderdash)*. Also represented are publications from national climbing organizations (*Access Notes, Accidents in North American Mountaineering, American Alpine Club Journal)*. Results indicated that climbers visiting NERI were "well read". The most popular publications read by most of the respondents were *Rock and Ice* (86%) and *Climbing* (83%). *Access Notes* a publication of the Access Fund was read by 50 percent of the respondents.

Table 5. Membership in Climbing and Environmental Organizations

Organization	N	Percentage
Access Fund	45	30.4
Other Organizations*	21	13.8
Nature Conservancy	13	9
Sierra Club	7	5
Wilderness Society	6	4
American Sport Climbing Federation	6	4
Leave No Trace	6	4
Appalachian Mountain Club	5	3
American Mountain Guides Association	3	2
American Alpine Club	2	1.4
Canadian Climbers' Coalition	2	1.4

* National Speliological Society, Ohio Climbers' Association, Potomac Appalachian Trail Club, World Wildlife Fund, Canadian Alpine Club, Ralph Stover Climbers' Coalition (PA), National Outdoor Leadership School, Earth First, Carolina Climbers' Coalition

Table 6. Readership of Individual Climbing Publications in the Past 12 Months

Publication	Non- Reader		Reader	
	N	%	N	%
Rock and Ice	21	14.2	127	85.8
Climbing	25	16.9	123	83.1
Access Notes	74	50	74	50
Accidents in North American Mountaineering	103	69.6	45	30.4
Boulderdash	105	70.9	43	29
Summit	117	79.1	31	20.9
High Mountain Sports	122	82.4	26	17.5
American Alpine Club Journal	132	89.2	16	10.8
*Other**	135	91.2	13	8.7
Crux	127	85.8	3	2.0

*other publications read include *Outside Magazine*

Table 7. A Comparison of Selected Characteristics of Rock Climbers at New River Gorge National River and Mount Rushmore National Memorial

Characteristic (Freeman, et al., 1997)	New River Gorge	Mt. Rushmore
Years of Climbing Experience	6 years (median=4)	5- 6 years (median=3)
Age	28	29
Gender		
male	67%	72%
female	33%	28%
Education		
college	73%	85%
graduate	27%	14%
Days Climbing per year	54	58
Length of climbing trip	3.6 days	2- 3 days
Membership	44%	21%
Access Fund	30%	25%

Table 8.

Positive Attributes of New River Gorge as a Rock Climbing Area
(What do you like best about NERI as a rock climbing area?)
(N=150)
1. Rock Characteristics
- quality
- rock texture
- variety of routes
- # of climbing routes
- mixture of traditional and sport routes
2. Surrounding Environment
- beauty of area
- scenery
3. Other
- access to climbs
- other activities to pursue (MTB, boating, hiking)
- friendly people

Negative Attributes of New River Gorge as a Rock Climbing Area
(What do you like least about NERI as a rock climbing area?)
(N=150)
1. Facilities
- lack of overnight camping facilities
- lack of convenient parking near climbing areas

- poorly marked trails in some areas
2. Visitor Behavior
- robbery (cars being broken into)
- vandalism (chiseled and epoxied handholds)
- too many routes
- poor LNT ethic
- crowded
- inconsiderate climbers
3. Climbing Experience
- routes too hard
- one pitch climbs
- weather (hot, humid, rainy)
- too far from place of residence

Table 9.

Variables Related to Travel, Previous Visits, Group Size, and Length of Stay

Variable	N	Mean	Median	SD	Range
Distance to NERI from residence	292	447.90	300.00	709.01	1 - 6,000 miles
Number of previous climbing visits to NERI in last 12 months	288	14.25	4.0	27.12	0 - 200 visits
Group Size	181	3.93	2.0	2.92	1 - 36
Length of Stay	282	2.96	2.0	3.16	1 - 20 days

Table 10.

Gender and Age of Climbers

Variable	N	Percentage	Mean
Gender	297	- - - - - -	
Male	198	66.66	
Female	99	33.33	
Age	294	- - - - - -	27.27

Table 11.

Climber's Lodging Preferences

Variable	N	Percentage
Overnight stay		
Yes	258	86.86
No	38	12.79
Accommodations		
Private Campground	181	70.15
Primitive Camping	28	10.85
Other*	22	8.52
Friends/Family	21	8.13
Hotel/Motel	15	5.81
State Park	9	3.48
Rent	4	1.55

* includes: owns home, guide's house, van

Summary of On- Site Interviews
(April - August 1997)
Summary of Open Ended Questions

A survey instrument was administered to climbers visiting New River Gorge during the months April to August, 1997. During this period, 297 climbers were contacted by interviewers. From the information gathered through these interviews, 287 questionnaires were mailed. Ten questionnaires were returned by the Postal Service as "non- deliverable". 150 questionnaires were returned for a 52% response rate. The questionnaire consisted of seven parts focusing on (1) the respondent's visit to NERI and their use of the climbing areas; (2) visitor's climbing preferences; (3) level of climbing experience; (4) attitudes about climbing behaviors; (5) actions while rock climbing; (6) attitudes on the commercial use of climbing areas; (7) and demographic information on climbers visiting NERI.

Part II of the questionnaire contained two open- ended questions: (1) What do you like best about NERI as a rock climbing area? and (2) What do you like least about NERI as a rock climbing area? Responses to question #1 focused primarily on the physical environment including the characteristics of the rock and the surrounding environment. Responses to question #2 centered around facilities, visitor behavior, and the climbing environment. Responses are categorized in Tables 1 and 2. Comments from each of the respondents are also included.

- Returning climbers made up 94 percent of all visits during this period and spent an average of 14 days climbing in NERI during the previous twelve months (Table 2).

- Visits lasted an average of 3 days, ranging from 1 to 20 days (Table 2).

- The average size climbing party consisted of 4 members (Table 2).

- Male climbers represented 66 % of all visitors, while females made up 33*.
(Table 3).

- The mean age for all climbers was 27 years of age (3).

*These figures correspond to national figures recently complied by the Outdoor Recreation Coalition of America (1997). According to ORCA, rock climbing participants are 65% male and 35% female.

Appendix F – US Fish and Wildlife Consultation

United States Department of the Interior

NATIONAL PARK SERVICE
DENVER SERVICE CENTER
12795 W. ALAMEDA PARKWAY
P.O. BOX 25287
DENVER, COLORADO 80225-0287

In reply refer to:
N1621 (DSC – PDS)
(NERI RCP)

Memorandum

To: Field Supervisor, U.S. Fish and Wildlife Service

From: Natural Resource Specialist, Planning Group, Denver Service Center

Reference: NERI - RCP, Climbing Management Plan/Environmental Assessment

Subject: List of Threatened or Endangered Species

The National Park Service (NPS) is developing a climbing management plan for New River Gorge National River. The planning area is focused on the gorge near the bridge at the town of Fayetteville, Fayette County, WV (maps attached). As the Natural Resource Specialist assigned to this project, I am requesting a current list of federally-listed or any other special status species that might occur in the locality mentioned above, and designated critical habitat, if any, for these species.

This letter will serve as a record that the NPS is initiating informal consultation with your agency pursuant to the requirements of the Endangered Species Act and National Park Service Management Policies.

We appreciate your response to this inquiry. Please send any responses to:

Greg Jarvis (DSC-PDS)
National Park Service
12795 W. Alameda Parkway
Denver, CO 80225
(303) 969-2263

Greg Jarvis

Attachment

United States Department of the Interior
FISH AND WILDLIFE SERVICE
West Virginia Field Office
694 Beverly Pike
Elkins, West Virginia 26241

OCT 09 2001

United States Department of Interior
National Park Service
ATTN: Greg Jarvis
Denver Service Center
12795 W. Alameda Parkway
P.O. Box 25287
Denver, Colorado 80225-02087

Dear Mr. Hawkes:

This responds to your information request of July 30, 2001 regarding the potential impacts of a proposed project on federally listed endangered and threatened species. The National Park Service proposes to develop a climbing management plan for New River Gorge National River, in Fayette County, West Virginia. The planning area is focused on the gorge near the bridge at the town of Fayetteville.

There are numerous known hibernacula for the Indiana bat in the limestone region of eastern West Virginia in Preston, Tucker, Randolph, Pendleton, Pocahontas, Greenbrier, Monroe, and Mercer Counties. The population of the hibernacula in West Virginia range in size from one to 9,000 Indiana bats. Recent data indicate that the area within an approximate five-mile radius of a hibernaculum provides an important foraging and roosting habitat for the Indiana bat in the fall swarming period, August 15 through November 14. The project area is outside a five-mile radius of a known hibernaculum. Therefore, fall-swarming behavior is not expected in the proposed project area.

The U.S. Fish and Wildlife Service (Service) is also concerned with the possibility of direct take or habitat disturbance within a two-mile radius around known maternity roosts and capture sites. The project is not within a two-mile radius of a known capture site.

The Service has compared the number of acres of suitable summer foraging and roosting habitat on the West Virginia landscape available to each Indiana bat, versus the total acreage of forest. On that basis, we have determined that a small project, generally affecting 17 acres or less of

forest, will have an infinitesimally small chance (at the 98% confidence level) of resulting in direct or indirect take and is therefore discountable. The project would disturb less than 10 acres of potential forested Indiana bat summer roosting and foraging habitat.

Based on the facts that the proposed project is not located within a five-mile radius of a hibernaculum or a two-mile radius of a maternity roost or capture site, and that the project would affect less than 17 acres of forested habitat, the Service believes that the project is not likely to adversely affect the Indiana bat.

The Service also believes that the proposed project will not result in adverse effects to other federally listed species. Therefore, no Biological Assessment or further Section 7 consultation under the Endangered Species Act (87 Stat. 884, as amended; l6 U.S.C. l53l et seq.) is required with the Service regarding this project. Should the project plan change, or if additional information on listed and proposed species or species of concern becomes available, this determination may be reconsidered. A compilation of federally listed endangered and threatened species in West Virginia is enclosed for your information.

If you have any questions regarding this letter, please contact Mr. Shane Jones of my staff at (304) 636-6586, or at the letterhead address.

Sincerely,

Jeffrey K. Towner

Jeffrey K. Towner
Field Supervisor

Enclosure

United States Department of the Interior

NATIONAL PARK SERVICE

NEW RIVER GORGE NATIONAL RIVER
GAULEY RIVER NATIONAL RECREATION AREA
BLUESTONE NATIONAL SCENIC RIVER
104 Main Street
P.O. Box 246
Glen Jean, West Virginia 25846

IN REPLY REFER TO:

L7617 (NERI)

April 22, 2003

William A. Tolin
U.S. Fish and Wildlife Service
West Virginia Field Office
694 Beverly Pike
Elkins, WV 26241

Dear Mr. Tolin:

Subject: Section 7, Consultation for Rare, Threatened, or Endangered Species. New River Gorge National River, *Climbing Management Plan*

The National Park Service proposes to develop and implement a Climbing Management Plan for the New River Gorge National River in Fayette, Raleigh, and Summers Counties, West Virginia, and the Gauley River National Recreation Area in Fayette and Nicholas Counties, West Virginia, and the Bluestone National Scenic River in Summers and Mercer Counties, West Virginia.

In July 2001, we requested from your office information regarding federally listed threatened or endangered species, species of special concern, or critical habitat that could be in the project areas. Subsequently, bat surveys were conducted throughout New River Gorge National River in the summer of 2002 resulting in the discovery of the Indiana bat (*Myotis sodalis*), Virginia big-eared bat (*Corynorhinus townsendii virginianus*), Small footed-myotis (*Myotis leibii*), and the Rafinesque big-eared bat (*Corynorhinus rafinesquii*) in areas subject to the proposed activity. In light of this new information, we are requesting additional consultation on potential adverse effects.

Enclosed is a map indicating the locations where most of the records for the Virginia big-eared bat and small footed-myotis were found below a section of climbing rock known as Endless Wall and Beauty Mountain, two of the major climbing areas in the park. The base of the cliff face is approximately 100 meters above the bench where the mine sites were inventoried. Activities typically associated with recreational climbing include rappelling from the top to the base, top rope and sport and traditional climbing which begin at the base and terminate at the top. Sport and traditional climbs usually involve free climbing with single or multiple pitches depending on the length of the climb.

If you have any questions regarding this letter, please contact Ken Stephens of my staff at (304) 636-6531. Please send any responses to Greg Jarvis (DSC-PDS) National Park Service, 12795 W. Alameda Parkway, Denver, CO 80225.

Sincerely,

Calvin F. Hite
Superintendent

Enclosure

cc: Greg Jarvis, Denver Service Center, National Park Service
Ken Stephens, Natural Resource Specialist, National Park Service

Appendix G – Peregrine Falcon Monitoring Protocol

Endless Wall Area – New River Gorge National Scenic River

The protocol is designed to determine whether peregrine falcons are breeding or attempting to breed in the Endless Wall area of NERI. The park consulted with expert ornithologist, and local peregrine falcon experts (Craig Stihler, WVDNR, et.al.), in developing the following protocol.

Goal
Determine whether peregrine falcons are breeding or attempting to breed on or near the Endless Wall from Beauty Mountain to the bridge area in New River Gorge National Scenic River.

Objectives
Establish with reasonable certainty whether peregrine falcons are or are not breeding in the area.
Locate peregrine falcon eyries in the area.

Definitions
Survey – a consecutive four- hour (or greater) observation made from one observation point. If possible, surveys should begin at dawn or end at sunset).
Eyrie – nest site. For peregrine falcons, these are usually on a ledge or pothole on a cliff. Peregrines do not build a stick nest but sometimes they use stick nests built on cliffs by other birds (e.g. common ravens).

Protocol
Monitoring period
Mid- February to late- April if no breeding peregrine falcons are observed. If breeding peregrine falcons are located, mid- February to two weeks after the young fledge (or death of the eggs or chicks is confirmed).

Frequency and duration of surveys
A "set" of surveys (a four- hour survey at each observation point) should be conducted twice weekly through the monitoring period.

Observation points
Four observation points along the Gorge in the vicinity of the Endless Wall will be surveyed, and will include Beauty Mountain, Kaymoor Top, Fern Point, and South Nuttall. If peregrines are observed in association with a particular section of cliff, observers should move away from the area to prevent disturbing the birds (at least several hundred meters away but it would be preferable to relocate to an observation point across the Gorge).

Observers
Observers should have experience observing breeding peregrine falcons and be familiar with other raptors of the area (especially Cooper's and sharp- shinned hawks, red- tailed, red- shouldered, and broad- winged hawks, and American kestrels). One observer could do all the monitoring. Alternatively, several or many qualified observers could accomplish a set of surveys simultaneously (e.g. three observers could simultaneously conduct surveys from each observation point).

Disturbance
Observer's top priority should be to avoid disturbing peregrine falcons. Observers should use remote observation points (see above). If peregrines are observed to dive at or vocalize in response to observers, the observers should leave the area immediately. Observers should not climb to or enter any suspected nesting site to document use. After the nesting season and the peregrines have left the area it might be desirable to enter the abandoned site to document nesting through collecting eggs or eggshell fragments, feather, and prey remains.

Record keeping
Log all surveys on "Raptor Survey cards" (attached).
Log observations of other raptors on "Raptor Observation and Nest Record Card" (attached).
Record all observations and eyries found on a master map for each peregrine falcon observation year.

Monitoring of the area should depend on whether peregrine falcons are observed.

> **Case 1 – No peregrine falcons are observed throughout observation period (minimum monitoring effort)**
> Conduct 20 surveys (two surveys per week), between mid- February and late April). Each survey consists of a four- hour survey at each of the four observation points (16 hours total survey time). After negative results on the final survey, declare the area free of breeding peregrine falcons. Total survey hours = 320 hours
>
> **Case 2 – Peregrine falcon(s) are observed (but are not breeding)**
> After any observation of a peregrine falcon (where a peregrine is observed but breeding is not confirmed and no eyrie is located) conduct a follow- up survey the next day at the same point. If no peregrine falcons are seen on the follow- up survey, return to the scheduled survey schedule. If peregrine falcons are seen on the follow- up survey, continue with follow- up surveys until no peregrine falcons are observed there, then return to the original survey schedule.
>
> **Case 3 – Peregrine falcons are observed and are attempting to breed**
> During the scheduled surveys, a peregrine falcon(s) is observed. After the observation, conduct a follow- up survey on the next day in the same area. Continue follow- up there until the eyrie is located. If peregrine falcons are not observed on follow- up surveys, return to the original survey schedule. When peregrines are found associating with a particular area, conduct follow- up surveys of the area until the eyrie is found. When the eyrie is located, continue bi- weekly observations until breeding is finished (two weeks after the young fledge or after the eggs or young are killed). When the eyrie is located, other areas on the Endless Wall away from the nest could be opened for climbing and other visitor use. An appropriate buffer depends on topography of the eyrie and immediate area but I recommend a minimum distance of 100 meters on either side of the eyrie.

Notes

Northern nesting peregrine falcons migrate through NERI and the eastern U.S. in spring. If a peregrine is observed flying through the area, it could be a migrant or a local breeding bird. Observers should pay particular attention to behavior, which may indicate whether the bird is a migrant or local breeder. If the peregrine falcon vocalizes, attacks other raptors or common ravens or crows, or perches and spends time on a particular cliff, breeding is possible or likely. If two peregrine falcons are observed, they are likely breeders. Peregrine falcons that are soaring high overhead or flying directly through the area may be migrants, especially if they are moving north.

RAPTOR OBSERVATION RECORD CARD (FEB 1989)

OBSERVER NAME AND ADDRESS:	MAP NAME:
	STATE - MAP # - NEST TERR. # - SITE # - YEAR
SPECIFIC AREA (DESCRIBE):	OTHER NO. (e.g. Agency No.):
	UTM-N or LATITUDE:
	UTM-E or LONGITUDE:

SPECIES (COM NAME OR AOU ABBREV.):

DATE	TIME	SUR MET	NO. ADS	NO. SUB	NO. EGGS	NO. NEST	AGE NEST	NO. FLG	ACTIVITIES
					E A	E A	E A		
					E A	E A	E A		
					E A	E A	E A		
					E A	E A	E A		
SEASON SUMMARY	TOTAL:								

SURVEY METHOD:	ACTIVITY / BEHAVIOR (May Be More Than One)		
1. FOOT	1. PERCHED	7. BODY CARE	13. COPULATING
2. VEHICLE	2. FLYING	8. COURTSHIP	14. OTHER:
3. BOAT	3. HUNTING/FORAGING	9. NEST BUILDING	
4. PLANE	4. FEEDING ADULT	10. INCUBATING	
5. HELICOPTER	5. TERR. DEFENSE	11. BROODING	
6. INCIDENTAL OBS.	6. VOCALIZING	12. FEEDING YOUNG	

OFFICIAL NEST STATUS	NOTES, MAP, OR PHOTO ATTACHED? 1. YES 2. NO

REMARKS (Moult In Adult Pair, Prey In Nest/Eyrie, Etc.):

RAPTOR NEST/EYRIE RECORD CARD (FEB 1989)

TREE NEST-SPECIES:

1. LIVE TREE
2. SNAG
3. NEST BOX/PLATFORM
4. ARTIFICIAL
5. CAVITY IN TREE
6. OTHER

TREE HEIGHT (M): E A

TREE DIAMETER (CM): E A

HEIGHT OF NEST IN TREE (M): E A

DOMINANT HABITAT TYPES
(up to three within .5 km of nest)

1. CLIFF
2. UNVEGETATED GROUND
3. WET MEADOW
4. DWARF SHRUB MEADOW (tundra dominated by grasses or sedges)
5. GRASS MEADOW
6. DWARF SHRUB MAT (dwarf shrubs <0.4 M high)
7. LOW SHRUB THICKET (shrubs 0.5 - 1.1 M high)
8. MED. SHRUB THICKET (shrubs 1.2 - 2.4 M high)
9. TALL SHRUB THICKET (shrubs 2.5 - 5.0 M high)
10. DECIDUOUS FOREST
11. CONIFEROUS FOREST
12. MIXED DECIDUOUS-CONIFER FOREST
13. SCATTERED WOODLAND AND DWARF FOREST
14. ARTIFICIAL HABITAT
15. OTHER
16. MARINE (dist. km) E A
17. RIPARIAN (dist. km): E A
18. LACUSTRINE(LAKE) (dist. km): E A
19. RIVER / STREAM (dist. km): E A
20. OTHER PERRENIAL WATER (dist. km): E A

FOR CLIFF NESTS - ABOVE CLIFF:
(habitat types) BELOW CLIFF:

GROUND NEST - SITUATION:

1. LEDGE ON CLIFF
2. STICKNEST ON CLIFF
3. CAVITY (POTHOLE) ON CLIFF
4. OPEN HILLSIDE
5. LEVEL GROUND
6. OTHER

CLIFF ROCK TYPE: 1. SED 2. IGN 3. MET

SPEC. FORMATION:

CLIFF HEIGHT (M): E A

CLIFF LENGTH (KM): E A

HEIGHT OF NEST ON CLIFF (M): E A

ELEVATION OF NEST ABOVE SEA LEVEL (FT):

ASPECT OF SLOPE:

ASPECT OF NEST:

NEST CONDITION: 1. GOOD 2. POOR 3. REMNANT ONLY

NEST ACCESSIBILITY (to ground predators):
1. EASY
2. MOD. DIFFICULT
3. VERY DIFFICULT

DISTANCE TO HUMAN ACTIVITY (KM): E A

HUMAN ACTIVITY VISIBLE FROM NEST? 1. YES 2. NO

TYPE(S) OF HUMAN ACTIVITY:

1. TRAIL
2. ROAD
3. BOATING
4. AIRCRAFT
5. BUILDING(S)
6. AGRICULTURE
7. CONSTRUCTION
8. RESEARCH
9. MINING
10. OIL / GAS
11. LOGGING
12. OTHER:

CIRCLE ANY THAT APPLY:

1. PHOTO OF CLIFF TAKEN
2. PHOTO OF EYRIE TAKEN
3. EYRIE DESCRIP. ATTACHED
4. PREY REMAINS COLL.
5. EGG(S) COLLECTED
6. EGG SHELLS COLLECTED
7. WHITEWASH AT EYRIE
8. OTHER WHITEWASH ON CLIFF
9. OVERHANG AT EYRIE
10. AFTERNOON SHADING?: a. YES b. NO c. UNKNOWN

BANDING AND BAND RECOVERY INFORMATION

AGE	SEX	AVISE NO. - COLOR / LEG	BAND CODE - COLOR / LEG

RAPTOR SURVEY CARD (FEB 1989)

OBSERVER (NAME & ADDRESS):	MAP NAME:
	STATE - MAP # - OBSERV. PT. #
SPECIFIC AREA (DESCRIBE):	OTHER NUMBER (e.g. Agency No.):
	Obs. Pt. Location (UTM or Lat-Lon):

DATE (dd mmm yy)	TIME (24 HR CLOCK)			AVE. SKY	RANGE °F
	START	END	TOTAL		

TOTAL TIME SPENT AT OBSERV. POINT:

CONFIDENCE SCALE: 1. LOW* 2. MOD.* 3. HIGH
*Circle Factors That Hindered Assessment Of The Area:
1. Weather 4. Fatigue 7. Poor Vantage Point
2. River Noise 5. Lighting 8. Helicopter Required
3. Other Noise 6. Distance 9. Other (remarks)

SKY:
1. Sunny
2. Cloudy/Overcast
3. Partly Cloudy
4. Cumulus/T-shwrs
5. Rain 6. Snow
7. Smoke

LIST OBSERVATIONS: MAP # - TERR. # - NEST SITE # - SPECIES

REMARKS:

As the nation's principal conservation agency, the Department of Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

Publication services were provided by Planning and Design Services, Denver Service Center. NPS D- 193, May 2003

United States Department of the Interior / National Park Service