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THE PROCESS

The primary purpose of this effort is to test some new concepts on how the National Park Service might approach general management planning and to share the results with other planners.

This document represents the efforts of an interdisciplinary task force assembled for the primary purpose of producing an example of a highly streamlined process for general management planning. More specifically, the effort focused on significantly minimizing production time, providing greater flexibility for field managers, and increasing the life of such plans. This example is based on the assumption that funding is not imminent and there is not a critical situation needing immediate attention. The planning process should remain flexible in order to address such situations, if they cannot be accomplished through a separate, smaller-scale planning and compliance effort.

The greatest challenge in streamlining planning is changing the way we have been trained to think as it pertains to our current "process," related laws, and policies. Some of these issues represent obstacles to streamlining of the planning process. Therefore, the proposed process assumes we can be liberated from current regulations and that waivers will be forthcoming that will allow us to operate within the law. We are at the crossroads of "business as usual" and "changing to meet the challenge." This document represents the latter road as well as the ability to think bold and to take certain risks.

The streamlined process, as reflected in this document, complements and applies in

detail many of the basic principles and concepts reflected in other efforts—the 1995 Denver Service Center "Reinvention Laboratory" report approved by the director and a pilot project referred to as "Visitor Experience and Resource Protection" (VERP) planning.

In the past, general management planning involved developing alternatives backed by detailed, site-specific development concepts and environmental analysis that took three to seven years to complete.

Unfortunately, many of these plans became obsolete before they could be implemented. Reasons varied—lack of funding for implementation, new research that rendered past planning decisions unacceptable, changes in management philosophy, and dramatic changes in visitor use. Planning also narrowly focused on resolving issues on the land within the park rather than implementing management objectives. There was also a primary focus on development needs with little to no emphasis on resources capability and management.

Streamlining and reinforcing the GMP process required modification of two other phases of work directly related to general management planning. These are the statement for management phase and the design phase, referred to below as Phase I and III, respectively. The following is a general description of all three phases of work as they would be modified in order to complement efforts to streamline general

management planning, which is described under Phase II below.

Phase I

This phase involves the preparation of a park's statement for management (SFM) through what is now referred to as the management assessment process (MAP). This process embodies the recommendations of the Vail Conference Report. The MAP is now conducted with heavy involvement of a cross section of other federal, state, and county agencies, the general public, special interest groups, and political entities in order to more broadly focus on a park unit as well as the environment beyond park boundaries. The key components of the SFM are purpose of the park, significance of its resources, and the management objectives. During the MAP, major emphasis is placed on developing sound and well-thought-out management objectives and ensuring that they relate back to the purpose and significance of the park unit. The SFM is a nonprescriptive document and forms the basic framework for moving into Phase II.

Phase II

This is the phase where a GMP is produced for a park unit. Under the new streamlined process, the basic approach to planning results in a document that identifies broad, highly conceptual alternatives for resource management and development of a park. As a rule, the alternatives are not as detailed as they were in the past and they are not tied to specific sites like they were in development concept plans, which were often included as part of a general management plan. The alternatives relate to individual, very large land areas that

have been previously identified and characterized based on the unique values and the opportunities they offer. The alternatives attempt to address a park's management objectives rather than merely focusing on the issues, as in the past. This broader, less-detailed approach provides greater flexibility and, in turn, increases the life of planning documents.

This more conceptual approach, by nature, minimizes the capability of assessing environmental impacts with any degree of specificity during the general management planning process. However, the level of assessment will be sufficient to select the proposed plan with an understanding that more detailed alternatives and environmental assessment work will be necessary as specific resource management action plans and design documents are developed during Phase III. Phase II, general management planning, represents the point where the broad framework for park management is established.

As stated earlier, Phase II should remain flexible enough so that in cases where there is some assurance that funding is imminent or there is a critical situation needing immediate attention, detailed direction supported by environmental documentation can emerge. Primary emphasis will be placed on providing the park with a product that responds to their immediate and long-term needs.

Phase III

This phase is the point when planning and design documents for specific sites are prepared. In essence, Phase III represents the point where a park begins to provide the details within the framework identified in Phase II. This phase of work will not start until funding becomes available for the preparation of detailed planning and design documents related to specific sites. This concept eliminates the need to prepare development concept plans that can become obsolete before funding becomes available for implementation. This represents a more incremental approach for planning and minimizes the risk of planning documents becoming obsolete. During this phase preliminary design alternatives, which take the place of development concept plans, will be developed and assessed from an environmental impact standpoint. Since preliminary design most often involves developing alternative large area site plans, it would be at this point that an environmental assessment or environmental impact statement would be prepared. This process would also require that planners and designers work more closely than in the past, thereby ensuring a more coordinated effort and better continuity between planning and design.

In summary, under this three-phase approach, general management plans could be produced in one and a half to two years. This more streamlined planning process would provide greater flexibility, increase the life of planning documents, and significantly reduce cost. It would also provide a more focused and scientific approach to park management because:

- environmental documents would be based on detailed preliminary design plans and therefore result in more accurate assessments of impacts and
- as development occurred, monitoring could be implemented to help substantiate impacts and data could be used to evaluate future site-specific proposals for development. This incremental approach would also be far more accurate in evaluating cumulative effects.

THE PLAN

The new general management plan has three basic components—a vision statement, the specific objectives, and management prescriptions.

The *vision* statement is a short narrative that describes the park's desired future condition. It is meant to stand the test of time and reflect the park's purpose and significance. It expresses the management philosophy for the park and what the park is to be like in the future.

Specific objectives capture the essence of the vision and represent a more detailed expansion of the management objectives outlined in the park's statement for management. These objectives are issue-, resource-, or geographic-specific. They may include products to be produced or conditions to be attained or maintained. As a whole, objectives are interrelated and interdependent. The specific objectives provide a basis for allocating resources and defining management regions in the park.

Management prescriptions can be either geographically or programmatically based, or a combination of both. Geographic-based prescriptions describe the characteristics of the management region for which they were developed and define the outputs, activities, and projects for that region. Programmatic prescriptions are not tied to a specific management region. They address resource goals such as air quality in the context of a large area. The rationale for defining regional boundary delineations is included in the planning document.

Management prescriptions for each region are based on the character and condition of the resource involved. Not only are they tied to park-wide needs, they also take into consideration factors beyond park boundaries.

Alternatives are constructed around a common theme. A menu of available management prescriptions is developed. The same set of prescriptions is applied differently over park lands based on the alternative themes. Themes set the basis for developing distinctly different alternatives that provide a variety of visitor experience options.

One should keep in mind that the following plan is the result of an interdisciplinary team effort to develop an example of how the Phase II—general management plan process—can be streamlined, assuming it would not be prudent to explore highly detailed alternatives and environmental assessment work at the time the document is prepared. In summary, the example is designed to identify *what* is needed, with the appropriate level of environmental compliance, and leaving the specifics of exactly *where, when, and how much* to be answered in Phase III, site design, where a greater level of environmental compliance will be required.

The plan is intended to follow an abbreviated format for an environmental assessment. Examples of each chapter, with statements describing the intent of the section, are included in this document.

**U.S. DEPARTMENT OF INTERIOR
NATIONAL PARK SERVICE
ENVIRONMENTAL ASSESSMENT**

PROJECT TITLE

PARK NAME

COUNTY, STATE

Summary:

One-paragraph description of purpose and need, proposal and alternatives, and environmental consequences.

Address Comments to:

Superintendent

Park name

Address

City, State, Zip Code

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PURPOSE AND NEED

PURPOSE OF THE PLAN

This section introduces the plan concept and describes why this document and planning process is needed.

A general management plan (GMP) is needed to provide the National Park Service with a long-range management program for the continued protection of the unique resources found within the park. The plan sets forth a management concept; establishes the role of the park within the context of regional trends and plans for conservation, recreation, transportation, economic development, and regional issues; and identifies the conditions necessary to resolve issues and achieve management. The primary objective for park management is to guide the protection and preservation of the natural and cultural environments while permitting biological, geological, and other natural processes to continue with a minimum of human disturbance. The plan also considers a variety of recreational and interpretive visitor experiences that enhance the enjoyment and understanding of the park resources.

Within this context, the purpose of this document is to provide a framework and broad, general direction for park management. This document requires that proposals for future actions be substantiated by further surveys and environmental assessments either prior to or as part of a design or during the

development of specific resource management and visitor service plans. Primary emphasis is placed on providing guidance for the park's long-term needs.

THE PLANNING PROCESS

This section describes the important pieces of planning direction.

The planning process builds upon the logic established for national parks, starting with the National Park System and all other applicable laws, regulations, and policies. The proposed action and alternatives displayed in this document and appendices are based on each unit's purpose and significance. Alternatives have three common components in the plan—the vision, the specific objectives, and management prescriptions. Each alternative responds differently in addressing the specific objectives.

The vision is a short narrative that describes the park's desired future condition. It is meant to stand the test of time and reflect the park's purpose and significance. It expresses the management philosophy for the park and what the park is to be like in the future.

Specific objectives capture the essence of the vision, providing clarity and priorities. These objectives are issue-, resource-, or geographic-specific. They may include products to be produced or conditions to be attained or

maintained. As a whole, objectives are interrelated and interdependent. The specific objectives provide a basis for allocating resources and defining management regions in the park.

Management prescriptions can be either geographically or programmatically based, or a combination of both. Geographic-based prescriptions describe characteristics of the management region for which they were developed and define the outputs, activities, and projects for that region. Programmatic prescriptions are not tied to a specific management region. They address resource goals such as air quality, in the context of a large area. The rationale for defining regional boundary delineations is included in the planning document.

Management prescriptions for each region are based on the character and condition of the resource involved. Not only are they tied not only to local or park-wide needs, they also take into consideration factors beyond park boundaries. A menu of available management prescriptions is developed. Each alternative revolves around a common theme. The same set of prescriptions is applied differently over park lands based on the alternative themes. Themes set the basis for developing distinctly different alternatives that provide a variety of visitor experience options.

The plan provides general or strategic guidance and is not detailed, specific, or highly technical in nature. Highly technical environmental analysis is to be done when funds become available

to begin design of facilities, if prescribed by the management plan, when site-specific impacts can be addressed. The proposed undertaking for Section 106 compliance as well as the rationale for the undertaking will also be completed at the time design funds become available.

THE NATIONAL PARK SYSTEM

This section describes the importance and purpose of the National Park System and its relationship to park legislation.

The National Park System represents a collection of the nation's heritage. It contains the nation's most outstanding and significant natural, cultural, historic, and recreational resources. Each park contains resources and values that make it something special—even nationally significant. The park fulfills a particular niche in the system. The "niche" each park fills is defined by its park purpose.

The National Park Service's purpose of conserving resources—whether they be natural, cultural, historic, or recreational—recognizes the importance of preservation as an active management tool. This preservation principal respects both natural and human relationships and emphasizes the value of maintaining land for the purpose of preserving natural ecosystems, historic significance, and outstanding recreational opportunities.

Balanced against the protection and preservation of these resources is the value of public enjoyment of present and future generations. Human use

often can threaten the very resources that the National Park Service is tasked to protect. Many public debates have revolved around the balancing of these two National Park Service purposes. Whether it is telling a story or distributing use carefully to protect resources, the Service uses the principles of human and natural management to accomplish its mission. But at the very least, "these areas derive increased national dignity and recognition of their superb environmental quality through their inclusion jointly with each other in one national park system managed for the benefit and inspiration of all people." (16 USC 1a-1,1970)

MANAGEMENT ASSESSMENT, PARK PURPOSE, AND SIGNIFICANCE

This section ties the process to development of the statement for management, the park's purpose, and its significance.

MANAGEMENT ASSESSMENT

In 1993, the park conducted a three-day management assessment workshop with participants from the park staff, the regional office, other agencies, and the public. This process began by looking at the park's legislation in an effort to clearly define its purpose and significance. The next step identified management objectives, which are broad, conceptual descriptions of what the park could be like, relative to resource management, visitor services, human resources, and partnerships. Applicable management objectives

derived during the management assessment were used to help define more specific objectives for this plan.

PARK PURPOSE

The reason or reasons for which the park was set aside as a part of the national park system is called the park purpose. Purpose statements are based upon legislation, legislative history, and historic trends. Copies of pertinent legislation is in the appendices.

The purpose statements below reflect the legislative intent for the monument. Other legislation affecting the management of the monument includes the 1916 Organic Act, the Wilderness Act, the National Environmental Policy Act, the Historic Preservation Act, and the Endangered Species Act.

The purpose of the park is to provide for:

- preservation and protection of the spectacular gorges and scenic values
- protection of natural, cultural, scientific resources and items of educational interest
- educational, scientific, and interpretive opportunities
- preservation of the integrity and characteristics of lands designated as wilderness
- opportunities for public use and enjoyment of these resources in a manner that will leave them unimpaired for future generations
- management of monument resources as an integral part of the Guene River Basin

PARK SIGNIFICANCE

Significance is summarized in statements that capture the essence of the park's importance to our natural and cultural heritage. Significance statements are not an inventory of significant resources but rather describe the importance or distinctiveness of the aggregate of resources in the park. Following are the significance statements developed for the park through the management assessment process:

- The dynamic evolution of the park, involving the forces of heat, pressure, and water action, has created one of the world's premier wild canyons, because of its sheer cliffs, depth, and narrowness, as it towers over the rapidly falling river. It is a visual attraction that draws hundreds of thousands of visitors each year.
- Clean air and panoramic views pale the influence of humans and give a feeling of what once was throughout the west.
- It's the view.
- The monument contains a diversity of plant and animal species, several of which are rare, endangered, or unique to the area. Natural resources provide an unaltered baseline from which to measure changes in regional and global conditions.
- The writing is on the wall. Without opening a book, one can go back over 1.7 billion years of geologic history as these vertical walls tell their story.
- The park is the centerpiece of geologic diversity in a relatively small area, reflecting 1.7 billion years of geologic evolution.
- The inner canyon wilderness is truly a wild, foreboding place.
- Tourism is a leading industry in the Guene River Basin. Centrally located in the basin, the park is an accessible destination that serves more than 300,000 visitors annually and directly contributes about \$4 million annually to the local economy.
- The establishment of the park as a unit of the National Park System is a symbol of community pride.
- Its position along the Guene River in combination with its values makes the park an integral part of ecosystem management of the Guene River Basin.
- At every turn, nook, and cranny, the park affords the opportunity for visitors to discover new vistas of nature and self.
- The park is a superlative example of continuing river erosion that is accessible to and understandable to the public.
- The combination of its depth and narrowness makes the park a one-of-a-kind setting in North America.
- The sheer size of the canyon creates an experience where one can feel the dominance of nature over people.
- The steep gradient of the Guene River and the depth and narrowness of the park are physical barriers to the migration of fish, plants, and animals. This has resulted in a diverse group of isolated biological communities that provide unique opportunities for scientific study, for example, evolution of plants and animals, impacts of migration barriers, and so on.
- The park's canyons and backcountry areas are quiet places where the sounds of nature create an experience for visitors that last a lifetime. You can hear the river flow and the wind in the trees. At times the river talks.
- You can go into the wilderness and experience primal America and bring back a sense of adventure and discovery.
- The canyon is a great place for scientific discovery and environmental education. It is a living classroom providing unique insights into geology, water and wind erosion, air quality, wildlife habitat, and cultural history.
- The magnificence of the canyon, its spectacular depth and color, defy description. It touches the emotion, imagination, and spirit. And a river runs through it!
- People can enjoy the canyon through a variety of recreational experiences that include sight-seeing, fishing, hiking, climbing, rafting, kayaking, photography, wildlife watching, meditation, and solitude.

VISION FOR RESOURCES, INTERPRETATION, AND RECREATION

This section relates the first of the three key parts of a plan, relating to readers a simple vision of the park's future.

Based on input received during the management assessment, the park staff developed a vision for the park. The vision statement is a short narrative relating "what could be" and is used in evaluating the appropriateness of various alternatives.

The spectacular canyon and adjacent uplands known as (the park) is a special place that touches mind and soul and offers a variety of opportunities to enjoy and contemplate one of nature's foremost scenic wonders. A place where quiet is enhanced by sounds provided by nature—where the continuous roar of the river rushing amid boulders and over falls attests to the power of the Guene to carve out a canyon over 2,000 feet deep. Although upstream dams have partially regulated the Guene, it is managed to exemplify a wild river, with flows mirroring natural levels, where the water is unpolluted, and the exceptional recreational, scenic, and educational values of the system are protected. Highly regarded and appreciated for its clean air and panoramic vistas, the rural and undeveloped nature of the landscape adds a pristine appearance, which promotes opportunities for discovery and enlightenment. The canyon is, indeed, a living classroom.

For those seeking to expand and expound on the resources and values found in the wilderness and front country, exceptional interpretive opportunities and media are available. A wide variety of activities and challenges are available, which include sight-seeing, hiking, fishing, wilderness backpacking, climbing, and white water rafting. Developed areas and facilities offer modest amounts of visitor conveniences in some locations, which provide a good balance to the primitive opportunities found throughout the park.

The National Park Service manages the river, canyon, and uplands as a part of the larger Guene Basin. Partnerships with a variety of local, state, and federal agencies as well as private organizations help align goals, which aggressively protect the natural and cultural resources of the region, including riverine resources, wildlife, superb air quality and visibility, and maintenance of a rural viewscape. This in turn maintains a high-quality of life for our neighbors. Additionally, partnerships assist in coordinating a variety of high quality services that meet our visitors' needs as well as those of the people in nearby communities. Our children's children will be able to learn from and enjoy the canyon as we have because the canyon is used in ways that are sustainable, leaving the resources unimpaired. Our canyon memories and experiences do indeed last a lifetime.



North Rim
© David Halpern

SPECIFIC OBJECTIVES

This section relates the second key part of this goal-oriented plan to readers—the specific objectives. It describes objectives for park programs.

Specific objectives further refine the management objectives completed during the 1993 management assessment workshops. They provide clarity and priorities. These objectives are resource-, geographic-, or issue-specific. They may include products to be produced or conditions to be attained or maintained. As a whole, objectives are interrelated and interdependent. The specific objectives provide a basis for allocating resources and defining management regions in the park.

PRIME RESOURCE

Prime resource lands are defined as those resources that made a direct contribution to establishing the park as a unit of the National Park System and are related to the park's purpose and significance. Other lands within the monument are also important to protecting and supporting the prime resource but are not considered to be the prime resource.

Prime resource lands comprise a little over 50 percent of the total and are those lands from the canyon edge to the Guene River below, mostly known as the Inner Canyon. The Inner Canyon and the majority of the westernmost upland, consisting of 11,180 acres, is wilderness designated under Public Law 94-567 (October 20, 1976). These lands are managed as part of the National Wilderness Preservation System,

designated by Congress and legally protected as wilderness in perpetuity. The Wilderness Act defines wilderness as land that "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable." Wilderness areas are managed for the use and enjoyment of the American people in such manner as will leave the lands unimpaired for future use and enjoyment as wilderness. Management includes the protection of these areas, the preservation of their wilderness character, and the gathering and dissemination of information regarding their use and enjoyment as wilderness. Public purposes for wilderness include recreation, scenic preservation, scientific study, education, conservation, and historical use.

Resource-Specific Objectives

AIR—Perpetuate and preserve outstanding air quality in the monument, which reflects its critical importance to visitor enjoyment, human health, scenic vistas, and the preservation of natural systems and cultural resources consistent with the aims of a designated Class I airshed.

Conditions to be attained:

- Ensure that facilities and activities within parks are in compliance with Clean Air Act requirements, including state and local regulations.
- Information and tools needed to document air quality conditions are acquired.
- A strategy for using available information to remedy existing and prevent future air pollution effects on park resources and values is developed.

CULTURAL RESOURCES—Protect, preserve, and develop cultural resources for public enjoyment, interpretation, and scientific research.

Conditions to be attained:

- Cultural sites—archeological and historic—are inventoried and documented; significant sites are preserved including CCC components—North Rim Road, Pulpit Rock, and Dragon Point overlooks.
- An understanding of the significance of the pre-history of the area is garnered and communicated to the public.
- A strategy is developed that helps define and interpret the importance of exploration, settlement, and development of the region, including its mining and agricultural history.
- In concert with the national recreation area, the Bureau of Reclamation, and the Valley Water Users Association, a strategy is developed to identify and interpret the significance of water development in the west and the subsequent impacts on the park.
- The importance of local support for the establishment of the canyon as a component of the National Park System and subsequent expansion and creation of the park Wilderness is identified and highlighted.

FACILITIES—Provide facilities and services that are attractive, safe, accessible, and of high-quality design that adheres to a common architectural theme. Location of the facilities will be chosen to minimize their impact on the surrounding landscape and resources.

Conditions to be attained:

- Development seen from within the park is done in a sensitive way, corresponds to a common architectural theme while blending with the natural landscape, and minimally impacts on the visitors' experience of a wild canyon setting.
- Facilities are designed and located to protect resources while minimizing impacts to those resources. Facilities attract visitors while meeting basic visitor needs, orient and educate the public

while enhancing visitor enjoyment, and provide information on the park and surrounding areas.

- East Portal facilities are compatible with the common architectural theme of the park.
- Road and parking systems are efficient and safe, accommodating moderate growth and are consistent with resource management and visitor experience objectives.
- The park and surrounding lands have a coordinated and comprehensive trail system that connects the Inner Canyon and uplands with significant features and resources.
- A strategy is developed to establish access through Red Rock Canyon.
- Facilities and programs are available for visitors with disabilities.
- Water is available in locations on both rims to meet basic visitor, resource protection, and operational needs.
- Visitor/interpretive facilities complement experiences of visitors who are emotionally touched by their canyon visit.
- Activities and support facilities are coordinated with entities outside of park boundaries.
- Facilities serving various functions are efficiently organized and do not conflict with land use.
- Maintenance and administration facilities are organized in a fashion that protects resources and meets visitor needs.

INTERPRETATION—Interpretation objectives are integrated and linked with the resource management program.

Conditions to be attained:

- The interpretive program connects the visitor to the park's resources, builds a local and national constituency, and gains public support, which, in turn, meets the objective of protecting park resources.
- An outreach component of the program provides vital information for protecting resources and gaining public support through schools, organizations, and partnerships.

PALEONTOLOGICAL RESOURCES—

Protect and preserve paleontological resources, including both organic and mineralized remains in body or trace form, for public enjoyment, interpretation, and scientific research.

Conditions to be attained:

- The extent of these resources are identified, inventoried, and protected.
- Through interpretive opportunities, the public gains an understanding of the significance of the paleontological resources and the role they play as a component of the park's geological/zoological story.

SCENIC VALUES AND SOUND—

Maintain a full spectrum of tangible and intangible attributes for which the park was established. Park areas contain various tangible natural and cultural features such as animals, plants, waters, geologic features, historic buildings and monuments, and archeological sites. They also have intangible qualities such as natural quiet, solitude, space, scenery, scenic vistas, a sense of history, sounds of nature, and clear night skies that are important components of visitor use and enjoyment.

Conditions to be attained:

- A strategy is developed that protects viewsheds, allowing them to remain generally natural and undeveloped as seen from within the monument and Vernal Mesa.
- Development seen from within the park is done in a sensitive way, minimally impacting the visitor's experience of a wild canyon setting and blends with the natural landscape.
- Management for viewsheds that are critical to providing quality experiences for park visitors are cooperatively coordinated with adjacent land management agencies, county planning entities, private landowners, and transportation agencies.

- A strategy is developed to protect the viewshed along the scenic approaches to the monument (Highway 50 to the South Rim Entrance and Crawfish to North Rim Boundary), emphasizing the importance of retaining the rural characteristics of the area along these routes.
- Obstructions to outstanding natural sound quality and night lighting, and air pollution are at or below 1993 levels.

SOILS/GEOLOGY—Seek to understand and preserve natural erosion processes as they relate to the monument and the formation of the canyon.

Conditions to be attained:

- Accelerated erosion resulting from visitor use and/or management activities is minimized or prevented.
- Continued research pertinent to the geologic processes that created the canyon and adjacent landscapes is encouraged.

VEGETATION—Perpetuate native plant life as part of natural ecosystems.

Conditions to be attained:

- The spread of noxious weeds is prevented.
- Habitat for threatened and endangered species is protected.
- Permit livestock is managed per the principals of sustainability; trespass livestock is eliminated by the use of fencing, and where fencing is not erected, resource impacts are identified and monitored to minimize such impacts.
- Prescribed fire is used to mimic natural fire effects in certain areas.
- Natural (pre-dam) river corridor vegetation is restored and maintained.
- Impacts of visitor use are minimized.
- Significant vegetation communities (e.g., old growth stands) are identified and protected.
- Natural vegetation communities extending across park boundaries are enhanced through common

efforts with other entities, minimizing habitat fragmentation in the region.

WATER—Manage and protect water resources and aquatic ecosystems to maintain, rehabilitate, and perpetuate their inherent natural integrity in coordination with the state and other federal agencies.

Conditions to be attained:

- The Guene River's flows and flow regime are protected, ensuring sufficient and permanent water flows following a more natural flow regime in the river.
- The extent of springs and seeps are identified and protected.
- Water quality is maintained at highest level possible, with the assistance of the national recreation area, consistent with the Clean Water Act (33 USC 1251 et seq.) and other applicable federal, state, and local laws and regulations.
- Water quality for the world-class trout fisheries is maintained.
- Other water users and agencies assist in achieving goals through recognition of common benefits and support to reach mutually agreed upon goals.

WILDLIFE—Perpetuate the native animal life as part of the natural ecosystem in consultation with other federal land-managing agencies.

Conditions to be attained:

- Endangered and threatened species are protected and the Service has accomplished its role in recovery of threatened and endangered species found at the monument.
- Habitat fragmentation is minimized.

- Native Guene River fish are restored and/or delisted.
- The world-class trout fishery is maintained.
- Zoological inventories have been completed and species are monitored to the point that changes in population trends or characteristics can be identified and/or managed.

VISITOR USE—Develop a strategy for determining the appropriate levels of visitor use and experience and alternative strategies for maintaining the diversity of quality visitor experiences consistent with the park's purpose and significance.

Conditions to be attained:

- A strategy is developed with public input to guide the park in ensuring a quality visitor experience, resource preservation, and development consistent with the uncrowded, pristine nature of the park and maintaining the ability of visitors to have a high-risk adventure experience in the wilderness.
- Wilderness areas are properly monitored for resources, impacts, and usage.
- Appropriate levels of government and concession services are determined. The levels are enough to enhance visitor enjoyment while protecting resources—services provide basic needs (food, rest rooms) and provide theme-related amenities (film, souvenirs).
- A strategy for determining and establishing a carrying capacity that protects resources and provides a range of experiences is developed.
- Recreational uses have been evaluated and are permitted when such use is otherwise compatible with park and NPS management objectives and regulations.

Geographic-Specific Objectives

PANORAMIC VIEWS—Preserve the natural setting, which allows the park to be seen within the larger regional context.

Conditions to be attained:

- Allow visitors to see and access the area for its larger panoramic views.
- Minimal development is used to support visitor access and a quality visitor experience.
- Air quality for a Class I airshed is maintained for long-distance views (to the San Bells, Grand, West Elks, Valley, etc.), which are important parts of the park's geologic and human history stories.

CANYON BACKDROP—Preserve and protect the wild setting within which the park exists.

Conditions to be attained:

- Visitors can access the area for recreation purposes while a wild setting is maintained.
- Development blends with the natural landscape and is done in a sensitive way, with minimal impacts to the visitor's experience of a wild canyon setting.
- Scenic easements are managed to perpetuate the natural resources and maintain a wild setting to the greatest degree possible.

CLIFF TOP—Provide visitors with a variety of recreational viewing opportunities to experience the depths of the inner canyon.

Conditions to be attained:

- Development is done in a sensitive way, protecting resources from visitor-use impacts, minimally impacts the visitor experience of a wild canyon setting, and blends with the natural landscape.

CLIFFS AND INNER CANYON—Provide for visitor enjoyment of park resources consistent with the management of the area for Wilderness values.

Conditions to be attained:

- Any development is limited in accordance with Wilderness values.
- Visitors have a wilderness experience—an experience that is associated with solitude and minimal contact with other people.
- Traditional climbing activities that use low-impact techniques and equipment are supported through a climbing management plan.
- A strategy is developed for identifying acceptable limits of impacts, monitoring back-country use levels and resource conditions, and taking prompt corrective action when unacceptable action and impacts occur.

THE RIVER—Provide for visitor enjoyment of park resources consistent with the management of the area for Wilderness values.

Conditions to be attained:

- Any development is limited in accordance with Wilderness values.
- Visitors experience the river and have a wilderness experience—an experience that is associated with solitude, the natural sounds of a wild river, and minimal contact with other people.
- The river flow and regime are managed (in concert with other entities) to more closely approximate natural conditions and systems.
- A strategy is developed for identifying acceptable limits of use, monitoring back-country use levels and resource conditions, and taking prompt corrective action when unacceptable action or impacts occur.

THE WAY IN—Provide visitors non-technical or nonmechanized access to the cliffs and inner canyon and the river using natural topography.

Conditions to be attained:

- Any development is limited in accordance with Wilderness values.
- Visitors have a wilderness experience along these access routes—an experience that is associated with solitude, minimal contact with other people, and nontechnical or non-mechanized access.
- A strategy is developed for identifying acceptable limits of use, monitoring backcountry use levels and resource conditions, and taking prompt corrective action when unacceptable actions and impacts occur.

Issue-Specific Objectives

FUTURE DEVELOPMENT SURROUNDING THE PARK—Promote partnerships among other federal, state, and county agencies and local interest with the common purpose of minimizing environmental impacts. This is extremely important with regard to the park, as both tangible and intangible resources are involved. Tangible natural and cultural features include animals, plants, waters, geologic features, historic buildings and monuments, and archeological sites. Intangible qualities include natural quiet, solitude, space, scenery, scenic vistas, a sense of history, sounds of nature, and clear night skies. These attributes are important both to the conservation of resources and to their use and enjoyment by the public.

Conditions to be attained:

- A strategy for a local community baseline information system is developed to provide a better understanding of the physical and ecological processes that shape and contribute to the evolution of the park and the Guene Basin.
- Viewsheds remain generally natural as seen from within the park.
- A cooperative strategy for any appropriate private land development adjacent to the park and on

access routes leading into the park is developed with land management agencies, private landowners, county planning entities, and transportation agencies so that negative impacts to water quality and aesthetic quality of the park experience are reduced.

Ecological System-Specific Objectives

These objectives, in contrast to those listed, view the park in the larger context of the region within which they exist, and recognize that the park is part of a larger ecosystem. The park is viewed without regard to administrative boundaries. As with the specific objectives listed above they can be resource-, geographic-, or issue-specific, however the issue in most cases will determine the regional boundaries of the ecosystem. The extent of the ecosystem should include those resources, issues, and items that influence park resources or are influenced by park resources or park management activities. The specific objectives provide a basis for allocating resources and define the partners for cooperative management efforts. Such efforts are increasingly important as agencies, counties, communities, and other entities have greater impacts on each other and their environments through growth, planning, and other actions. Cooperative efforts assist in recognizing and addressing concerns and areas of mutual benefit and are invaluable in the planning.

ECO: SOCIOLOGICAL—The overall objective is to manage parks in the context of their socioeconomic setting. The parks should continue to expand partnerships (federal, state, local, private) to exchange information, to ensure

protection of natural and cultural features and resources, and to develop a complete and consistent visitor information package and a variety of information distribution points and programs. The parks will work with other entities involved with tourism industries to focus, emphasize, and coordinate recreational and interpretive opportunities in marketing what the parks offer in the wider regional context.

Conditions to be attained:

- Partnership with other entities to provide information to regional visitors and to facilitate protection of resources.
- Infrastructure and concession activities are coordinated with entities outside of park boundaries.
- Socioeconomic ecosystem stakeholders have a good understanding of visitor characteristics.
- Long- and short-term recreation use and tourism goals, including use levels and growth, accommodations, and infrastructure, are coordinated between federal, state, and private entities.
- Effective communications have been established with other entities, the public, and special interests.

ECO: WATER—The overall goal is to manage and protect the regional water resources and aquatic ecosystems to maintain, rehabilitate, and perpetuate their inherent natural integrity in western Colorado in coordination with state and other federal agencies.

Conditions to be attained:

- The Guene River's flows and flow regime are protected, ensuring sufficient and permanent water flows following a more natural flow regime in the river.

- Water quality is maintained at highest level possible, consistent with the Clean Water Act (33 USC 1251 et seq.) and other applicable federal, state, and local laws and regulations.
- Water quality for the world-class trout fisheries is maintained.
- Other water users and agencies assist in achieving goals through recognition of common benefits and support to reach mutually agreed upon goals.
- Interpretive programming is in place that addresses park and regional issues in the context of the Guene River Basin ecosystem.
- The park staff is able to inform visitors about resource issues on surrounding lands, and surrounding land management agencies are able to communicate park resource issues to their visitors.
- Both parks are managed as part of the larger Guene River Basin ecosystem.
- The hydrologic environment (including flow, flow regime, aquatic life, riparian vegetation, and visitor experience) is managed to maintain natural hydrologic systems from the headwaters to the Colorado River.
- Interpretive programming is active in addressing regional river resources issues in the context of the Guene River Basin ecosystem.
- Research is facilitated in cooperation with other entities.
- An adequate database to support management decisions is in place.

The boundary for this ecosystem is defined as the Guene River Drainage, from the headwaters to the confluence with the Colorado River.

ECO: AIR—The park staff will work with federal, state, and local agencies and groups to perpetuate and preserve outstanding air quality in and surrounding the parks, including the benefits to visitor enjoyment, human health, scenic vistas, and the preservation of the designated Class I and II airsheds.

Conditions to be attained:

- In a cooperative effort, staff works to ensure that facilities and activities within and adjacent to the parks are in compliance with Clean Air Act requirements, including state and local regulations.
- Staff obtains and uses necessary tools to gather and gain information in a cooperative effort to document air quality conditions for the region.
- Park assists in an effort to develop a strategy and to use available information to remedy existing, and prevent future, air pollution effects on regional air quality.
- Park assists in the protection of the regional Class I and II air quality areas and long-range visibility resources.
- The boundary is defined by the continental divide, the Colorado–New Mexico state line, the Colorado–Utah state line, and the Colorado–Wyoming state line. We also recognize that the region defined as the Grand Canyon Visibility Transport Area is a more accurate definition of the airshed for the parks. We will work with the other agencies and states within this larger region to protect air resources and define the National Park Service position on protection of this resource.

ECO: HISTORY—The park staff works with other federal, state, local, and private entities to maintain and preserve the resources and stories that capture the geologic history and human experience associated with the Guene River. Through these resources and the stories that they tell we can draw a bridge of understanding between present-day people and the natural and cultural resources found here.

Conditions to be attained:

- Sites associated with the human stories are preserved, and the stories shared through various cooperative efforts as best carries their message.
- The story of water is told in a comprehensive manner in cooperation with public and private entities to present the epic nature of the events

preserved. All parts of the narrative are shared in the Guene Basin and related in the context of water development in the West.

- Partnerships are developed as needed to impart the cultures of historic and prehistoric people indigenous to the basin.
- Exploration and settlement of the region is revealed from the earliest arrivals through present-day people. Characters out of the past that brought mining, railroads, agriculture, and the CCC should be brought to life as they fit into the national recreation area and the park scene.

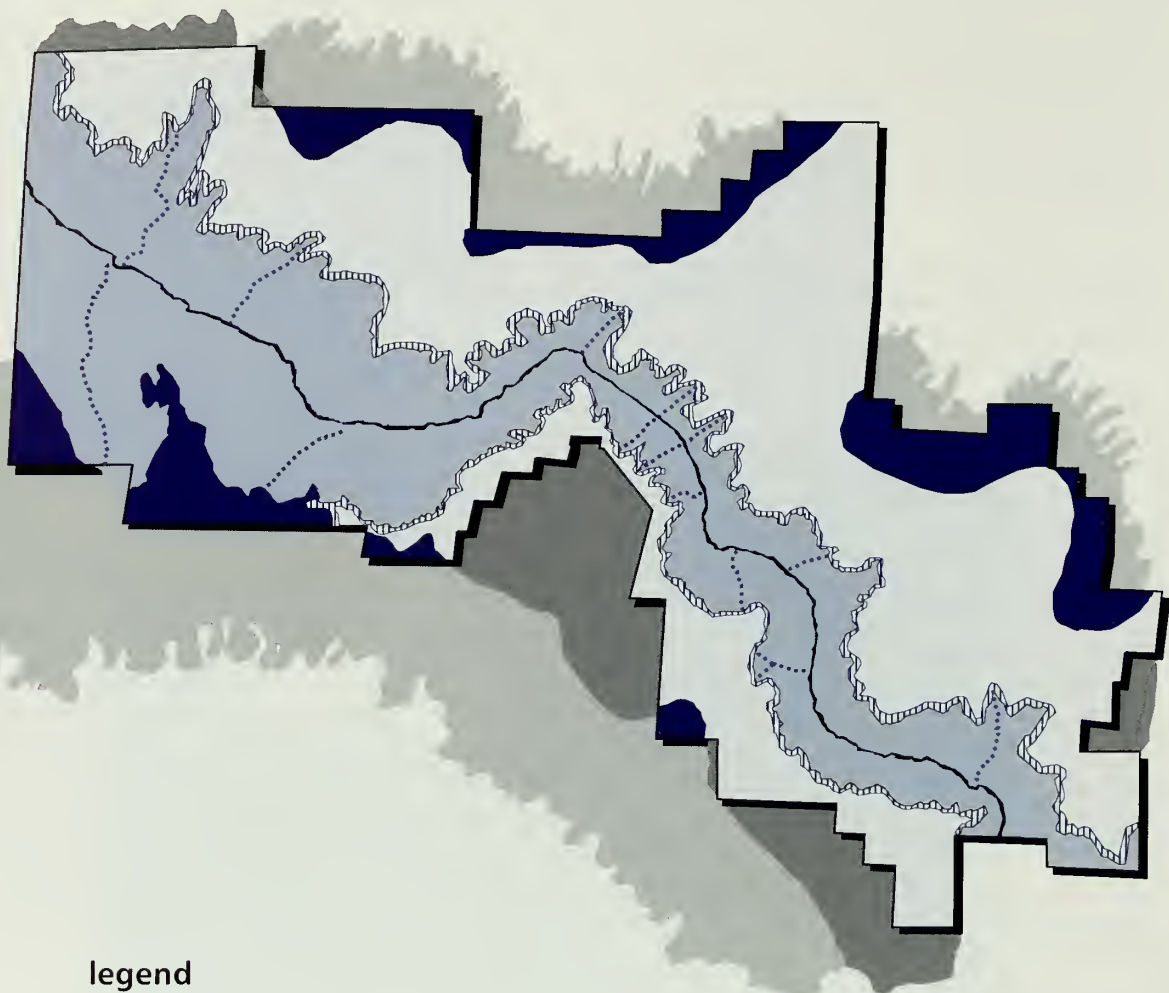
ECO: LAND—The overall goal is to manage and protect the regional land-based ecosystems and to maintain, rehabilitate, and perpetuate their inherent natural integrity in western Colorado in coordination with state and other federal agencies.

Conditions to be attained:









- Landscapes and their interdependent resources are managed in a manner that does not derogate or cause irretrievable damage to such resources.
- Wildlife habitat and associated migration corridors are managed in a manner that sustains wildlife populations consistent with applicable federal, state, and local laws and regulations.
- Vegetation is maintained to perpetuate biological diversity of communities and emphasis is placed on natural vegetation while alien or noxious weed species are controlled cooperatively with assistance from county weed districts.
- Grazing is managed in a manner consistent with NPS policies and guidelines with particular emphasis on the perpetuation of wildlife and associated habitat and the protection of riparian and riverine areas.
- Other land management entities and agencies assist in achieving goals through recognition of common benefits and support to reach mutually agreed upon goals.
- Interpretive programming is in place that addresses park and regional resource issues in the context of the Guene Basin ecosystem.

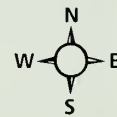
- The park staff is able to inform visitors about resource issues on surrounding lands, and surrounding land management agencies are able to communicate park resource issues to their visitors.
- The park is managed as part of the larger Guene Basin ecosystem.
- Interpretive programming is active in addressing regional land-based resources issues, in the context of the Guene Basin ecosystem.
- Research is facilitated in cooperation with other entities.
- An adequate database to support management decisions is in place.
- The boundary for this ecosystem is defined as the Guene Basin, from the headwaters to the confluence with the Colorado River.





legend

-  the river
-  panoramic vista (inside the monument)
-  panoramic vista (outside the monument)
-  canyon backdrop (inside the monument)
-  canyon backdrop (outside the monument)
-  cliff top
-  cliffs and inner canyon
-  the way in



0 1 mile

Resource Opportunity Areas

United States Department of the Interior
National Park Service

PROPOSAL AND ALTERNATIVES

VISITOR EXPERIENCE AND THE PARK ENVIRONMENT

This section describes how humans experience park resources and represents the first part of the Visitor Experience and Resource Protection Program (VERP), which addresses carrying capacity for the park.

Beyond the resource management plan that identifies specific needs relative to individual program areas, such as natural and cultural resources, an overall resource management strategy to protect park resources needs to be developed. This would enable the park to begin monitoring conditions and ensure that goals related to resource management and visitor use can be achieved. The development of the resource opportunity area concept is the first step toward incrementally moving the park unit toward the goal of addressing carrying capacity.

Parks are composites of a variety of important natural and cultural resources. People value parks for a number of reasons—inspirational, educational, aesthetic, recreational, scientific, spiritual, and economic. Significant differences relating to resource values and visitor use usually exist within different areas of a park. The uniqueness of these various areas and their relationship to one another as well as lands beyond the park boundary, influence visitor use and management of the park. Therefore, describing a set of alternatives and the

park's affected environment (and ultimately assessing impacts) requires one to identify and categorize the resource values of a park. These pieces of the park are called resource opportunity areas (ROAs) and can extend beyond the boundaries of the park. The evaluation of these areas requires the involvement of public and private interests in the area. The ROAs are referenced in the environmental consequences section to describe how park resources and visitor experience may be affected. There are six areas in the park—panoramic views, canyon backdrop, cliff top, cliffs and the inner canyon, the river, and the way in. These areas are used as the basis to describe how a visitor might enjoy and relate to the park's environment and how the environment might be protected from visitor use. These areas are also used to provide a basis for understanding general impacts on the park environment by development (facilities) or use (activities and people). Along with the specific objectives for each area, the ROAs provide the rationale for land-allocation decisions.

Each resource opportunity area summary includes a brief description of the following:

- Outstanding examples of natural, scenic, geological, ecological, floral, faunal, and recreational values for which the park was established.
- Resources that are unusually sensitive to human use.

- Rare plants and animals that are particularly vulnerable because of their small population sizes and genetic isolation.
- Habitat necessary for the survival or reintroduction of federal- or state-recognized threatened or endangered species or candidate species being considered for listing.
- Major archaeological or historical resources.

PANORAMIC VISTAS ROA

The Panoramic Vistas Resource Opportunity Area consists of locations within the park that offer the most distant views and sweeping landscapes that extend beyond the park boundary.

Examples include areas atop Green Mountain and along portions of the Warner Nature Trail. Views are generally characterized as being unobstructed (in some cases up to 360 degrees) and range from a few miles up to 100 miles.

In addition to the impressive views, this resource opportunity area allows the canyon to be viewed in its regional context, making it easier to understand the importance of managing the area as a component of other larger ecosystems. The value of the area's Class I air quality is magnified on days when visibility allows viewing targets at distances of 60 to 100 miles; and the interpretive story is more complete when the San Bell and West Elk Ranges, which figure prominently in the park's geological story, can be viewed from within this resource opportunity area.

Mixed vegetative cover includes areas of pinyon/juniper woodland and mosaics of mountain scrub and sagebrush.

Most of the higher ridges found within the park occur within this zone.

Topography that slopes away from the canyon, which is typical because of the nature of the Guene Uplift in which the canyon was formed, permits views not possible closer to the canyon's rim. Soils tend to be more fully developed, having eroded from softer, overlying sandstones.

As development along ridgelines would be immediately visible and evident, this resource opportunity area is extremely sensitive in terms of protecting the natural and primitive views now possible from the canyon. Current development is minimal and includes only closed primitive roads, limited fencing, and activities that occur on some private lands (many of which the National Park Service has acquired as scenic easement).

Resources of special significance which occur within the Panoramic Vistas Resource Opportunity Area include:

- Wildlife viewing opportunities—especially larger mammals, including mule deer, elk, and bighorn sheep.
- Recreational opportunities—for those willing to exert some effort, but less than required for inner-canyon hiking, some of the most spectacular, distant, and panoramic views are available.
- Interpretive opportunities—understanding the values and concepts of ecosystem management, including the canyon's high-quality Class I airshed.
- Rural "State" landscape—the distant views enhance the understanding and appreciation of the vastness of wildlands and rural cultural landscape that comprise much of western states.



View from Overlook
©David Halpern



THE CANYON BACKDROP ROA

This resource opportunity area is the scenic background in which the canyon is viewed. It includes both gentle and steep slopes that form the prominent viewscape as seen from the opposite rim.

Examples include the side of Fruitland Mesa on the North Rim and Vernal Mesa on the South Rim. Views from either rim are greatly enhanced because of the primitive, natural setting created by the canyon backdrop.

Mixed vegetative cover is found throughout this zone. Areas of sagebrush are intermixed with large clusters of mountain scrub, whereas other areas are dominated by old growth pinyon/juniper woodland. The seasons are highlighted by the color changes that occur throughout this zone, especially during early autumn.

Sedimentary rocks that overlay the older and harder Precambrian rocks of the inner canyon help complete the park's geologic story. These rocks tell of times long ago—vast oceans and shallow seas, mountain building, and erosion—that set the stage for carving out this magnificent gorge. The rocks within the canyon backdrop are more easily eroded than inner-canyon rocks because soil depth is greater, and disturbances in this area can accelerate erosion.

This resource opportunity area contains the bulk of development that has already occurred within the park, with roads and visitor and support facilities found here. It is important to realize that not only do these developments provide basic services and amenities for visiting the canyon and maintaining the area, they are also a component of the view as seen from the rim. Therefore, this resource opportunity area is one of the most sensitive zones, because it is a primary component of most canyon views.

Resources of special significance that occur within the Canyon Backdrop Resource Opportunity Area include:

- Wildlife viewing opportunities—rich in a variety of species, including mule deer, marmots, squirrels and chipmunks, porcupine, bobcat, fox, bear, mountain lion, and a variety of bird life.
- Recreational opportunities—less physically demanding trails that provide significant panoramic views, opportunities to explore away from the rim, and developed campsites.
- Cultural resources—areas within this zone have been identified as being seasonally used by American Indians, both during historic and prehistoric times; the North Rim Road was an important Civilian Conservation Corps (CCC) project of the early 1930s.
- Rural “State” landscape—the area is a remnant of the natural and primitive nature that at one time composed much of the West.



View from Cliff Top
©David Halpern

THE CLIFF TOP ROA

The Cliff Top Resource Opportunity Area is the area most visitors experience and remember while sight-seeing in the park. This is the area of the park that hugs the canyon rim and may vary in width from 5 to 200 feet to the edge. Some of the overlooks are protected by railings to permit viewing right up against the edge, although some visitors are reluctant to stand this close, even with these railings in place. Other less well-defined overlooks lack railings, drawing more adventuresome souls to the very edge in an effort to maximize the view.

When viewing the canyon for the first time, there is little evidence that such an abrupt void exists. This adds to the excitement for visitors as they peer into the vast chasm below. The fact that the canyon is, in many places deeper than it is wide, adds to this sense of wonder and awe.

Much of the Cliff Top Resource Opportunity Area is composed of exposed bedrock, including fins of pegmatite, which serve as overlooks that loom over the canyon depths. Scattered clumps of mountain scrub, with occasional pinyon or juniper trees,

add interest to the bedrock. Different environments found just below the rim, including groves of Douglas fir, are visible from the Cliff Top Resource Opportunity Area.

Resources of special significance that occur within the Cliff Top Resource Opportunity Area include:

- Wildlife viewing opportunities—especially chipmunk, squirrel, marmot, swifts, swallows, and soaring birds of prey.
- Recreational opportunities—this is the primary sight-seeing zone, offering some of the easiest access to view the canyon. Excellent photo points along short, easy trails are readily available. This is where visitors began to explore the idea of inner-canyon travel.
- Interpretive opportunities—because this is where the greatest number of visitors experience the resource “up close and personal,” it is a good place to provide interpretive information and contacts.
- Cultural resources—both Pulpit Rock and Dragon Point have overlook construction dating to the Civilian Conservation Corps work of the early 1930s and are, therefore, important as historical resources.
- Scale—it is difficult for some visitors to understand the scale involved in viewing the canyon, and they are humbled when they realize the immensity of it.
- Expletives—“It’s the view!”



Cliffs and the Inner Canyon
©David Halpern

THE CLIFFS AND THE INNER CANYON ROA

The Cliffs and Inner Canyon Resource Opportunity Area represents the core of what is the canyon. Wallace Hansen wrote of the characteristics of the canyon that make it unique . . . *no other canyon in North America combines the depth, narrowness, sheerness, and somber countenance of the . . . Canyon. . . .* The dark walls of the canyon, composed of metamorphic rocks of gneiss and schist, help give it its name.

Small groves and individual trees and shrubs cling tenaciously to nooks and ledges, while fins and dikes of granitic rock add interest and contrast to otherwise foreboding walls. Islands of rock, long ago separated from the primary canyon walls, stand like sentries above the Guene River.

The river makes its presence known on a continuing basis, evident by the constant sights and sounds as it churns and roars above, around, and below boulders, some the size of small houses.

Unlike the cliff top, access is extremely difficult. The highest vertical cliff in "State," at 2,280 feet, lies beneath

Serpent Point. This portion of the Painted Wall, along with the Chasm Wall just upstream, presents challenges to world-class rock climbers. The East Portal Road winds along the cliff edges as a reminder of the development and delivery of water to a thirsty Upvalley Valley and was instrumental in supporting the construction of the Guene Tunnel and Crystal Dam, both upstream from the park boundary.

Resources of special significance that occur within the Cliffs and Inner Canyon Resource Opportunity Area include:

- Fauna—eyries of the endangered peregrine falcon and bald eagle are protected among the sheer cliffs.
- Flora—the Gilia, a rare plant of the region, is known to grow among the vertical cracks of Precambrian metamorphic rock. Seeps and small hanging gardens cling to walls above the river. Relict plant communities are protected on and among islands of rock within the confines of the inner canyon.
- Recreational opportunities—world-class technical rock climbing is popular during the late spring and early fall—wilderness adventure and solitude.
- Cultural resources—the Guene Tunnel, just upstream from the park boundary, is listed as a National Engineering Landmark. The importance of the tunnel, leading to water development and settlement of the Valley, cannot be overstated.



The Way In
©David Halpern

THE WAY IN ROA

This Resource Opportunity Area consists primarily of the inner-canyon access routes. Some of these routes are specially identified and recommended to those visitors wishing to hike to the river and include such graphic names as SOB Draw and Slide Draw. Most of these routes are really scrambles down very steep tributaries, and all require that hikers are in excellent physical condition and have a sense of adventure. There are other drainages that are not identified or recommended but are possible ways to reach the river. Some of these may require technical climbing skills and some climbing equipment to negotiate safely. Loose rock is common on most routes.

Vegetation along the routes is different than that found in the Cliff Top Resource Opportunity Area, and it differs from the North to South Rim. Douglas fir and a few aspen prefer the shadier and moister environments found along the South Rim routes, but box elder, Gamble oak, and poison ivy are also regularly encountered here and along the North Rim routes. Vegetation generally provides good shade, especially in the upper reaches of the route; and most routes lack running water (except Red Rock Canyon).

Opportunities for solitude and isolation are generally available, especially on some of the less-used routes. Quiet is the rule except for the sound of the river.

The level of difficulty is high due to the steepness of the routes and the presence of boulders and loose rock. Rescue activities for the park are generally concentrated in this resource opportunity area, as hikers that become fatigued or injured will sometimes require assistance.

Resources of special significance that occur within the Way In Resource Opportunity Area include:

- Wildlife viewing opportunities—especially chipmunks, squirrels, birds, and occasional mule deer.
- Recreational opportunities—visitors who wish to challenge their hiking abilities and those seeking additional adventure will select this zone. Opportunities for solitude and quiet abound with excellent photo points available.
- Scale—those that use the Way In can truly get a sense of the canyon through the challenges offered by the canyon. The average descent on most routes is 1,800 feet—to sense one's human frailty within the immensity of the canyon is truly a humbling experience.



The River
©David Halpern

THE RIVER ROA

If the Cliffs and Inner Canyon Resource Opportunity Area constitutes the core of the park, the River Resource Opportunity Area is its heart and soul. The river brings life to the inner canyon—over the millennia it has provided power and cutting materials needed to carve out the gorge; it serves as an agent to replenish and cleanse aquatic systems, and supports a variety of riparian plant and animal life; it is also what makes the inner canyon such a special place to visit.

Historic flows varied from a late summer trickle to spring floods in excess of 25,000 cubic feet per second. Construction consisting of three upstream dams, the Aspinall Unit, altered flows to achieve objectives of water storage, flood control, recreation, and hydroelectric power.

Streamside environments are frequently lush with riparian vegetation. Because the river is fed through penstocks near the base of Crystal Dam, water temperatures remain cold year round, allowing small aquatic creatures to thrive in the streambed. These creatures and other insects form a base for the food chain, which supports a Gold Medal trout fishery. Seasonal flow variations enhance the riverine environment, cleansing streambed soils and

maintaining river channels that might otherwise be choked by sediments and erosional debris.

The river is inviting to the human spirit—its roar as it descends along an average gradient of ninety-five feet per mile soothes the soul. For some, it presents the challenge of catching trophy-sized rainbow or German brown trout using a light-weight rod and a hand-tied fly. Others are challenged by the river's extremes, choosing the kayak as the vehicle to propel themselves through its wild turbulence.

Resources of special significance that occur within the River Resource Opportunity Area include:

- Flora and fauna—river otter, ringtail cat, a variety of birds and aquatic life, including a Gold Medal trout fishery.
- Water resources—the Guene River is the major tributary to the State River within "State" and contains endangered fish downstream as well as a superb trout fishery.
- Recreational opportunities—although river flows and riverside topography can greatly limit inner-canyon hiking, hiking and camping do occur in this area. Wilderness solitude is a part of this experience. Fishing, and to a lesser extent, kayaking, are popular activities.
- Wild and scenic—the Guene within and downstream of the park is eligible for Wild and Scenic designation due to the outstanding natural values found there.

MANAGEMENT AREA PRESCRIPTIONS

This section is very much like park zoning, describing how an area is managed. The difference is that management prescriptions describe “what could be” as opposed to park zoning, which describes “what is.”





Management prescriptions denote how blocks of land within the park will be managed in the future. These are strategic in nature and are established through the general management planning process. They set a broad framework for the human use of parklands providing for a variety of visitor experiences, ever mindful of the Service’s commitment to preserve parklands for future generations.

Management prescriptions (known as prescriptions) are common to all alternatives and provide general management direction for specific areas of land within a park. Prescriptions articulate management for an area of land considering visitor experience,

access, natural resources, cultural resources, facilities, and maintenance. The various combinations of prescriptions drawn on each alternative map and its written text make up one alternative. Each alternative represents a different theme for management and is based on the purpose, significance, and management objectives outlined in the park’s statement for management. The prescriptions consider the capability of lands used to support identified uses as described within each “resource opportunity area.” They provide a framework for further site-specific planning and management decisions on the use and the protection of resources. Prescriptions have been tailored for use in the park.

The prescription concept includes four land-based (primitive, semi-primitive, motorized rural, and developed) and two special (scenic easements and protected resource area) management prescription areas. The following table—Table 1—summarizes land-based prescriptions based on setting, experience, and activities.

Table 1. Land-Based Prescriptions

	Setting	Experience	Activities
<p>PRIMITIVE</p> 	<ul style="list-style-type: none"> • Natural-appearing landscape • Encounters with others are infrequent • No facilities unless required to protect resources • No motorized access 	<ul style="list-style-type: none"> • Isolation from sights & sounds of man • Feeling of closeness with nature • Opportunity to experience solitude, tranquility, & quiet • High degree of challenge, self reliance, & risk • Knowledge & use of outdoor survival & wilderness skills • Infrequent encounters with 	<ul style="list-style-type: none"> • Primitive camping • Fishing • Nature observation • Hiking • Climbing • Kayaking
<p>SEMI PRIMITIVE</p> 	<ul style="list-style-type: none"> • Predominantly natural-appearing landscape • More frequent encounters than in primitive setting • Evidence of facilities that blend with surroundings may be present • Evidence of human occupation 	<ul style="list-style-type: none"> • Predominantly isolated from sights & sounds of man • Opportunity to experience solitude, tranquility, & quiet • Interaction with nature predominates • Knowledge & use of outdoor recreation, survival, & wilderness skills • Occasional encounters with other humans 	<ul style="list-style-type: none"> • Semi-primitive camping • Fishing • Nature observation • Hiking
<p>MOTORIZED RURAL</p> 	<ul style="list-style-type: none"> • Predominantly natural-appearing landscape with small-scale modifications • Encounters with others & vehicles are expected • Service facilities present • Evidence of human occupation 	<ul style="list-style-type: none"> • Limited opportunity to experience solitude, tranquility, & quiet • Knowledge & use of outdoor survival & wilderness skills is not essential • Encounters with other humans & vehicles expected 	<ul style="list-style-type: none"> • Semi-primitive camping from boats & vehicles • Fishing • Nature observation • Hiking • Interpretive activities
<p>DEVELOPED</p> 	<ul style="list-style-type: none"> • Predominantly modified landscape with facilities to provide for major visitor services in a substantially modified environment with a natural-appearing backdrop • Constant encounters with others & vehicles • Area shows definite signs of human occupation • Motorized access 	<ul style="list-style-type: none"> • Sights & sounds of man are dominant • Limited opportunity to experience solitude, tranquility, & quiet • No knowledge & use of outdoor survival & wilderness skills necessary • Near constant encounters with other humans & vehicles 	<ul style="list-style-type: none"> • Developed camping • Park tours • Interpretive activities • Bus tours/recreation • Vehicles • Fishing

LAND-BASED PRESCRIPTIONS

Specific guidance for each area is described using the following six categories: visitor experience, access, natural resource management, cultural resource management, facilities, and maintenance.

Primitive

Management provides wilderness experiences. Challenge and adventure for visitors are high. Visitors have infrequent contacts with each other or with NPS personnel and are in an environment free of human influence and alteration. Natural processes and conditions would be perpetuated. The setting is composed of an unaltered natural landscape appearance. Encounters with other people are infrequent and there are no facilities present unless essential to protect resources or provide for visitor safety, health, and well-being. There is no motorized access.

Visitor Experience. The primitive area provides abundant opportunities to experience the backcountry wilderness in solitude. It is reserved for hiking, fishing, nature observation, climbing, kayaking, and primitive camping. Off-site interpretation and education are stressed.

Generally visitors are isolated from human sights and sounds. Visitors can experience a feeling of closeness with nature and there is the opportunity to experience solitude, tranquillity, and quiet because encounters with others are few. A high degree of challenge, self-reliance and risk is prevalent for visitors to this area, and knowledge and use of

outdoor survival and wilderness skills is highly recommended.

No recreational use is apparent along trails and in camping areas, although areas getting to the Guene River, known as the Way In Resource Opportunity Area may, at times, have indications of human use. Resource manipulation is kept to a minimum, but some resource management actions required to reduce the impacts of visitor use interpretive exhibits or signs are provided. Rules and regulations are explained to visitors before entry into the wilderness.

Management helps to ensure an experience in an "untrammelled," "primeval" environment, without the works of people. No facilities are present in this zone. Evidence of other visitors is also small and there is a sense of being immersed in a natural landscape, without comforts and conveniences. Visitors commit to a high level of time and energy. Rustic signs, cairns, and primitive trails are the only facilities present.

Access. Access is difficult. The area is roadless, and visitors may travel cross-country or on low-standard trails that provide connections over ridge lines, to the canyon rim and to the river. Discovery and adventure are the order of the day.

Public access is on foot only, except for trails also designated for horseback use. Within the wilderness, aircraft use is permitted for emergencies and necessary administrative functions only. Aircraft and vehicle use within the primitive prescription area but outside of the

wilderness is limited to emergencies and administrative functions only.

Natural Resource Management. The natural environment is preserved to the maximum extent possible while accommodating low-density backcountry use. Naturally occurring species are maintained or reestablished, and populations of sensitive species are protected and augmented. The introduction of nonnative species is prevented to the extent possible, and attempts are made to eliminate introduced species before they become established. The Service maintains close control over resource-damaging activities.

Monitoring is carried out regularly, and mitigating measures (revegetation, species augmentation, and reintroduction of extirpated species) is done as needed. Uses are controlled or dispersed, if necessary, to protect resources, however, with the anticipated light use. A backcountry permit system is implemented if resources or solitude is threatened.

Cultural Resource Management. Cultural resources selected to illustrate interpretive themes and those listed on or eligible for listing on the National Register of Historic Places would receive stabilization. A cultural resource management plan would be prepared to guide management decisions and address the treatment of individual sites. Coordination and consultation with the state historic preservation officer would be part of the process.

Facilities. No developments are allowed, and there are no further modifications to

the natural environment. Designated camping may be provided to protect resources, but no designated campsites are allowed.

Maintenance. Maintenance activities protect resources and restore areas disturbed by human activities. There is no recurring maintenance. Power tools are not allowed unless the superintendent determines that such tools are necessary to respond to a life- or resource-threatening emergency.

Semi-Primitive Nonmotorized

Management accommodates visitors wishing to experience each park's superlative natural and cultural resources by foot or horse. Intra-party and NPS contacts are less frequent than those in developed or rural motorized areas and opportunities for solitude are less limited in this area than in others. Contacts are less frequent during mid-week and off-season periods, when opportunities for solitude and seclusion would be greater.

The landscape setting appears predominantly natural, although an evidence of facilities that blend with surrounding may be present. Encounters with other people are occasional and there is some evidence of human use. There is no motorized access.

Challenge ranges from low to high according to visitors' abilities. Moderate to extensive resources management activity is required to mitigate impacts associated with visitor use levels. Naturalness would be emphasized, but some human alterations and intrusions would be evident. Horse traffic is

prohibited on the South Rim and allowed on designated trails on the North Rim.

Visitor Experience. This area brings the visitor in direct contact with many of the park's natural and cultural resources. The natural character of the semi-primitive non-motorized area is maintained while providing interpretation and trailed and cross-country access for large numbers of visitors. This area provides a sense of being immersed in a natural landscape and feels somewhat distant from most comforts and conveniences. The only facilities present are unpaved trails and rustic camping facilities.

A variety of on-site interpretive media are used to present the primary park themes and provide orientation and information. Interpretation and information are provided by rangers within the park. A permit system could be implemented for camping and use in both trailed and cross-country areas.

Hunting and trapping are allowed for, but are regulated by state law and special NPS directives.

Access. Access ranges from easy to difficult. This area is roadless, although some dirt road remnants exist. Access is by low-to high-standard trails or no trails.

Public access is limited to foot or horse traffic. Horse use is confined to designated trails. No bicycles or motorized vehicles are permitted. Aircraft use is allowed only in emergency situations.

Natural Resources Management. The natural environment along and away from the trail corridor is maintained to the extent possible with resource manipulation being kept to a minimum. Emphasis is placed on minimizing human impacts on sensitive environments, habitats, and species. Unavoidable human impacts within the park would be confined to resistant and less-sensitive environments, avoiding areas identified as highly scenic environments. Management would reduce or minimize the impacts of nonrecreational uses. Resources and uses would be carefully monitored, and if impairment occurred, mitigating actions such as temporary closures, revegetation, or elimination of some uses that might conflict with or damage natural resources would be implemented as required.

Cultural Resources Management. Resources or sites that are designated as part of the National Archeological District would be accessible to the extent that no degradation to sites occur. Other resources or sites that are designated as outstanding cultural features might be restored. Sites could be stabilized or restored to protect the integrity of the resource. Other features designated as outstanding cultural features or listed or eligible for listing on the National Register of Historic Places could be stabilized or restored. To guide management decisions for resources in this area, a cultural resources management plan (CRMP) would be prepared to address treatment of individual sites. Coordination with appropriate NPS staff and the State

Historic Preservation Officer would be part of the process.

Facilities. Only limited development is provided—major facilities would not be allowed. The primary development would be day-use trail systems (low- to high-standard) leading to destination areas or points of special interest and rustic campgrounds. Campground facilities could include fire grates, picnic tables, and vault toilets.

Maintenance. Activities include maintaining trails, campgrounds, and interpretive facilities and resource protection. Hardening of sites could occur as well as the restoration of areas disturbed by human activity. Facilities to provide for the convenience of visitors and their safety would be maintained to lesser standards than those found in the developed areas of the park.

Motorized Rural

Management provides for two-wheel-drive access along unpaved roads, which gives a sense of remoteness. Although the area is predominantly natural, there is evidence of the sights and sounds of human activity. It provides a vehicular alternative to the highly structured experiences in the developed area and the backcountry. The types of visitor activities to be accommodated include, but are not limited to, camping opportunities, wayside interpretive exhibits, interpretation along trails, and access to hiking trails. Opportunities for more solitude than experienced in the developed areas could be expected except on peak season weekends. Human interaction and contacts with NPS staff could be moderately frequent

during these times and infrequent during the off season. Visitor challenge would be low due to the presence of roads and motorized vehicles. A moderate amount of resource manipulation would be required to mitigate impacts associated with moderate human use levels. Natural conditions would be maintained as much as possible, however, some human intervention and alteration would be evident along roads, at trail heads, and in camping areas. Support facilities such as picnic tables, fire grates, vault toilets, and contact stations may be provided.

Visitor Experience. There would be a sense of remoteness and seclusion, but not of isolation and seclusion from human activity. Visitors would be able to reach undeveloped areas of the park from unpaved roads and stay overnight in rustic campsites. For those who are unable to access areas of the park having a more semi-primitive character, this area would provide an alternative and allow for a more rural experience without the degree of difficulty found in a semi-primitive area.

Visitors are provided a limited amount of interpretation and education, which is designed to supplement the low-profile signs and interpretive exhibit panels placed in selected locations to provide information, offer limited interpretation of park themes, ensure protection of park resources, and provide for visitor safety.

Access. Access is moderately difficult. No paved roads would be provided and all access would be on gravel surfaced roads. Trails for hiking could originate from this area. Short interpretive trails

could allow for visitors to discover areas of special interest. Access for physically challenged visitors could be provided in selected areas to provide an opportunity for these visitors to experience representative park settings.

Natural Resources Management. The natural character of lands is preserved to the extent possible while accommodating moderate visitor-use levels. Potential negative impacts associated with visitor use would be mitigated, and existing disturbed areas causing significant visual impairment would be restored. The cumulative effects associated with unacceptable levels of visitor use at campsites or in other areas of visitor concentration could be mitigated or prevented by ensuring appropriate levels of visitor use and implementing a monitoring program.

Cultural Resources Management. Cultural resources identified to illustrate interpretive themes and those listed or eligible for listing on the National Register of Historic Places or nominated and placed within the National Archeological District could receive moderate stabilization. To guide management decisions for resources, a separate cultural resources management plan (CRMP) would be prepared. Treatment of individual sites would be addressed within the context of this plan. Coordination and consultation with the State Historic Preservation Officer would be part of the process of developing the CRMP.

Facilities. Only limited development would be provided and few major structures or facilities would be present. Gravel roads, rustic campgrounds,

interpretive panels, information signs, and trailheads could be provided.

Fire grates, picnic tables, vault toilets, and water could be provided, but no electricity or sewer connections would be available. Size restrictions could be placed on RVs and trailer-campers.

Maintenance. Activities could include the maintaining of roads and facilities (cleaning, painting, repair, pumpout, etc.), hardening sites, providing for visitor convenience and comfort, protecting resources, and restoring areas disturbed by human activity.

Developed

This management prescription includes all major park development required to serve visitors and meet the needs of management. It encompasses areas where park development and intensive use substantially alter the natural environment or the setting of historically significant resources. This is an area with major visitor facilities, which provide an experience that is facility-dependent (e.g., campground, visitor center). The sights and sounds of vehicles and people predominate and include the experience that is tied to vehicles along the major road corridors of the park.

This area would accommodate the highest levels of use in the park. Visitor activities would be fairly structured and directed and involve little challenge. Support services and facilities could be extensive. Visitor contacts and contacts with NPS personnel could be frequent in this area, especially during peak visitor periods. Contacts could be less frequent during the off-peak season, but might

still be common compared with other management areas. There could be little or no opportunity for solitude. Relatively intensive resources management activity may be required to mitigate impacts associated with high levels of visitor use and development. Although natural processes would be perpetuated wherever possible, a high degree of perturbation and human intrusion to the natural environment could continue to be evident.

Visitor Experience. This area provides the primary experience for many visitors, introducing them to many of the park's significant resources and presenting the primary park interpretive themes. Inside information and education devices such as exhibits, films, slide programs, and publications distributed at visitor centers and contact stations could be used to convey an understanding of the park and its natural and cultural resources. Interpretive trails and guided ranger tours could also be used in this area. Other orientation information would assist visitors in planning their stay in the park or region. Campgrounds would be managed under a paid permit system during the peak season.

Access. Access would be easy. This area could contain both surfaced and unsurfaced roads, and all roads could be accessed by two-wheel vehicles. Pedestrian access along low-to-high standard trails could allow for visitor access to a variety of environments. Hardened trails could be provided in areas around visitor centers and in other areas of high use that have been identified to give visitors an overview and better familiarity with park

resources. Barrier-free design is provided in selected areas to permit visitors with physical impairments to experience representative park settings.

Natural Resources Management. The natural character of lands within this area is maintained to the greatest extent possible while accommodating for high levels of use. Wherever possible and appropriate, previously disturbed areas would be used for new or expanded areas of development. New facilities would be designed and located to blend naturally with the environment and would use principles developed for sustainable resource design.

Vista site modifications may be used to improve views in this area. Visitors would be confined or directed to hardened sites and trails to confine and limit resources impacts. Significant soil and vegetation impacts occurring near high-use sites could be mitigated through periodic closures, the use of natural materials to more clearly define use corridors, and increased enforcement techniques. Only native species would be used for revegetation. Landscaping with native species and natural materials, mowing—where appropriate—and removal and/or pruning of trees may also be done where appropriate or to provide for visitor safety.

Cultural Resources Management. Resources or sites designated as significant cultural features or nominated to the National Register of Historic Places or included in the National Archeological District will be preserved or restored depending on the degree of importance to the visitor's understanding of the purpose of the park or settlement and

use of the region. All archeological sites would be protected from degradation.

Facilities. Major developments are confined to this area. Existing and potential modifications might include visitor centers, surfaced parking lots, transportation systems, limited-service and campgrounds, maintenance facilities, administrative facilities, residential areas, water storage, and sewage treatment facilities as well as various other support facilities.

Maintenance. Maintenance activities could involve maintaining existing facilities (cleaning, painting, crack sealing, chip and sealing, striping, etc.),

hardening sites, landscaping, providing for visitor convenience and comfort, protecting resources, irrigating, and restoring areas disturbed by human activities. Roads, buildings, signs, walks, interpretive displays, landscaping, and other facilities would be maintained on a regular basis. Power tools could be used for routine maintenance activities, and heavy equipment could be used for road and utility system repairs, development, and maintenance.

This concludes the section for land-based prescriptions. The following table—Table 2—summarizes special prescriptions based on setting, experience, and activities.

Table 2. Special Prescriptions

PROTECTED RESOURCE



Setting

- Management is geared to protect recognized fragile significant park resources
- Visitor experiences, access, natural and cultural resource management, development, and maintenance would be controlled or carried out to ensure protection of resources.

Experience

- May be limited by regulation, restrictions, or closure

Activities

- Limited to those activities that will not impact resources being protected

SCENIC EASEMENT



- Setting is managed to be complementary to park objectives for a natural appearance

- Natural-appearing backdrop
- No public access or use

- No public activities
- Grazing as permitted under legal contract requirements

SPECIAL PRESCRIPTIONS

Specific guidance for each area is described using the following six categories: visitor experience, access, natural resource management, cultural resource management, facilities, and maintenance.

Scenic Easement Lands

This management area is composed of the private lands within the monument boundary. The lands are on the North Rim within the scenic backdrop for the canyon. The property remains in private ownership but the government has purchased a conservation scenic easement to protect the view and natural resources found on these properties. Restrictions imposed on the lands include a list of conditions prohibiting certain uses of the property. These include no subdivision or development of the land; no placement of trailers or mobile homes on the property; no hunting; no pesticide use; no mining, quarrying, or sand and gravel removal; no dumping of trash; and no vegetation clearing that exceeds one-half acre. Permitted activities include livestock grazing and maintenance of livestock facilities. Public use of these lands is at the owners' discretion. Management of these lands is primarily to protect the scenic qualities they possess.

Visitor Experience. The scenic quality of these lands enhances the visitor's experience and adds to the wild quality of the canyon. Use of

the lands by visitors is limited since the lands remain in private ownership.

Access. The private landowners have access to their property via primitive, unsurfaced roads. Public access to the area is limited and in most cases is not allowed.

Natural Resource Management. The natural environment and the view it provides are maintained to the extent possible within the guidelines of the scenic easement provisions. Management under these provisions is intended to minimize the impacts of noncompatible uses of the lands. Resources and uses would be carefully monitored, and if damage did occur, mitigating actions allowed under the terms of the scenic easement restrictions would be carried out as required.

Cultural Resource Management. The Service will work with the owners of the property to preserve and protect any resources or sites designated as outstanding cultural features. However, most cultural resources, including those selected to illustrate cultural resource interpretive themes and those listed on or eligible for listing on the National Register of Historic Places would be stabilized. Other cultural resources would be managed to be consistent with the landowners' desires.

Facilities and Maintenance. Only limited development and maintenance of development are

allowed under the terms of the scenic easement provisions—major structures and facilities are prohibited. The type of development allowed is related to management of livestock and their use of the area such as, fences, small stock ponds, and primitive access roads. Existing facilities can be maintained but this maintenance must be directed at preserving the existing character of the facility.

Protected Resource Areas

This management area could include resources that are recognized as fragile or ecologically or geologically significant, especially for sensitive or endangered wildlife or plant species, paleontological resources, and cultural resources. Strict protection measures would be employed to ensure protection and perpetuation of these resources. Human intrusions would be minimized or not allowed. Visitor experiences, access, natural and cultural resources management, development, and maintenance would be controlled or carried out specifically to ensure the protection of these resources.



THE PROPOSAL AND ALTERNATIVES

This section describes the basis for constructing alternatives and the proposal.

Four alternatives, including the proposal, are presented in this chapter. The proposal represents a new general management plan for the park. Alternatives provide for distinctly different levels of use, visitor orientation to natural resources, and visitor services. The same set of management area prescriptions noted on the next few pages are applied in various combinations to describe each alternative. Combinations of management area prescriptions establish the complete strategy for management of lands within the boundary. Prescriptions are based largely on resource values, with provision made for retention of existing development and use based on each alternative's general theme.

All alternatives consider a broad strategic management scheme for the park. This does preclude development options and partnerships outside park boundaries as long as these proposals are supportive and consistent with the park's chosen management direction. Alternative sites within the park boundaries for visitor contact, maintenance, and administration would be evaluated when proposals are presented. Partnerships with other agencies and local entities would be explored to minimize cost, impacts on resources, and provide consolidated services to the public.

Alternatives for visitor use, development, and park operations range from no action (continuation of existing management) to establishing new use patterns, while broadening protection of natural resources. One alternative would use the park as an outdoor classroom whereas another would develop the park's North Rim to the same standard that exists on the South Rim. Alternatives are broad and strategic in nature, requiring additional site-specific environmental analysis to be completed at the time of conceptual design. This would require an environmental assessment or an environmental impact statement.

NO-ACTION ALTERNATIVE

This section describes the no-action alternative.

The no-action alternative would use existing zoning as a basis for mapping management prescription. Under the no-action alternative, existing management activities would continue. Minimal changes would be implemented to bring existing conditions into compliance with regulations and policies, subject to funding availability. Visitor facilities would be maintained to support current activities, but no new facilities would be built. Roads would continue to be repaired as needed. Required improvements for safety, sanitation, and access for persons with disabilities would be accomplished as funding permitted. The park would remain unchanged in size, visitor access, and operational flow. This alternative is consistent with most existing plans and programs.

The park would continue to protect the natural resources of the canyon, emphasizing developed recreational experiences on the South Rim and more primitive experiences on the North Rim. No legislative action would be required under this alternative.

Existing Management Zoning

Park lands are managed in two different zones, the park *development* and the park *natural* zones, according to their intended use. The location of these zones is shown on the Existing Management Zoning map, which represents the existing condition of the park.

As stated previously, park zoning describes “*what is*” as opposed to “*what could be*” in management prescriptions. All lands within the boundary are included in the classification system. This zoning is based on consideration of land characteristics, existing and proposed development, future demands for visitor use, and land protection. The purpose, size, percent of total park acreage, and key features of each zone are described below.

Development. The 210 acres within this management zone make up 1 percent of the total acreage within the authorized boundary. They include space for existing and proposed developments such as roads, buildings, housing area, maintenance area, campgrounds, parking, and utilities. These areas have the capacity to accommodate intensive visitor use and the facility developments necessary to provide safe and convenient visitor access.

Natural Zone. Twenty thousand, five hundred fifty-six (20,556) acres within this zone are separated into five subzones: the natural environment, the wilderness, the scenic easement, the twenty-year leaseback grazing, and the inholding subzones. Areas within the natural environment subzone are managed primarily to preserve the natural environment, and facilities are limited to those necessary for access to, and interpretation of, the natural environment. Typical facilities in this zone include foot trails, interpretive signs, and displays. On October 20, 1976, Public Law 94-567 established the 11,180-acre park wilderness. The wilderness encompasses the entire inner gorge and some higher elevations of the eastern and western portions of the park. Lands in the wilderness subzone are managed in accordance with the Wilderness Act of 1964 to preserve and protect their primeval character. The act defines wilderness as, “an area where earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.” Facilities such as minimum rustic signing, foot trails, and vault toilets are allowed in this zone only to the extent necessary to meet minimum requirements for protection and administration of the wilderness area.

The scenic easement subzone is considered as a natural environment where extensive development is not permitted. There are some management differences that require this area to be managed as a separate zone. The Service ownership extends only to scenic interests in the property, and the underlying owners can allow or prohibit

public use of these lands. The owners also hold privileges to continue grazing operations and maintenance of facilities and vegetation related to grazing.

The inholding subzone consists of 120 acres of privately held land falling within the authorized boundary. All acres are on the South Rim bordering the East Portal Road. Management will monitor the land to document any apparent change in land use, which might threaten the values of the natural and scenic character. The goal of this monitoring will be to prevent changes that would cause irreparable damage to land that will eventually become part of the park. The land protection plan will further detail the management posture regarding this land.

Attempts to minimize impacts on park resources from incompatible uses of adjacent lands would be protected through existing scenic easements, partnership and cooperative management, and through mutual agreement with adjacent landowners. The objective of cooperative agreements would be to keep and promote the natural scenic character of the landscape and an undeveloped horizon contributing to the park's ambiance and aesthetics.

Land Use and Management

Both the North and the South Rims would remain undeveloped and unchanged except for ongoing maintenance and resource management projects. Use would be monitored and limited in designated wilderness to that necessary to maintain the wilderness

attributes. There would be no changes at the East Portal.

There are 20,886 acres within the park boundary. Using management area prescriptions to describe how the park could be managed if current management continued, management can be broken down as follows.

- About 210 acres (1.0%) — Developed Management Prescription
- About 435 acres (2.1%) — Motorized Rural Management Prescription
- About 124 acres (0.6%) — Semi-Primitive Management Prescription
- About 17,903 acres* (85.3%) — Primitive Management Prescription
- About 50 acres (0.2%) — Protected Resource Management Prescription
- About 2,144 acres (10.2%) — Scenic Easement Management Prescription
- About 120 acres (0.6%) — Private Inholding

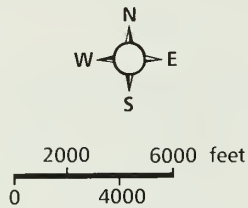
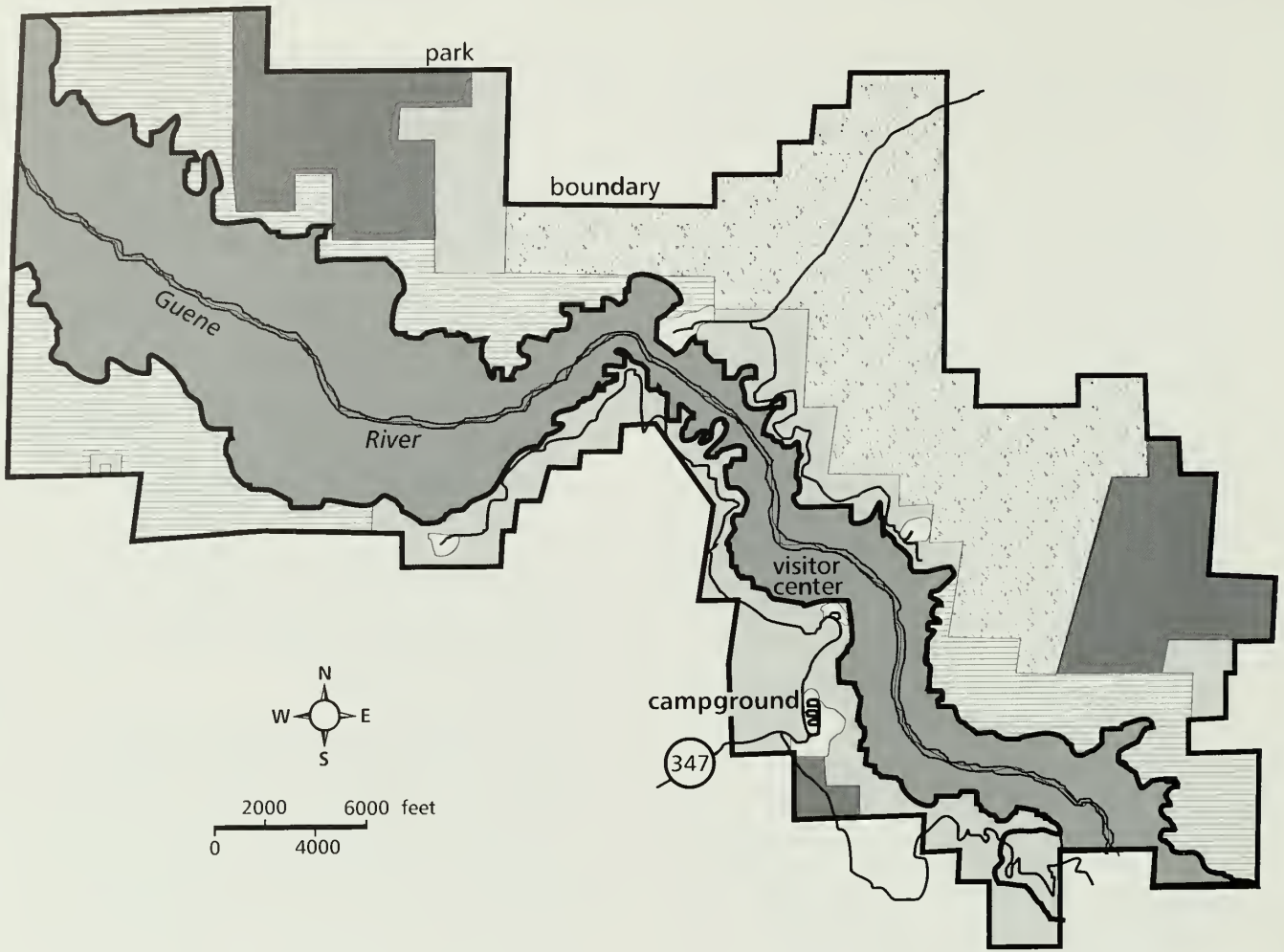
*11,180 acres in the park are in wilderness.

The no-action alternative would retain the existing undeveloped appearance of both the North and South Rims. There would be no change in how each resource opportunity area in the park is used.

Scenic values inside and next to the park would continue to be cooperatively evaluated with the Dove and Makin Planning Commissions and the Bureau of Land Management.

There would continue to be a lack of short or long-term plans for dealing with regional recreation use.

Current partnerships would continue to focus on local organizations to



- legend
-  road
 -  canyon rim
 -  development zone
 -  wilderness subzone in canyon
 -  wilderness subzone
 -  natural environment subzone
 -  inholding subzone
 -  scenic easement subzone
 -  grazing subzone

Existing Management Zoning

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cooperatively facilitate resource protection.

Information exchanges with local organizations—U.S. Forest Service Scenic Byways, Upvalley Conservation Alliance, Makin Visitor Center and Convention Bureau—would continue.

Resource Management

The *General Management Plan* affirms issues addressed by the *Resource Management Plan*, completed in February 1993 and continues current management. Information on programs addressing resource management issues is addressed in the *Resource Management Plan*.

Natural Resources. This includes the following:

- The park would continue to work to meet state and local compliance requirements as funding permits.
- A partial inventory of resources has been obtained, and inventorying would be done as funding permits.
- A program that encourages continued research to provide a better understanding of the evolution of the park would continue.
- A program to control noxious weeds through the least environmentally harmful method would continue.
- A cooperative program between the state of "State" and the U.S. Fish and Wildlife Service to maintain the trout fishery and delist appropriate native state fish species would continue.
- Cooperative efforts between the Bureau of Reclamation and the state of "State" to establish a

protected flow of the Guene River through the park would continue. Efforts with the U.S. Geological Survey and the National Biological Survey (NBS) are narrowly focused on water related issues.

Cultural Resources. There would be no program to expand interpretation of cultural resources.

Visitor Use and Interpretation

Visitors would continue to receive programs emphasizing the natural resources of the park with some allowances for expanding stories of significant cultural resources in the park. Visitors would use existing routes to and into the park, but there would be no program to expand interpretation of cultural resources.

The existing visitor orientation would be retained. Visitor experience would draw on the natural setting of the park, including ties to the scenic quality of the surrounding landscape. Resource opportunity areas would be described to visitors. This would sensitize visitors as to how various parts of the park are used and how each resource opportunity could be impacted by human use. Through this understanding, visitors could assist in protecting sensitive resources. Current access would be retained as shown on the Existing Conditions map. Current road and vehicle-use patterns within the park would remain. Initial visitor contact would remain at the existing visitor center.

General Development

Existing facilities would remain. The no-action alternative would retain current uses of park resources and the status quo on development, physical plant, and organization. Facilities would be improved to meet high-quality standards

and to reflect a common architectural theme as funding permits. No construction activities other than maintenance would be planned. Existing facilities and structures would continue to serve their present functions with existing park access retained.

ALTERNATIVE B: THE PROPOSAL

This section describes the park's preferred alternative.

This alternative would emphasize *a variety of human experiences in a rugged canyon environment*. It would provide developed areas on the South Rim and less-developed areas on the North Rim. Contemplation of one of nature's foremost scenic wonders on both rims would be provided by encouraging visitors to experience the *depth of the canyon from above*. A variety of other educational and recreational experiences would be provided to protect and enhance the wilderness values of the park.

This alternative would emphasize viewing the canyon from the Cliff Top Resource Opportunity Area to give visitors a variety of viewing opportunities to experience the canyon in a range of settings.

Visitors to the South Rim would find this area more developed and visited than the North Rim. Ample staff would be available to assist visitors in learning about park resources. Visitors to the North Rim would find this area less developed and visited. Some staff may be necessary to answer questions about park resources, but for the most part, encounters with park staff would be minimal.

Any new public facilities would support both recreational viewing and educational activities in the park's outdoor environment.

Mutually beneficial partnerships would be encouraged with both educational institutions and the private sector to provide for visitor services and to protect park resources.

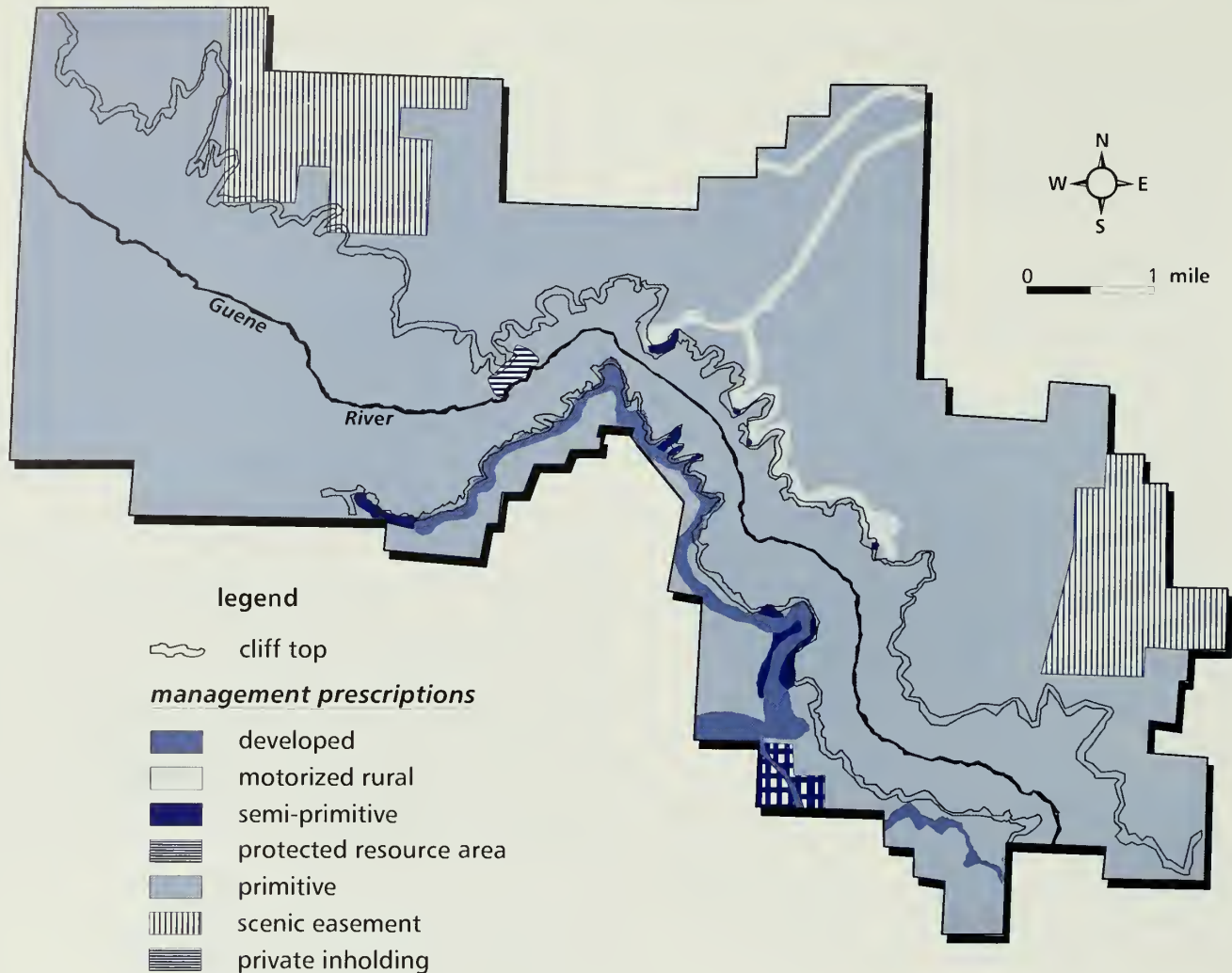
The proposal is consistent with state/area/local plans and programs.

Land Use and Management

The park's relationship to the surrounding lands is an important part of its scenic values, which provide opportunities for visitors to feel "in awe" as they first view the canyon's depth. The sense of openness created by surrounding lands forms the setting and the basis for the scenic ambiance of the park. Today, that sense of openness still continues to enhance visitor enjoyment of the park's resources.

The proposal calls for maintaining appropriate and compatible uses of the surrounding lands essential to the maintenance of a natural resource setting through continued scenic easements and a cooperative partnership between adjacent private landowners, including other federal agencies like the Bureau of Land Management and the U.S. Forest Service. Any additional scenic easement priorities would be set by the Land Protection Plan.

The North Rim would remain relatively undeveloped and substantially unchanged in the future except for minor improvements in existing facilities. Management of this area would



- This alternative would emphasize a variety of human experiences in a rugged canyon environment. It would provide developed areas on the South Rim and less-developed areas on the North Rim.

- Most visitors would be encouraged to experience the depth of the canyon from above. This would provide a breathtaking experience of one of nature's foremost scenic wonders from both rims.

- A variety of other educational and recreational experiences would also be provided to protect and enhance the wilderness values of the monument.

- This alternative would emphasize viewing the canyon from the cliff top resource opportunity area to give visitors a variety of viewing opportunities and enable them to experience the canyon in a range of social settings.

- The South Rim would be more developed and visited than the North Rim. Ample staff would be available to assist visitors in learning about the Black Canyon resources.

- Any new public facilities would support both recreational viewing and educational activities in the park's outdoor classroom.

The Proposal Alternative B The Canyon Depths

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emphasize a variety of backcountry wilderness experiences and encounters with park resources.

On the South Rim, facilities for viewing the canyon from above would be maintained and improved. A new or upgraded visitor center would provide better visitor orientation to the park. Partnerships would be sought to provide visitor services and to protect park resources.

In the canyon, use would be monitored and limited to ensure the protection of the wilderness resource.

In the East Portal area, park staff would develop a common architectural theme to improve and unify the visual appearance of facilities, including roads and signage. This would be coordinated with the park, Palvera National Recreation Area, and the Bureau of Reclamation and would apply to the East Portal and its associated road corridor.

The following would be the acreage distribution of the management prescription under this alternative within the park.

- About 621 acres (3.0%) — Developed Management Prescription**
- About 417 acres (2.0%) — Motorized Rural Management Prescription
- About 122 acres (0.6%) — Semi-Primitive Management Prescription
- About 17,412 acres* (83.3%) — Primitive Management Prescription
- About 50 acres (0.2%) — Protected Resource Management Prescription
- About 2,144 acres (10.3%) — Scenic Easement Management Prescription
- About 120 acres (0.6%) — Private Inholding

*11,180 acres in the park are in wilderness.

** This would provide for expansion of the developed area along roads and additional developed sites on the South Rim.

This alternative would retain the existing rugged appearance of both the North and South Rims. The Cliff Top Resource Opportunity Area would have about 411 acres (2 %) more land allocated to the developed management plan than would be allocated in the no-action alternative. Because there are no immediate improvements in facilities on either rim, the Canyon Backdrop Resource Opportunity Area would be the same as under the no-action alternative. Eventually, additional facilities could be placed on the South Rim side of the canyon to support visitor services.

The park would pursue efforts to systematically and regularly work with surrounding federal, state, and county agencies and other entities to establish partnerships designed to unify and complement land management practices within the region. The park would also explore the formation of a friends group to help in accomplishing this objective.

Scenic values inside and adjacent to the park would continue to be cooperatively evaluated with the Dove and Makin Planning Commissions and the Bureau of Land Management. Management would encourage local agencies to ensure that any development surrounding the park be done in a sensitive manner so that it would not detract from the area's scenic values.

This alternative would broaden partnership strategies to rely on an advisory group of public participants and

land management agencies to work cooperatively to develop short- and long-term plans to address regional recreation use and resource protection. The possible formation of a friends group would also be explored.

Information exchanges with local organizations such as U.S. Forest Service Scenic Byways, Upvalley Conservation Alliance, Makin Visitor Center, and Convention Bureau would continue.

Resource Management

A *Resource Management Plan (RMP)*, addressing both cultural and natural resource management, was completed in February 1993. The *General Management Plan* affirms issues addressed by the *Resource Management Plan* and introduces some additional strategies. Information about programs addressing resource management issues can be found in the *Resource Management Plan*.

Natural Resources. The following are additional strategies that would be employed by this alternative to address specific objectives set for the park.

- The park would continue to work to meet state and local compliance requirements for clean air as funding permitted and would pursue a coordinated program for Class I air monitoring with the U.S. Forest Service and the state of "State."
- A partial inventory of paleontological resources has been obtained. Inventorying would be completed in partnership with educational institutions as funding permitted.
- A program that encourages continued research to provide a better understanding of the geologic evolution of the park would continue.
- A program to control noxious weeds through the least environmentally harmful method would continue.

- A program to identify habitat fragmentation and mitigate its effects would be developed cooperatively with educational institutions and land management agencies.
- A cooperative program with the state of "State" and the U.S. Fish and Wildlife Service to maintain the trout fishery and delist appropriate native "State" fish species would continue.
- Cooperative efforts with the Bureau of Reclamation and the state of "State" to establish a protected flow of the Guene River through the park would continue. Efforts with the U.S. Geological Survey and the National Biological Survey to establish water quality monitoring would be expanded to include educational institutions.
- A database would be developed to track water-related data used to guide management decisions.

Cultural Resources. The following are additional strategies that would be employed by this alternative to address specific objectives set for the park.

- Cultural resource management would emphasize stabilization and preservation.
- Cultural resource management may include archeological research and study.
- A new interpretive program would be developed (see Visitor Use and Interpretation).

Visitor Use and Interpretation

A new interpretive program would be developed to communicate the history and prehistory through a partnership with educational institutions and private groups. Interpretive themes would be expanded to preserve significant sites and to tell the story of water development in western "State" using an array of partners—educational institutions, historical societies, and private groups.

Park Operations

Ranger operations would be increased to provide additional protection while serving public use. Additional services and patrols would take place on the South Rim and in the wilderness/backcountry. Staff would receive additional training to respond proactively to emergency situations.

Possible Facility and Development Changes

Facilities would be improved to meet high-quality standards and to reflect a common architectural theme as funding permitted. The following would be some of the possible facility changes:

- new or improved visitor center
- additions to existing parking areas
- components of the old National Park Service complex near Kneeling Camel would be evaluated for rehabilitation or removal; a group camp could also be established in the same location

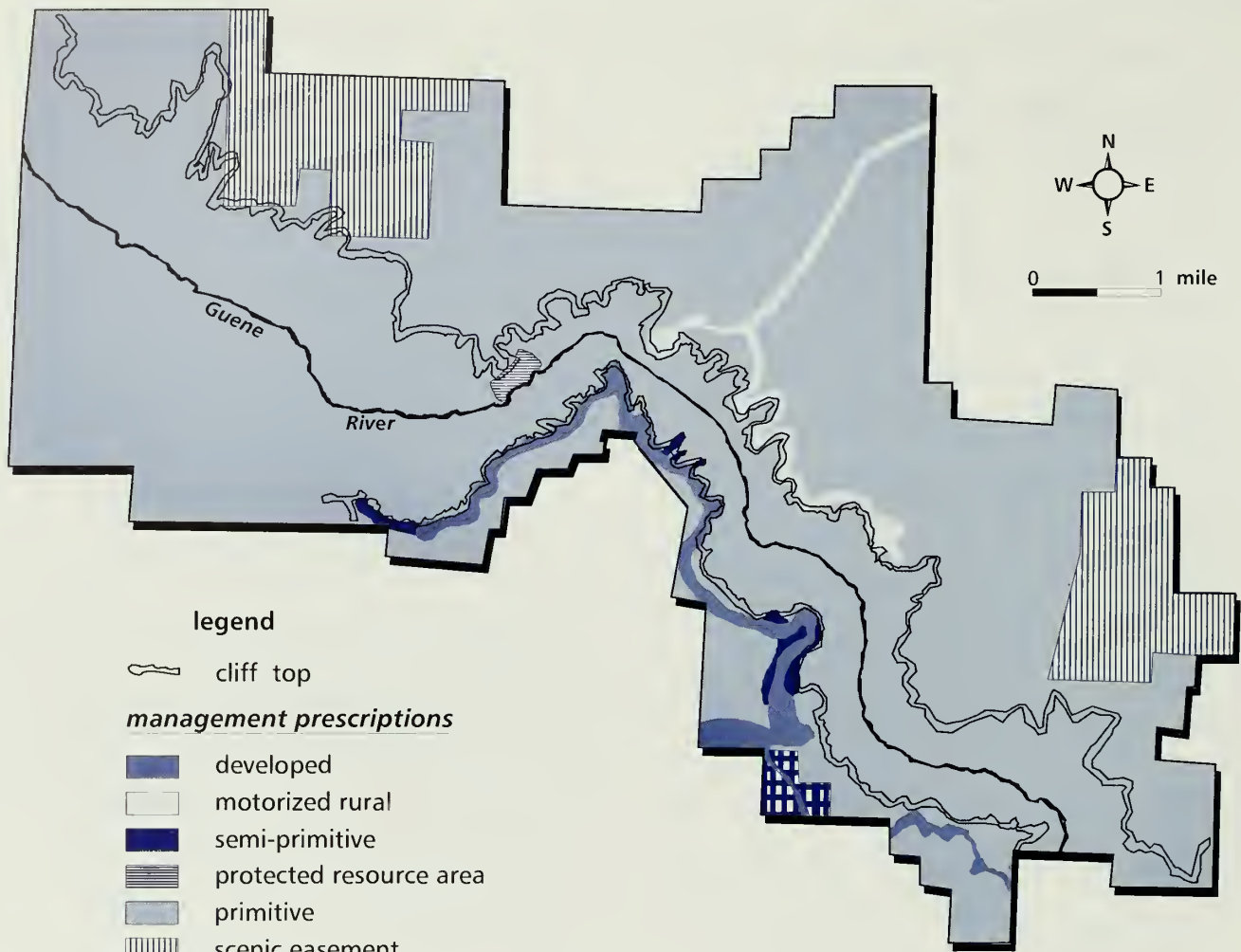
- architectural theme enhancements
- new trails

Costs for the above improvements would be estimated at the time of project design.

Future Plans and Studies

Planning needs would be continually identified on an annual basis. Increased priority would be given to the following plans:

- a visitor experience and resource protection plan
- a wildland fire management plan
- a long-range interpretive plan
- a wilderness management plan
- an emergency operations plan
- a trail and backcountry management plan



- legend**
- cliff top
 - management prescriptions**
 - developed
 - motorized rural
 - semi-primitive
 - protected resource area
 - primitive
 - scenic easement
 - private inholding

- * This alternative would emphasize primitive human experiences, using the rugged canyon as an outdoor classroom.
- * This alternative would provide only minimally developed areas where necessary, which allow visitors to contemplate one of nature's foremost scenic wonders and encourage primitive experiences of the canyon through interpretation, partnerships, and orientation programs with educational institutions.
- * Educational institutions would be actively encouraged to conduct research on monument resources, visitor use, and interactive ecological processes within the Gunnison River Basin. Some areas of Black Canyon may be designated as a *research natural area*.
- * Educational institutions and visitors would be encouraged to participate in a limited number of primitive learning experiences in outdoor recreation classroom settings. These could include sight-seeing, hiking, fishing, wilderness backpacking, climbing, and white-water rafting.

- * The use of new and existing developments would be limited to the minimum necessary to meet research and educational needs in an outdoor classroom.
- * Partnerships with educational institutions and private groups (retired adults, family groups, college students, and grades K-12) would be encouraged to

Alternative C

The Park as an Outdoor Classroom

United States Department of the Interior
National Park Service

ALTERNATIVE C: THE PARK AS AN OUTDOOR CLASSROOM

This section describes the more undeveloped alternative for the park.

This alternative would emphasize *primitive human experiences using the rugged canyon as an outdoor classroom*. It would provide only minimally developed areas where necessary to allow visitors to contemplate one of nature's foremost scenic wonders, and it would *encourage primitive experiences of the canyon through interpretation, partnerships, and orientation programs* with educational institutions.

The alternative would emphasize the canyon as a dynamic, living outdoor classroom, interpreting and allowing people to learn about the natural environment.

Educational institutions would be actively encouraged to conduct research on park resources, visitor use, and interactive ecological processes within the Guene River Basin. Some areas of the park could be designated as a Research Natural Area.

Educational institutions and visitors would be encouraged to participate in a limited number of primitive learning experiences in outdoor recreation classroom settings. These could include sight-seeing, hiking, fishing, wilderness backpacking, climbing, and white-water rafting.

The use of existing and new development would be limited to the minimum necessary to meet research

and educational needs in an outdoor classroom.

Partnerships with educational institutions and private groups would be encouraged to promote the park as an outdoor classroom.

This alternative is consistent with state/area/local plans and programs.

Land Use and Management

There would be no change in South Rim development except for cosmetic improvements or a shifting in the use of existing facilities. Based on an analysis of need, some development could be eliminated. Research activities in this area could increase.

Development on the North Rim would be limited to support research and educational endeavors or would enhance the education and orientation values of the wilderness area. The North Rim area would be reserved to support an outreach outdoor classroom partnership program with educational institutions.

The following is the acreage distribution of the management prescription.

- About 621 acres (3.0%) — Developed Management Prescription**
- About 417 acres (2.0%) — Motorized Rural Management Prescription
- About 122 acres (0.6%) — Semi-Primitive Management Prescription
- About 17,412 acres* (83.3%) — Primitive Management Prescription

- About 50 acres (0.2%) — Protected Resource Management Prescription
- About 2,144 acres (10.3%) — Scenic Easement Management Prescription
- About 120 acres (0.6%) — Private Inholding

*11,180 acres in the park are in wilderness.

** this would provide for expansion of the developed area along roads and additional developed sites on the South Rim.

This alternative would retain the existing rugged appearance of both the North and South rims. The Cliff Top Resource Opportunity Area would have about 411 acres (2 %) more land allocated to the Developed Management Plan than would be allocated in the no-action alternative. Because of the removal of some facilities on North Rim, the Canyon Backdrop Resource Opportunity Area would appear less developed. Eventually, additional facilities could be placed on the South Rim to support visitor services, but would be designed in such a way as to minimize impact on scenic quality on the Canyon Backdrop.

Some areas could be designated as Research Natural Areas.

Scenic values inside and adjacent to the park would continue to be cooperatively evaluated with the Dove and Makin Planning Commissions and the Bureau of Land Management.

Attempts would be made to develop active partnership plans that would address issues dealing with regional recreation use.

Current partnerships would continue to focus on local organizations to

cooperatively facilitate resource protection.

Information exchanges with local organizations such as U.S. Forest Service, BLM, Scenic Byways, Upvalley Conservation Alliance, Makin Visitor Center, and Convention Bureau would continue.

Resource Management

The Resource Management Plan (RMP), addressing both cultural and natural resource management, was completed in February 1993. The *General Management Plan* affirms issues addressed by the *Resource Management Plan* and introduces some additional strategies. Information on programs that address resource management issues can be found in the *Resource Management Plan*.

Natural Resources. The following are additional strategies that would be employed by this alternative to address specific objectives set for the park.

- The park would continue to work to meet state and local air quality compliance requirements as funding permitted. The park would pursue a coordinated program for Class I air monitoring with the U.S. Forest Service and the state of "State."
- A partial inventory of paleontological resources has been obtained. Inventorying would be completed in partnership with educational institutions as funding permitted.
- A program that encourages continued soil and geologic research to provide a better understanding of the evolution of the park would continue.
- A program to control noxious weeds through the least environmentally harmful method would continue.

- A program to identify habitat fragmentation and to mitigate its effects would be researched through an educational institution.
- A cooperative program with the state of “State” and the U.S. Fish and Wildlife Service to maintain the trout fishery and delist appropriate native “State” fish species would continue.
- Cooperative efforts with the Bureau of Reclamation and the state of “State” to establish a protected flow of the Guene River through the park would continue. Efforts with the U.S. Geological Survey and the National Biological Survey to establish water quality monitoring would be expanded to include educational institutions.
- A database would be developed to track water-related data used to guide management decisions.

Cultural Resources. Actions would be the same as outlined in alternative B.

Visitor Use and Interpretation

Interpretation would increase its focus on research and educational activities regarding the park’s resources, including both natural and cultural resources. Use would be monitored and would be limited to maintain the wilderness character.

A new interpretive program would be developed to communicate the history and prehistory through a partnership with educational institutions and private groups. Interpretive themes would be expanded to preserve significant sites and to tell the story of water development in western “State” using an array of partners—educational institutions, historical societies, and private groups.

Park Operations

Park operations would be increased to provide additional protection to

preserve research values and educational opportunities while controlling non-conforming uses. Staff would continue to respond to incidents as they occur.

Possible Facility and Development Changes

Development within the designated wilderness area would be limited to what is allowable under wilderness legislation. Existing facilities would be evaluated based on need, and some facilities could be removed.

Facilities would be improved to meet high-quality standards and reflect a common architectural theme as funding permitted. The following would be some of the possible facility changes were this alternative to be chosen:

- amphitheater would be converted to educational use
- facilities at Pulpit Rock would be removed
- the old National Park Service complex near Kneeling Camel would be converted to support research and educational uses
- architectural theme enhancements

Costs for these improvements would be estimated at the time of project design.

Future Plans and Studies

- Planning needs would be continually identified on an annual basis. Increased priority would be given to the following plans: a visitor experience and resource protection plan
- a wildland fire management plan
- a long-range interpretive plan
- a wilderness management plan
- an emergency operations plan
- a trail and backcountry management plan



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ALTERNATIVE D: DEVELOPMENT TO ALLOW EASY ACCESS TO THE RIM ALONG NORTH AND SOUTH RIM DRIVES

This section describes the more undeveloped alternative for the park.

This alternative would emphasize *human experiences at the rim of a rugged canyon*, and would provide developed areas on the South and North Rims for the visiting public, allowing contemplation of one of nature's foremost scenic wonders while protecting the wilderness values of the park.

This alternative stresses providing easy access to both rims. Developed facilities would be provided to support the experience for all visitors to easily see the depths of the canyon.

Partnerships with the private sector would be encouraged to provide visitor services and to protect park resources.

Land Use and Management

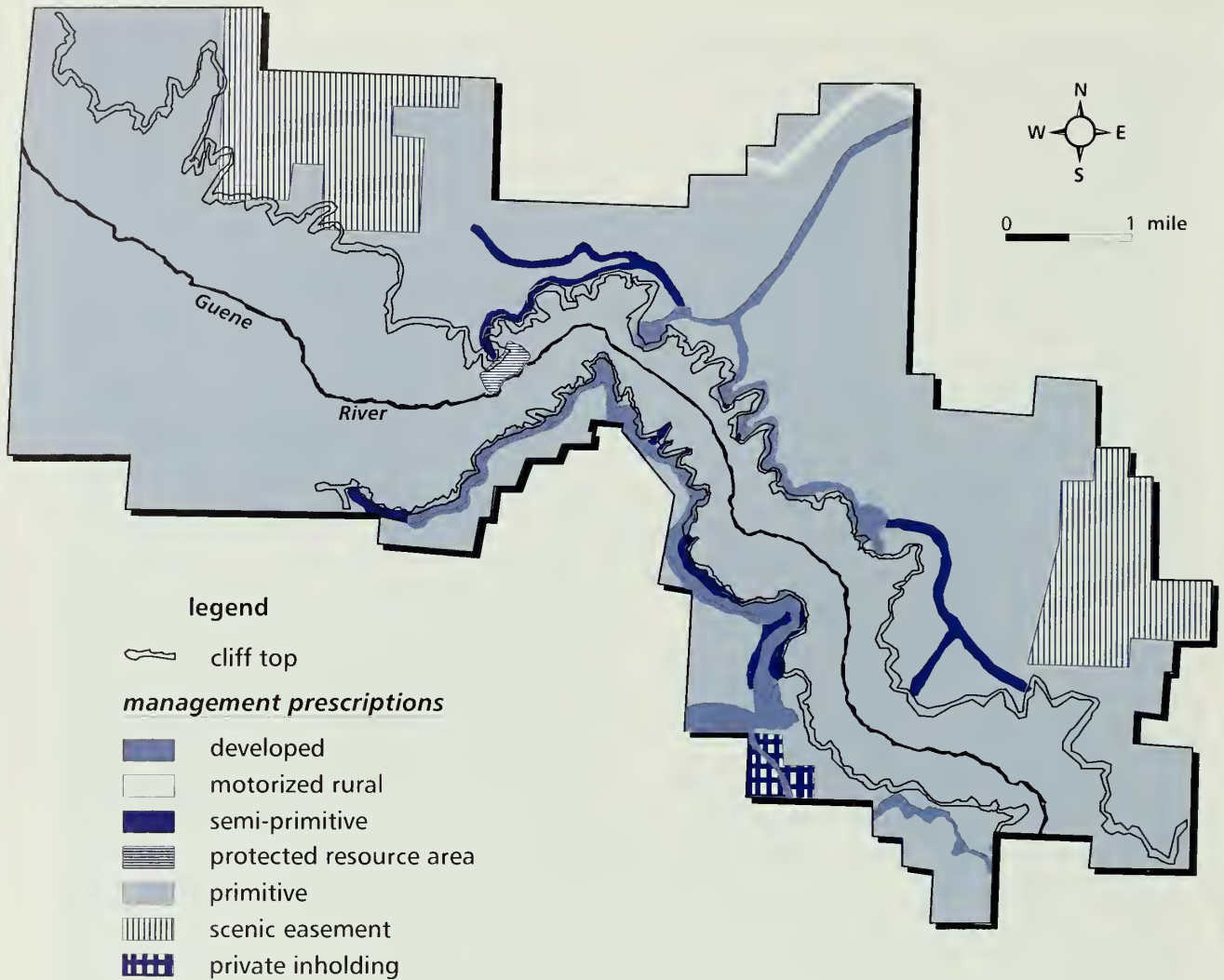
New development on the North Rim would accommodate a more developed experience on both rims of the canyon. Developments on the North Rim may

eventually approximate the level of development on the South Rim. Some development on scenic easement properties could also occur to support recreational opportunities.

On the South Rim, additional development would support recreational experiences for viewing the canyon from above. A new or upgraded visitor center would provide better visitor orientation to park resources, and partnerships would be sought to provide visitor services and to protect park resources.

In the canyon, use would be monitored and would be limited to maintain the wilderness character. Increased use would be allowed outside of the designated wilderness so that visitor experience in those areas would be different.

In the East Portal area, park staff would develop a common architectural theme to improve and unify the visual appearance of facilities, including roads and signage. This would be coordinated with the park, Palvera National Recreation Area, and the Bureau of Reclamation. It would apply to the East Portal and its associated road corridor.



- * This alternative would emphasize human experiences at the rim of a rugged canyon and provide developed areas on the South and North Rims for the visiting public.

- * The experience would provide for the contemplation of one of nature's foremost scenic wonders, by providing experiences of the canyon from above while protecting the wilderness values of the monument.

- * This alternative would stress providing easy developed access to both rims.

- * Developed facilities would be provided to help all visitors to easily see the depths of the canyon.

- * Mutually beneficial partnerships with the private sector would be encouraged to provide for visitor services and protect park resources.

Alternative D

Development of the Non-Wilderness Areas to Allow Easy Access to the North and South Rims

United States Department of the Interior
National Park Service

The following would be the acreage distribution of the management prescription.

- About 1,150 acres (5.5%) — Developed Management Prescription
 - About 71 acres (0.3%) — Motorized Rural Management Prescription
 - About 459 acres (2.2%) — Semi-Primitive Management Prescription
 - About 16,892 acres* (80.9%) — Primitive Management Prescription
 - About 50 acres (0.2%) — Protected Resource Management Prescription
 - About 2,144 acres (10.3%) — Scenic Easement Management Prescription
 - About 120 acres (0.6%) — Private Inholding
- * 11,180 acres in the park are in wilderness.

** This would provide for expansion of the developed area along roads and additional developed sites on the North and South Rims.

This alternative increases the capacity to serve visitors who want to see the canyon from above on both the North and South Rims. The Cliff Top Resource Opportunity Area would have about 950 acres (4.5%) more land allocated to the Developed Management Area Prescription than would be allocated in the no-action alternative.

Scenic values inside and adjacent to the park would continue to be cooperatively evaluated with the Dove and Makin Planning Commissions and the Bureau of Land Management. Management would encourage any development surrounding the park be done in a sensitive manner so that it would not detract from the scenic values of the park.

This alternative would broaden partnership strategies to use an advisory group of public participants and land management agencies to work cooperatively to develop short and long-term plans to address regional recreation use and resource protection.

Information exchanges with local organizations such as U.S. Forest Service Scenic Byways, Upvalley Conservation Alliance, Makin Visitor Center, and Convention Bureau would continue.

Resource Management

A *Resource Management Plan (RMP)*, addressing both cultural and natural resource management, was completed in February 1993. The *General Management Plan* affirms issues addressed by the *Resource Management Plan* and introduces some additional strategies. Information on programs addressing resource management issues can be found in the *Resource Management Plan*.

Natural Resources. The following additional strategies would be employed by this alternative to address specific objectives set for the park.

- The park would continue to work to meet state and local compliance requirements as funding permitted. The park would pursue a coordinated program for Class I air monitoring with the U.S. Forest Service and the state of "State."
- A partial inventory of paleontological resources has been obtained, and inventorying would be completed prior to development of the North Rim.

- A program that encourages continued research to provide a better understanding of the evolution of the park would continue.
- A program to control noxious weeds through the least environmentally harmful method would continue.
- A program to identify habitat fragmentation and to mitigate its effects would be developed cooperatively with educational institutions and land management agencies.
- A cooperative program with the state of "State" and the U.S. Fish and Wildlife Service would continue to maintain the trout fishery and delist appropriate native "State" fish species.
- Cooperative efforts with the Bureau of Reclamation and the state of "State" would continue to establish a protected flow of the Guene River through the park. Efforts with the U.S. Geological Survey and the National Biological Survey to establish water quality monitoring would continue.
- A database would be developed to track water-related data used to guide management decisions.

Cultural Resources. Actions would be the same as outlined in alternative B.

Visitor Use and Interpretation

Interpretation would concern itself with both natural and cultural resources from a recreational perspective. A new interpretive program would be developed to communicate the history and prehistory of the park through a partnership with educational institutions and private groups. Interpretive themes would be expanded to preserve significant sites and to tell the story of water development in western "State," using an array of partners—educational institutions, historical societies, and private groups.

Park Operations

Park operations would be increased to provide additional protection while serving public use. Additional services and patrols would take place on the South Rim, North Rim, and in the wilderness/backcountry.

Possible Facility and Development Changes

Facilities would be improved to meet high quality standards and to reflect a common architectural theme as funding permitted. The following would be some of the possible facility changes were this alternative to be chosen.

- a new or improved visitor center (South Rim)
- a visitor center contact station (North Rim)
- newly paved roads and parking areas
- two picnic areas (North Rim)
- an entrance station (North Rim)
- a campground (100 sites, North Rim)
- additions to existing parking areas
- the North Rim Quonset hut storage and old quarters converted to educational uses.
- architectural theme enhancements
- new trails

Costs for the above improvements would be estimated at the time of project design.

Future Plans and Studies

Planning needs would be continually identified on an annual basis. Increased priority would be given to the following plans.

- a visitor experience and resource protection plan
- a monitoring plan to protect resources from increased visitor use
- a wildland fire management plan
- a long-range interpretive plan
- a wilderness management plan
- an emergency operations plan
- a trail and backcountry management plan.



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TABLE 3—Summary

Alternative A: No Action	Alternative B: The Canyon Depths (The Proposal)	Alternative C: The Park as an Outdoor Classroom	Alternative D: Development North & South Rim
<p>General Description</p> <p>Under the no-action alternative, existing management activities would continue as funds allowed. Existing visitor facilities would be maintained to support current activities, but no new facilities would be built. Roads would continue to be repaired as needed. Required improvements to safety, sanitation, and access for persons with disabilities would be accomplished as funding permitted.</p>	<p>This alternative would emphasize a variety of human experiences in a rugged canyon environment. It would provide developed areas on the South Rim and less-developed areas on the North Rim. Contemplation of one of nature's foremost scenic wonders would be provided on both Rims by encouraging most visitors to experience the depth of the canyon from above. A variety of other educational and recreational experiences would be provided to protect and enhance the wilderness values of the park.</p> <p>This alternative would emphasize viewing the canyon from the Cliff Top Resource Opportunity Area to give visitors a variety of viewing opportunities to experience the canyon in a range of social settings. Visitors to the South Rim would find this area more developed and visited than the North Rim. Ample staff would be available to assist visitors in learning about park resources. Visitors to the North Rim would find the area less developed and visited than the South Rim. Some staff could be encountered to answer questions about park resources; but for the most part, encounters with park staff would be minimal.</p> <p>Any new public facilities would support both recreational viewing and educational activities in the park's outdoor classroom.</p>	<p>This alternative would emphasize primitive human experiences using the rugged canyon as an outdoor classroom. It would provide only minimally developed areas that allow visitors to contemplate one of nature's foremost scenic wonders and encourage primitive experiences of the canyon through its interpretation, partnerships, and orientation programs with educational institutions.</p> <p>This alternative would emphasize the canyon as a dynamic, living outdoor classroom, interpreting and allowing people to learn about the natural environment. Educational institutions would be actively encouraged to conduct research on park resources, visitor use, and interactive ecological processes within the Guene River Basin. Some areas of the park may be designated as a Research Natural Area.</p> <p>Educational institutions and visitors would be encouraged to participate in a limited number of primitive learning experiences in outdoor recreation classroom settings. These could include sight-seeing, hiking, fishing, wilderness backpacking, climbing, and white-water rafting.</p> <p>The use of existing and new development would be limited to the minimum necessary to meet research and educational needs in an outdoor classroom.</p>	<p>This alternative would emphasize human experiences at the rim of a rugged canyon, providing developed areas on the South and North Rims for the visiting public. It would allow contemplation of one of nature's foremost scenic wonders from above the canyon, while protecting the wilderness values of the park.</p> <p>This alternative would stress providing easy, developed access to both rims. Developed facilities would be provided to support the experience for all visitors to easily see the depths of the canyon.</p> <p>Mutually beneficial partnerships with the private sector would be encouraged to provide visitor services and protect park resources.</p>

TABLE 3—Summary

	Alternative A: No Action	Alternative B: The Canyon Depths (The Proposal)	Alternative C: The Park as an Outdoor Classroom	Alternative D: Development North & South Rim
North Rim	This area would remain relatively undeveloped and unchanged except for ongoing maintenance and resource management projects. It would remain relatively undeveloped and substantially unchanged in the future except for minor improvements to existing facilities.	Mutually beneficial partnerships would be encouraged with both educational institutions and the private sector to provide visitor services and protect park resources. Management of this area would emphasize a variety of backcountry wilderness experiences and encounters with park resources. Development would be limited to support research and educational endeavors or to enhance the education and orientation values about wilderness areas on the North Rim.	Partnerships with educational institutions and private groups—retired adults, family groups, college students, and grades K-12 would be encouraged to promote the park as an outdoor classroom. This area would be reserved to support an outreach outdoor classroom partnership program with educational institutions. Developments could be added so that the level of facility would be similar to that of the South Rim.	Some development on scenic easement properties could occur to support recreational opportunities in the park.
South Rim	This area would remain relatively undeveloped and unchanged except for ongoing maintenance and protection projects.	Facilities for viewing the canyon from above would be maintained and improved. A new or upgraded visitor center would provide better visitor orientation to park resources. Partnerships would be sought to provide visitor services and to protect park resources.	There would be no change in South Rim development except for cosmetic improvements or a shifting in the use of existing facilities. Based on an analysis of need, some development could be eliminated. Research activities could increase.	There would be additional development to support recreational experiences of viewing the canyon from above. A new or upgraded visitor center would provide better visitor orientation to park resources. Partnerships would be sought to provide visitor services and to protect park resources.
Canyon Area	Use would be monitored and would be limited to that necessary to maintain the wilderness character.	Use would be monitored and would be limited to that necessary to maintain the wilderness character.	Use would be monitored and would be limited to that necessary to maintain the wilderness character.	Use would be monitored and would be limited to that necessary to maintain the wilderness character. Higher tolerance to use would be allowed outside of the designated wilderness.
East Portal	There would be no changes in current management.	Common architectural themes and improvements would be coordinated between the park, Palvera National Recreation Area, and the Bureau of Reclamation in the East Portal Area and	Development would be limited to that allowable under wilderness legislation. Existing facilities would be evaluated based on need. Some facilities could be removed.	Common architectural themes and improvements would be coordinated between the park, Palvera National Recreation Area, and the Bureau of Reclamation in the East Portal Area and

TABLE 3—Summary

	Alternative A: No Action	Alternative B: The Canyon Depths (The Proposal)	Alternative C: The Park as an Outdoor Classroom	Alternative D: Development North & South Rim
		within the road corridor, providing access.		within the road corridor, providing access
Land Use and Management Prescriptions (MP)	<p>About 210 acres — Developed MP</p> <p>About 435 acres — Motorized Rural MP</p> <p>About 124 acres—Semi-Primitive MP</p> <p>About 17,903 acres* — Primitive MP</p> <p>About 50 acres — Protected Resource MP</p> <p>About 2,144 acres — Scenic Easement MP</p> <p>About 120 acres—Private Inholding</p> <p>*This alternative would retain the existing rugged appearance of both the North and South Rims. There would be no changes in how each resource opportunity area in the park is used.</p>	<p>About 621 acres — Developed MP</p> <p>About 417 acres — Motorized Rural MP</p> <p>About 122 acres—Semi-Primitive MP</p> <p>About 17,412 acres* — Primitive MP</p> <p>About 50 acres — Protected Resource MP</p> <p>About 2,144 acres — Scenic Easement MP</p> <p>About 120 acres — Private Inholding</p> <p>*This alternative would retain the existing rugged appearance of both the North and South Rims. The Cliff Top Resource Opportunity Area would have about 411 acres (2.0%) more land allocated to the Developed Management Prescription than would be allocated in the no-action alternative. Because of improvements in facilities on both rims, the Canyon Backdrop Resource Opportunity Area would appear about the same as it would under the no-action alternative.</p>	<p>About 621 acres — Developed MP</p> <p>About 417 acres — Motorized Rural MP</p> <p>About 122 acres—Semi-Primitive MP</p> <p>About 17,412 acres* — Primitive MP</p> <p>About 50 acres — Protected Resource MP</p> <p>About 2,144 acres — Scenic Easement MP</p> <p>About 120 acres — Private Inholding</p> <p>*This alternative would retain the existing rugged appearance of both the North and South Rims. The Cliff Top Resource Opportunity Area would have about 411 acres (2.0%) more land allocated to the Developed Management Prescription than would be allocated in the no-action alternative. Because of improvements in facilities on both rims, the Canyon Backdrop Resource Opportunity Area would appear less developed. Some areas could be designated as Research Natural Areas.</p>	<p>About 1,150 acres — Developed MP</p> <p>About 71 acres — Motorized Rural MP</p> <p>About 459 acres—Semi-Primitive MP</p> <p>About 16,892 acres* — Primitive MP</p> <p>About 50 acres — Protected Resource MP</p> <p>About 2,144 acres — Scenic Easement MP</p> <p>About 120 acres — Private Inholding</p> <p>*This alternative would increase the capacity to serve visitors who want to see the canyon from above on both the North and South Rims. The Cliff Top Resource Opportunity Area would have about 940 acres (4.5%) more land allocated to the Developed Management Prescription than would be allocated in the no-action alternative. Because of improvements in facilities on both rims, the Canyon Backdrop Resource Opportunity Area would appear less rugged and more developed.</p>
Interpretation	Interpretation would remain focused on the natural resources of the park with allowance for expanding stories of significant cultural resources in the park.	Interpretation would focus more broadly to include both natural and cultural resources from an educational and recreational perspective.	Interpretation would increase its focus on research and education activities about the park's resources, including both natural and cultural resources.	Interpretation would focus more broadly to include both natural and cultural resources from a recreational perspective.
Park Operations	Park operations would continue at present levels with an emphasis on protecting resources, serving the public, and responding to incidents	Park operations would need to be increased to provide additional protection while serving public use. Additional services and patrols	Park operations would need to be increased to provide additional protection to preserve research values and educational opportunities	Park operations would need to be increased to provide additional protection while serving public use. Additional services and patrols

TABLE 3—Summary

	Alternative A: No Action	Alternative B: The Canyon Depths (The Proposal)	Alternative C: The Park as an Outdoor Classroom	Alternative D: Development North & South Rim
	as they occur.	would take place on the South Rim and in the wilderness/backcountry. Staff would receive additional training to respond proactively to emergency situations.	while controlling non-conforming uses. Staff would continue to respond to incidents as they occurred.	would take place on the South Rim, North Rim, and in the wilderness/backcountry. Staff would receive additional training to respond proactively to emergency situations.
Partnerships	<p>Scenic values inside and adjacent to the park would continue to be cooperatively evaluated with the Dove and Makin Planning Commissions and the Bureau of Land Management.</p> <p>There would continue to be a lack of short- or long-term plans for dealing with regional recreation use.</p> <p>Current partnerships would continue to focus on local organizations to cooperatively facilitate resource protection.</p> <p>Information exchanges with local organizations (such as U.S. Forest Service Scenic Byways, Upvalley Conservation Education Alliance, Makin Visitor Center, and Convention Bureau) would continue.</p>	<p>Scenic values inside and adjacent to the park would continue to be cooperatively evaluated with the Dove and Makin Planning Commissions and the Bureau of Land Management. Management would encourage local agencies to ensure that any development surrounding the park be done in a manner that would not detract from the park's scenic values.</p> <p>This alternative would broaden partnership strategies to rely on an advisory group of public participants and land management agencies to work cooperatively to develop short and long-term plans to address regional recreation use and resource protection. The possible formation of a friends group would also be explored.</p> <p>Information exchanges with local organizations (such as U.S. Forest Service Scenic Byways, Upvalley Conservation Alliance, Makin Visitor Center, and Convention Bureau) would continue.</p>	<p>Scenic values inside and adjacent to the park would continue to be cooperatively evaluated with the Dove and Makin Planning Commissions and the Bureau of Land Management. Management would encourage local planning agencies to keep lands surrounding the park in an undeveloped state.</p> <p>This alternative would broaden partnership strategies to use friends groups, educational institutions, or nonprofit groups to work cooperatively to develop short-and long-term plans to address regional recreation use and resource protection.</p> <p>Information exchanges with local organizations (such as U.S. Forest Service Scenic Byways, Upvalley Conservation Education Alliance, Makin Visitor Center, and Convention Bureau) would continue.</p>	<p>Scenic values inside and adjacent to the park would continue to be cooperatively evaluated with the Dove and Makin Planning Commissions and the Bureau of Land Management. Management would encourage any development surrounding the park to be done in a sensitive manner so that it would not detract from the scenic values of the park.</p> <p>This alternative would broaden partnership strategies to use an advisory group of public participants and land management agencies to work cooperatively to develop short- and long-term plans to address regional recreation use and resource protection.</p> <p>Information exchanges with local organizations (such as U.S. Forest Service Scenic Byways, Upvalley Conservation Education Alliance, Makin Visitor Center, and Convention Bureau) would continue.</p>
Natural Resource Management	The park would continue to work to meet state and local compliance requirements as funding permitted.	The park would continue to work to meet state and local compliance requirements as funding permitted. The park would pursue a coordinated program for Class I air monitoring	The park would continue to work to meet state and local compliance requirements as funding permitted. The park would pursue a coordinated program for Class I air monitoring	The park would continue to work to meet state and local compliance requirements as funding permitted. The park would pursue a coordinated program for Class I air monitoring
Air				

TABLE 3—Summary

	Alternative A: No Action	Alternative B: The Canyon Depths (The Proposal)	Alternative C: The Park as an Outdoor Classroom	Alternative D: Development North & South Rim
		with the U.S. Forest Service and the state of "State."	with the U.S. Forest Service and the state of "State."	with the U.S. Forest Service and the state of "State."
Paleontological Resources	A partial inventory of resources has been obtained. Inventorying would be done as funding permitted.	A partial inventory of resources has been obtained. Inventorying would be completed in partnership with educational institutions as funding permitted.	A partial inventory of resources has been obtained. Inventorying would be completed in partnership with educational institutions as funding permitted.	A partial inventory of resources has been obtained. Inventorying would be completed prior to development of the North Rim.
Soils/Geology	A program that encourages continued research to provide a better understanding of the evolution of the park would continue.	A program that encourages continued research to provide a better understanding of the evolution of the park would continue.	A program that encourages continued research to provide a better understanding of the evolution of the park would continue.	A program that encourages continued research to provide a better understanding of the evolution of the park would continue.
Vegetation	A program to control noxious weeds through the least environmentally harmful method would continue.	<p>A program to control noxious weeds through the least environmentally harmful method would continue.</p> <p>A program to identify habitat fragmentation and to mitigate its effects would be developed cooperatively with educational institutions and land management agencies.</p>	<p>A program to control noxious weeds through the least environmentally harmful method would continue.</p> <p>A program to identify habitat fragmentation and to mitigate its effects would be researched through an educational institution.</p>	A program to control noxious weeds through the least environmentally harmful method would continue.
Wildlife	A cooperative program with the state of "State" and the U.S. Fish and Wildlife Service to maintain the trout fishery and delist appropriate native state fish species would continue.	A cooperative program with the state of "State" and the U.S. Fish and Wildlife Service to maintain the trout fishery and delist appropriate native state fish species would continue.	A cooperative program with the state of "State" and the U.S. Fish and Wildlife Service to maintain the trout fishery and delist appropriate native state fish species would continue.	A cooperative program with the state of "State" and the U.S. Fish and Wildlife Service to maintain the trout fishery and delist appropriate native state fish species would continue.
Water	Cooperative efforts with the Bureau of Reclamation and the state of "State" to establish a protected flow of the Guene River through the park would continue. Efforts with the U.S. Geological Survey (USGS) and the National Biological Survey (NBS) are narrowly focused on water-related issues.	Cooperative efforts with the Bureau of Reclamation and the state of "State" to establish a protected flow of the Guene River through the park would continue. Efforts with the U.S. Geological Survey and the National Biological Survey to establish water quality monitoring would be expanded to include	Cooperative efforts with the Bureau of Reclamation and the state of "State" to establish a protected flow of the Guene River through the park would continue. Efforts with the U.S. Geological Survey and the National Biological Survey to establish water quality monitoring would be expanded to include	Cooperative efforts with the Bureau of Reclamation and the state of "State" to establish a protected flow of the Guene River through the park would continue. Efforts with the U.S. Geological Survey and the National Biological Survey to establish water quality monitoring would continue.

TABLE 3—Summary

	Alternative A: No Action	Alternative B: The Canyon Depths (The Proposal)	Alternative C: The Park as an Outdoor Classroom	Alternative D: Development North & South Rim
		educational institutions. A database would be developed to track water-related data used to guide management decisions.	educational institutions. A database would be developed to track water-related data used to guide management decisions.	A database would be developed to track water-related data used to guide management decisions.
Cultural Resource Management Interpretation	There would be no program to expand interpretation of cultural resources.	A new interpretive program would be developed to communicate the history and prehistory of the park through a partnership with educational institutions and private groups. Interpretive themes would be expanded to preserve significant sites and to tell the story of water development in western "State," using several partners—educational institutions, historical societies, and private groups.	A new interpretive program would be developed to communicate the history and prehistory of the park through a partnership with educational institutions and private groups. Interpretive themes would be expanded to preserve significant sites and to tell the story of water development in western "State," using several partners—educational institutions, historical societies, and private groups.	A new interpretive program would be developed to communicate the history and prehistory of the park through a partnership with educational institutions and private groups. Interpretive themes would be expanded to preserve significant sites and to tell the story of water development in western "State," using several partners—educational institutions, historical societies, and private groups.
Facilities & Development Changes	Facilities would be improved to meet high-quality standards and to reflect a common architectural theme as funding permitted. No construction activities other than maintenance would be planned.	Facilities would be improved to meet high-quality standards and to reflect a common architectural theme as funding permitted. The following would be some possible facility changes were this alternative to be chosen: - new or improved visitor center - additions to existing parking areas - components of the old National Park Service complex near Kneeling Camel would be evaluated for rehabilitation or removal. A group camp might be established at this location. - architectural theme enhancements	Facilities would be improved to meet high-quality standards and to reflect a common architectural theme as funding permitted. The following would be some possible facility changes were this alternative to be chosen: - amphitheater would be converted to educational use - facilities at Pulpit Rock would be removed - the old National Park Service complex near Kneeling Camel would be converted to support research and educational uses - architectural theme enhancements	Facilities would be improved to meet high-quality standards and to reflect a common architectural theme as funding permitted. The following would be some possible facility changes were this alternative to be chosen: - new or improved visitor center (South Rim) - visitor center contact station (North Rim) - newly paved roads and parking areas - two picnic areas (North Rim) - entrance station (North Rim) - campground (100 sites, North Rim)

TABLE 3—Summary

Alternative A: No Action	Alternative B: The Canyon Depths (The Proposal)	Alternative C: The Park as an Outdoor Classroom	Alternative D: Development North & South Rim
	<ul style="list-style-type: none"> - new trails 		<ul style="list-style-type: none"> - additions to existing parking areas - the North Rim Quonset hut storage and old quarters would be converted to educational uses - architectural theme enhancements - new trails
<p>Future Plans and Studies</p>	<p>Planning needs are continually identified on an annual basis.</p> <p>Increased priority would be given to the following plans:</p> <ul style="list-style-type: none"> - a visitor experience and resource protection plan - a wildland fire management plan - long -range interpretive plan - wilderness management plan - emergency operations plan - trail and backcountry management plan 	<p>Planning needs would be continually identified on an annual basis.</p> <p>Increased priority would be given to the following plans:</p> <ul style="list-style-type: none"> - a visitor experience and resource protection plan - a wildland fire management plan - long-range interpretive plan - wilderness management plan - emergency operations plan - trail and backcountry management plan 	<p>Planning needs would be continually identified on an annual basis.</p> <p>Increased priority would be given to the following plans:</p> <p>visitor experience and resource protection plan</p> <ul style="list-style-type: none"> - a monitoring plan for increased visitor use - a wildland fire management plan - long-range interpretive plan - wilderness management plan - emergency operations plan - trail and backcountry management plan

THE ENVIRONMENT AND CONSEQUENCES OF ALTERNATIVES

This section combines information on the affected environment and environmental consequences. Since this particular document is designed to approach resource allocation decisions on a broad level instead of a detailed and site-specific level, the assessment of consequences is also broad in nature. As previously stated the details concerning allocation of resources will come at the project planning and design stage. At that stage a more detailed level of environmental assessment will be required. To abbreviate and simplify this example, only compliance for the proposal, or alternative B, is assessed.

Only those areas of the park that could be affected by strategic land allocation decisions are described. The purpose of this document is to provide a framework and broad, general direction for park management, which requires that proposals for future actions be substantiated by further surveys and environmental assessments.

In some cases, the plan provides detailed direction that can be quantified in terms of actions and associated impacts. Such cases will, for the most part, occur when there is some assurance that funding is imminent or when a critical situation exists that needs immediate attention. The primary emphasis is placed on providing general guidance for immediate and long-term needs; thus the proposed plan is intended to provide broad and strategic direction for the

management of park resources. *Effects, therefore, are documented in general terms but are related to the descriptions of the resource opportunity areas previously described.*

By their very nature, the design of existing park facilities and developments depend on close associations with surrounding ecosystems. Instead of seeing these resources from the outside looking in, similar to a visitor touring a museum, park visitors *interact* with park resources and neighboring ecosystems. From this, visitors develop a better understanding, awareness, and appreciation of the delicate balance that adjoining ecological systems play in contributing to the park experience.

To fulfill the mandate that requires the NPS to provide for visitor use and enjoyment of the park means change in the ecological systems is inevitable. As a practical means of anticipating and minimizing negative impacts of future use and developments, this section is intended to document impacts and suggest possible mitigation for any negative impacts. Impacts are divided into three sections—impacts to natural resources, cultural resources, and social environment.

NATURAL RESOURCES

SOILS/GEOLOGY/TOPOGRAPHY

Examples of geological history and evolution can be seen for a period of over 1.7 billion years in the park canyon as visitors access the canyon bottom via routes characterized in the Way In Resource Opportunity Area. The Guene River channel typifies an active, down-cutting stream. Its decreased rate of activity is due to a lack of sediment load in the stream flow and a reduction in peak springtime flows resulting from regulated flows from upstream dams. Weathering and erosions continue to be the main geologic processes, whereas plate uplift may have ceased. Most of the rocks identified are Precambrian, metamorphic, or igneous, which are very resistant to erosion. The North Rim shows ridges of sedimentary rock with nearly vertical, bare bedrock walls. The South Rim displays sedimentary rock with gentler slopes and additional side canyons. Both Rims have thin soils and exposed bedrock and can be affected by increases in visitor traffic.

Alluvial outwash occurs along the canyon floor, particularly at the mouth of the side canyons and along the mainstream where backwater deposits develop. A variety of vegetation on the canyon floor has resulted from side canyon and isolated soil deposits.

Canyon rim elevations range from 7,400 to 9,040 feet above sea level and the canyon floor elevation is approximately 6,000 feet above sea level. Canyon walls are 2,200 feet above the river, varying from steep sloping ridges with deep side

canyons to vertical Precambrian rock walls. Generally, the canyon rim is gently rolling, interrupted by cuts of steep side canyons. Because of the precipitous walls, no constructed or maintained trails exist from the rim to the canyon floor. Eight or more access routes exist, and all are subject to rock slides, debris flows, and flooding. The foot trail to the river is available at the East Portal located within Palvera National Recreation Area. At lower flows, access is less restricted, and visitors prepared for rigorous inner-canyon travel, including wading and swimming in the river, can hike the entire canyon.

Impacts of Alternative B. The most direct impact from this alternative would be the potential increase in visitor traffic in developed areas and along trails. The impacts to soil can be directly and indirectly caused by continual and increased use of the resource. They include soil compaction, soil erosion, and loss of soil permeability. Changes in the aforementioned soil conditions could occur after development of areas on the South Rim were completed in alternative B. Effects on the North Rim would be minimal. In the long term, any new public facilities would support recreation and educational activities to increase awareness of the park's resources and to help mitigate future resource impacts. In the short term, geographic and topographic alterations would occur if facilities are developed. Impermeable structures such as new roads, trails, and buildings would completely or partially eliminate direct inflow of water to soil.

Acreage designated for development in alternative B totals 1 percent of the park.

More facilities may be placed on the South Rim, allowing increased visitor use and creating the potential for more resource impacts on the soils of the area.

To counter this potential, a monitoring program would be implemented when facilities were developed.

Visitor traffic could affect the sedimentary base in the Cliff Top Resource Opportunity Area. The Developed Management Prescription calls for visitor facilities to be constructed in areas where there are less than 15 percent slopes to minimize the soil erosion created by foot traffic. There may be provisions to harden trails and encourage visitors to stay on maintained trails where impacts can be anticipated. Special trail design methods would also be used in high-slope and soil-erosive areas.

The Way In Resource Opportunity Area provides for hiker access routes to the canyon bottom. Although these routes already have natural erosion and loose rocks, significant increases in visitor traffic would increase soil erosion and rock slides. These areas would be carefully monitored in all alternatives. Soil erosion and rock slides would be likely impacts from long-term use without mitigation measures in place.

Buildings, roads, trails, and parking area site preparation would result in soil addition or removal and destruction of soil structure. Removal and displacement of topsoil would occur where pavement and buildings are located and utilities or other facilities are installed. Foot traffic in and around campgrounds, picnic areas, and interpretive facilities would affect soils.

The most common impact on soil is compaction, which lowers permeability, changes the soil moisture, and decreases water storage capability.

As a result, water transmission within soils would decrease, and surface runoff and soil erosion would increase. Continual trampling could gradually diminish topsoil and increase ground exposure to wind, rain, and hail. Flat and slightly sloping areas could erode, and channeling of the soil could take place. In the short term, disturbed soil from construction would temporarily undergo rapid erosion. In the long term, when drainage structures are in place and fully operable and topsoil restored, the soil would be protected and preserved. Measures to decrease topsoil impacts would include carefully design and landscaping and retaining and replacing topsoil where needed. Topsoil replacement is done to conserve available organic matter and to replant with original vegetation. Careful and continuous monitoring would be done to mitigate impacts. Alternative B balances the issues of resource preservation and visitor use through the amount and type of development and mitigation measures it proposes.

VEGETATION

A number of ecological niches exist in the park because of topographic variation, soil developments, and exposure to sun and wind. The rims of the canyon are mostly scrub oak and pinyon/juniper forests, with patches of high desert sagebrush communities. Two sizable pinyon pine and juniper groves exist, one on each rim at 8,000 feet. Within these groves are many

large, old pinyon pines, some of which are dying from an unknown cause. The north slopes of the canyon have conditions that favor the Douglas fir and spruce/fir groves found there. Deciduous trees and shrubs along the river are characteristic of river strands in the region. Generally, plant communities are stable, healthy, and show no signs of disease or insect plague. Limited public access to a large portion of the park has kept human impact to a minimum, but some disturbance can be seen in wilderness camps at the river's edge. Some areas of the park contain identified relict plant communities worthy of further study.

Riparian plant communities are influenced by variations in river flow, which is controlled by upstream reservoirs. Before the reservoirs were built, the canyon experienced periodic flood flows as high as 32,000 cubic feet per second that limited establishment of riparian vegetation or created open vistas from the river bottom.

Impacts of Alternative B. Damage to vegetation is also linked to increases in visitor traffic. Direct and indirect impacts to vegetation communities occur when foot traffic in and around campgrounds, picnic areas, and interpretive facilities develop. Common impacts to vegetation include the introduction of exotic species, creation of corridors for exotic species invasion, and altered or destroyed vegetation and nutrient flows. Developments would threaten vegetation communities dependent on soil-rich nutrients, soil permeability, and undisturbed environments. Alternative B would allow for 621 acres of developed

land in a Developed Management Prescription. The potential effects on vegetation from increases in visitor use are similar to the effects on soils.

The Cliff Top Resource Opportunity Area, the Way In Resource Opportunity Area, and the Canyon Backdrop Resource Opportunity Area vegetation (especially flora close to new visitor and administrative facilities) along both rims could be trampled, altered, or eliminated by use. The vegetation along the canyon access routes (Way In ROA) typifies a moister, shadier environment and is sensitive to disturbance. The scenic background of the Canyon Backdrop ROA is sensitive to the placement of the developed sites and the effects of visitor use that future development could pose.

The Cliff Top Resource Opportunity Area along the canyon rim, whose width varies from 5 to 200 feet, would be impacted most by increased use. To mitigate impacts, flora near overlooks, trails, and interpretive facilities could be replaced by use-tolerant species. The Way In Resource Opportunity Area contains the access routes from the rims to the river. Vegetation impacts along access routes could eventually spread to adjacent plant communities. The Developed Management Prescription within each ROA could encourage exotic species introduction of Canadian thistle and tamarisk through vehicle transportation and foot traffic. Exotic species and exotic species corridors could be introduced, carried in on visitor clothing.

Without appropriate site design and resource monitoring, developments could eliminate flora within the Canyon

Backdrop Resource Opportunity Area. Careful monitoring must be provided in these areas to deter overuse. Within the River Resource Opportunity Area, a comprehensive riparian and watershed report is being completed to address the effects and impacts of river use. When complete, it would be used to establish baseline information on the mitigation measures for monitoring use.

Campgrounds, picnic areas, trailheads, buildings, and scenic attractions would experience impacts from visitor traffic. Eventually, soil erosion would occur from destruction of plant communities. As soil continues to erode, tree and shrub roots may be exposed, resulting in the death of more mesic plants. Soil compaction from foot traffic may destroy sprouting and reproduction of certain plant species. Various impacts from trampling could result in a lack of vegetation communities, slight changes in species composition, reduction in shrubland grasses and low plants, and an increase in grassland annuals and quick-spreading perennials. Long-term effects from trampling could eventually decrease vegetation and increase bare ground exposure. Rainfall and wind further erode the soil and create soil channeling even on slightly sloped areas.

Measures that would be used to preserve native vegetation are careful design and landscaping for disturbed area restoration, retaining topsoil before utility installation or other construction activities occur, reseeding the topsoil after facilities are developed, and continuing monitoring and reseeding of disturbed areas.

Partnerships to protect the resource and help with visitor protection are common threads in all of the alternatives as is a defined monitoring program and evaluation of impacts during the time of site-specific design.

FLOODPLAINS/WETLANDS/WATER QUALITY

Water resources and the adjacent floodplain exist in nature in a state of dynamic equilibrium. If one riverine area is disturbed, a chain reaction could occur within the entire system until it readjusts to a new equilibrium. Above the park, a series of three dams controls flows of the Guene River.

The Guene River flows range from 300 to 600 cubic feet per second. Natural floods on the canyon floor are nonexistent due to three major upstream impoundments such as Crystal Dam, one and a half miles from the park boundary. Large seasonal and daily fluctuations can occur as a result of great variations in releases by the impoundments. Extremes have measured from over 10,000 cubic feet per second in the high runoff years of 1983–1984 to a minimum of 200 cubic feet per second, with average flows ranging from 1,600 to 2,000 cubic feet per second. Silt transport and driftwood replenishment are severely reduced because of the effects of the impoundments. The fluctuations do affect the river strand, the gravel and sand bar configuration, and the fish habitat, however, no data is available on the morphology or ecology of the river since the cessation of natural flooding. Throughout the canyon, the river floodplain is narrow, and within the park, it is usually nonexistent.

The Guene River water quality is high, supporting an excellent trout fishery. Natural sources of water that could be treated for public consumption are not available in the park; therefore, potable water from Makin and Crawfish must be hauled into visitor-use areas. Visitors must transport their own water supply into the canyon or treat surface water, which may contain *Giardia*. Flows affecting the water quality are directly tied to flow regulation at the Guene Tunnel. Year-round diversion of water affects turbidity, oxygenation levels, and the temperature of the water in the Guene River.

The Guene River is designated by the State Division of Wildlife as "Gold Medal Fishing and Wild Trout Waters." Although it is an excellent cold-water, game fish habitat, limited access, unscheduled daily fluctuations in stream flow, and nearly impossible navigation of the canyon floor have kept visitor use low. Navigating distances greater than one mile at flows above 600 cubic feet per second make boating difficult and challenging because of large boulder fields in the river bottom and very dangerous rapids (e.g., the river drops at an overall rate of 95 feet per mile and at a rate of 480 feet in the 2 miles between Pulpit Rock and Chasm View). Historically, only a few river kayakers and even fewer rafters have traversed the river. Increasing popularity of inner-canyon hiking, boating, and excellent fishing is attracting more visitors to this wilderness area. Wilderness campsites at the end of rim-to-floor routes provide overnight camping in the canyon for hikers and fisherman. Boaters generally

use less-accessible locations but may use the facilities at these designated sites.

Impacts of Alternative B. There would be no impacts on the floodplains from National Park Service developments and facilities. None of the alternatives would significantly affect the water resource values of the floodplain connected to the natural moderation of floodwaters, water quality maintenance, and recharging of groundwater. Living resource values would not be affected by the alternatives of the *General Management Plan*.

There is a series of three dams above the campground area. Adequate visitor protection needs to be provided in the event of flooding caused by dam failure. If a dam fails, flooding would affect some visitor facilities and the visitors who are using them. Based on the Bureau of Reclamation's 1991 Emergency Action Plan for Dam Failures, visitors would have thirty minutes to evacuate from picnic sites and wilderness campsites if Crystal Dam or Morrow Point Dam should fail. If Blue Mesa Dam were to fail, visitors would have ninety minutes to leave the park.

All action alternatives (B, C, and D) allow for the expansion of development along roads within the developed management prescription. These developments could be washed away within the East Portal area, but the likelihood of a dam failure is remote. If one did occur, high flows could have an effect on the Cliffs and Inner Canyon Resource Opportunity Areas due to the water rising to 1,133,000 cubic feet per second according to the Emergency Operation Plan. This could partially immerse the cliff walls along

with the plants and shrubs that grow on them. Fins and dikes of granitic rock could be partially submerged by floodwaters, and protected relict plant communities growing on the rock islands could be submerged or washed away.

Within the canyon, if dam failure were to occur, all trails above the 7,400-foot level would be immersed in water, and all riparian resources included within the River Resource Opportunity Area would be under water and out of sight. Visitors using park resources above the canyon floor would be safe from dam failure; but river recreationists such as boaters, fishermen, and rock climbers would be in danger from floodwaters.

The Bureau of Reclamation's (BOR) 1991 Emergency Action Plan for the Aspinall Unit covers emergency procedures in case of dam failure and is part of the standing operating procedure for each dam. It outlines the steps Bureau of Reclamation and park personnel would take during an emergency situation. Visitors would be asked by park staff to leave the area, and trail users above 7,400 feet would be notified to evacuate.

Emergency information brochures would warn visitors, boaters, and campers of exit routes in case of flooding. Other mitigation measures include interpretive programs to inform and demonstrate what would happen if dam failure were to occur.

All action alternatives provide plans for a database that tracks water-related data and is later used to guide management decisions. Interpretive programs to educate the public on water

development and prepare visitors for flood emergencies would be provided in alternative B. In alternatives B and D, additional emergency training would be provided to the staff for responding to future life-threatening situations.

AIR/VISUAL QUALITY

Since the park is a Class I airshed, the vitality, significance, and integrity of many park resources are dependent on good air quality. The park includes many scenic views that are important resources. The Environmental Protection Agency visibility regulations gave the Secretary of the Interior an opportunity to identify scenic views from Class I areas that were integral or important to the park visitor's visual experience.

Regulations require that states include these area vistas in evaluations for clean air and to weigh the costs and benefits of preventing visibility degradation to those vistas before deciding to allow new air-pollution sources within them. By law, maintaining pristine air quality as part of the Class I airshed is an important objective for the park. The park did complete a list of integral vistas in 1980.

Observation points were Guene Point, Chasm View, High Point, and Warner Overlook, and the vistas included the North Rim, the West Elk Mountains, the Lower Guene Gorge, and the Valley. Draft guidelines and a preliminary list of integral vistas were published in the *Federal Register* in January 1981 (46 FR 3646) and April 1981 (46 FR 23389). The list of vistas was also given to the state. The National Park Service was directed by the secretary to work cooperatively with states to ensure protection of these scenic views.

Recently the Department of the Interior's Assistant Secretary for Fish and Wildlife and Parks notified the Environmental Protection Agency that there is existing visibility impairment in the park caused by regional haze. Concerted community efforts to attract industry to the nearby Valley (upwind) call for continued and expanded monitoring because bringing more industry to the area would likely result in a further decline in air quality.

Impacts of Alternative B. Visitor experience is directly affected by air and visual quality. Lands affected include sensitive resource opportunity areas that require clean air and clear views of the resource (the Panoramic Vistas, the Canyon Backdrop, and the Cliff Top) to help provide visitors with a quality experience. Air pollution can interfere with a visitor's enjoyment of the park. This can occur even when pollution concentration levels are at or below the National Ambient Air Quality Standards. Industrial air pollution from the west is far removed but can still negatively affect the visitor's panoramic views of the park.

Mitigation and monitoring measures include the use of a camera to monitor air quality, the installation of vehicle emission-control systems on new vehicles, the application of water or other dust palliatives on construction sites to reduce dust particles in the air, improvements on unpaved roads, and operations completed within state and federal compliance on air quality standards.

The camera used in air quality monitoring was not funded in 1994, therefore, no monitoring is taking place, and photographs from the camera are

not adequate to detect air quality changes. Due to increased visitor use, there is rising concern about the effect of auto emissions. The automobile industry is now installing new models with emission-control systems and older models are being phased out. Noise and dust from construction projects would temporarily add to pollution without the use of water or dust palliatives. Upgraded roads would temporarily stop dust particles from polluting the air. Eventually, continual use of paved roads would create impacts to adjacent vegetation and soil and air quality. Visitors who want to view the resources may stop and park on the side of the road. The crushing of vegetation and eventual soil compaction and erosion from vehicles would cause dust to enter the air.

When construction occurs, temporary effects would occur from heavy equipment emissions, excavation of aggregate material, material crushing and processing, and asphalt production. All operations under state and federal permits would comply with air quality standards. Dust plumes would be visible from nearby access routes during operation of the construction site. No measurable effect outside of the construction corridor is anticipated.

The park would continue to comply with state and local air quality requirements as funding levels permitted. An effort would be made to work with the U.S. Forest Service and the state to establish a Class I air monitoring program. Alternative B plans to expand partnership strategies to create an advisory group of public and agency participants who

would recommend short- and long-term plans to address regional recreation use and resource protection.

NATURAL QUIET

Natural quiet is an important attribute of a visitor's wilderness experience at the park. No data is currently available to document the effects of sound on experience, although low-flying aircraft have occasionally created visual and auditory intrusions.

Impacts of Alternative B. To monitor and mitigate noise pollution, two sound monitors were installed in the park in 1993 to help develop new sound monitoring programs for resource protection. Park staff continues to work with the Federal Aviation Administration (FAA) to make pilots aware of the ceilings required to help protect resources and prevent low-level overflights.

WILDLIFE/THREATENED AND ENDANGERED SPECIES

Wildlife typical of the park's geography and elevation include large mammals such as mule deer (black-tailed), black bear, bobcat, elk, and an occasional cougar. Bighorn sheep are native and were introduced on Bureau of Land Management lands west of the park in 1985. Individual sheep, probably from this transplant, have been observed in the downstream areas of the park. River otter were reintroduced at the east boundary of the park and are seen along the Guene River. Small mammals include a variety of rodents such as porcupines, squirrels, and yellow-bellied marmots. The cliffs have attracted a significant raptor population including golden

eagles, bald eagles, prairie falcons, peregrine falcons, northern goshawk, and many migrating birds of prey. A substantial population of swift hawks and swallows favor the same steep walls as nesting sites.

The upstream water impoundments have dramatically altered the historic fish populations. The native species of cutthroat trout, squawfish, bonytail chubs, and razorback suckers have been replaced by rainbow and brown trout. The excellent conditions for trout growth have led to the designation of the river as a Gold Medal Fishery.

According to the U.S. Fish and Wildlife Service (January 19, 1995), the endangered bald eagle (*Haliaeetus leucocephalus*) and the endangered peregrine falcon (*Falco peregrinus anatum*) reside within and near the canyon walls. Other species that may be present in the project area include the southwestern willow flycatcher (*Empidonax traillii extimus*), humpback chub (*Gila cypha*), bonytail (*Gila elegans*), squawfish (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), and the clay-loving wild buckwheat (*Eriogonum pelinophilum*).

The U.S. Fish and Wildlife Service also stated that several candidate species could occur within the park; the North American wolverine (*Gulo gulo luscus*), northern goshawk (*Accipiter gentilis*), loggerhead shrike (*Lanius ludovicianus*), white-faced ibis (*Plaegadis chihi*), flannelmouth sucker (*Catostomus latipinnis*), roundtail chub (*Gila robusta*), Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*), Colorado desert parsley (*Lomatium*

concinnum), and adobe beardtongue (*Penstemon retrorsus*).

Impacts of Alternative B. Concurrent with the new approach to planning, the National Park Service, to comply with Section 7, would continually coordinate with the U.S. FWS as more detailed planning and design is carried out. At the beginning of each new planning effort, a current threatened and endangered species listing would be requested to check for newly listed species possibly affected by the plan.

A National Park Service biologist has determined that there would be no effect on the endangered bald eagle (*Haliaeetus leucocephalus*) or the endangered peregrine falcon (*Falco peregrinus anatum*). In addition, there is no evidence that other endangered species would be affected by prescriptions allowing development. This includes the southwestern willow flycatcher (*Empidonax traillii extimus*), humpback chub (*Gila cypha*), bonytail (*Gila elegans*), Colorado squawfish (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), and the clay-loving wild buckwheat (*Eriogonum pelinophilum*). *Further environmental documentation would be required as site-specific plans are developed.*

Use of areas along the river and in the cliff areas could conflict with the habitat of falcons and eagles. Some areas could be closed to visitors during this season to avoid possible impacts to this population.

Code of Federal Regulations (CFR) management guidelines and policy authorities would be used in such circumstances. The park staff and the State Division of Wildlife have been

researching and banding the resident peregrine falcons. When minimal disturbance is necessary, human activity has been decreased in peregrine nesting sites.

CULTURAL RESOURCES

ANCESTRAL RESOURCES

Thirty-nine archaeological sites generally associated with the Ute Tribe and classified as temporary camps have been identified in the park. Most are remote from visitor-use areas, and their locations are not generally public knowledge. Until more survey work is done, none of the sites is considered critical. The continued policy of allowing a site to remain "as is" seems to provide the best protection from impairment. The new area added to the park by Public Law 98-357 needs to be evaluated for cultural and archaeological resources.

At highly accessible overlooks, campgrounds, and picnic areas, the unauthorized collection of plants and American Indian artifacts and feeding of wildlife are minor problems.

Impacts of Alternative B. There would be no impacts on known cultural resources from National Park Service facilities and developments. Currently, partnerships continue to be created with local organizations to share the responsibility of the park's resource protection program. Presently, the park does not have an active program to expand the interpretation of cultural resources.

Construction of buildings, parking lots, trails, and placement of signs would unearth and damage buried cultural

resources. Construction equipment and activities could compact the soil and alter horizontal and vertical distribution of buried cultural remains. Information extracted from the soil and the position of artifacts would be lost to archaeological research. The use impacts of visitor facilities would directly and indirectly impact cultural resources important to ancestors of the original inhabitants as well as archaeologists. Use would leave adjacent cultural resources vulnerable to vandalism and inadvertent damage.

The absence of direct backcountry resource protection by park personnel would have an effect on cultural remains. Digging, collecting, and selling of these resources would be illegal. Grazing activities on scenic easement lands would have indirect impacts on cultural resources as livestock create surface disturbances to vegetation, soil, and cultural resources. Soil erosion would lead to cultural resources being washed away by rain or exposed to trampling, breakage, scattering, and natural deterioration.

To mitigate any foreseeable impacts to cultural resources in alternatives B, C, and D, a search for resource protection strategies with an advisory group of public and agency participants would be done. Future cultural resource management would emphasize preservation and stabilization, which would include research and study and developing a new interpretive program. Ranger operations would increase to enhance the protection of resources while serving the public, and mitigation and monitoring efforts would extend to

include consultation with federally recognized Ute Tribes to identify and locate visitor conflicts and make future management recommendations.

All lands not surveyed would be examined by qualified professional archaeologists for cultural remains prior to any land-modifying activity. Cultural resources affected by plans would be investigated, recorded/mapped, and run through sampling, collecting, and testing. Newly discovered or unrecorded cultural remains would undergo the same processes before earth-disturbing activities continue. *Further environmental documentation and Section 106 compliance would be required as site-specific plans were developed.*

HISTORIC RESOURCES

Four WPA/CCC-era buildings remain in the park although one was moved from its original site and altered many years ago. The other three are on the North Rim and consist of two 1930-era Quonset huts and a 1930-era cookhouse. The Rim House concession building was constructed in 1950 and has been modified by expansion twice in the last thirty years. The other structures in the park are either temporary (house trailer) or have been built or extensively modified within the past ten years. Some of the trails and overlooks were constructed by CCC labor as were portions of the North and South Rim roads. This construction was evaluated for historic value, and determination was made that the North Rim cookhouse, North Rim road alignment (and associated rock face culverts), and the rock wall supporting the road were

historically significant. On the South Rim the Devil's Overlook and Pulpit Rock areas were historically significant. On both rims the historic significance was related to CCC development and early park history.

Impacts of Alternative B. Alternative B plans for the removal or possible adaptive use of the old National Park Service complex near Kneeling Camel. Adaptive use usually calls for the preservation or restoration of a building facade and the conversion of the interior to a modern, functional space. Original fabric is retained wherever possible. Adaptive use could result in changes in quality or understanding of those aspects that qualified the resources for entry on the National Register.

Moving a historic structure has the adverse effect of destroying its site integrity and also the integrity of any grouping of buildings or landscape it helps to compose. Monitoring and mitigation measures would include interpretive/educational programs to prevent damage from overuse, converting the structure for use in order to preserve it, and relocating to a site with similar terrain, vegetation, and neighboring buildings. If removed, documentation of the site, the building, and orientation would be done. *Further environmental documentation and Section 106 compliance would be required as site-specific plans are developed.*

COLLECTIONS

Objects are defined under Museum Collections as material things possessing functional, aesthetic, cultural, symbolic,

and/or scientific value. They are usually movable by nature or design.

The museum collection consists of a variety of artifacts, including a herbarium, natural history specimens, geologic samples, a few historic objects that relate to early exploration of the canyon, archeological collections, and archival material. Most of the archeological items are in storage at the Midwest Archeological Center in Lincoln, Nebraska, and many of the photographs and some archeological objects are in storage at the Western Archeological and Conservation Center in Tucson, Arizona. All these items need proper cataloguing, storage, and conservation work to satisfy standards. To handle the materials in storage, seasonal museum curators were hired in 1988 and 1989 to begin cataloguing and to properly care for the collection. A separate room in the South Rim ranger office was dedicated to museum collections storage, and a deadbolt lock was installed on the door. As a result, the artifact storage and record-keeping has been greatly improved, but still does not meet NPS standards. A scope of collections statement was completed in 1986 and is used as a guide to determine which objects should be added to the collection.

Impacts of Alternative B. Alternative B plans a new or improved visitor center and repository to catalogue, store, and perform conservation work to satisfy National Park Service standards. The museum collections would be relocated to an environmentally stable area sufficient in size to house the collection. Attempts would be made to secure

project money or to recruit interns trained in museum sciences to complete conservation and cataloguing of the materials. Alternative B would lessen the impacts to the resource, but is expected to be more costly.

ETHNOGRAPHIC RESOURCES

Ethnographic resources pertain to those resources that have traditional subsistence—sacred, ceremonial or religious, or other cultural meaning—for members of contemporary, park-associated ethnic groups, including American Indians. The ethnographic resources of the park have not been clearly identified and documented, even though ethnobotanical information and Ute legends have been included in interpretive programs.

Early park history whispers the name of the first occupants of the park, the Folsom complex, characterized by their utilitarian tools. Subsequent occupants were the Plano complex, the Archaic complex, the Upvalley complex, and the Ute complex. The variations among each complex occur in stone tool technology, use of modern game species, the environment, and the change of lifestyle. These original occupants' culture and lifestyle are so similar to the Ute Tribe that it can be inferred that they are closely related.

Many small, temporary campsites located in the vicinity of Blue Mesa Lake along the rims of the park apparently are related to this late prehistoric and early historic occupation. "In 1880 after the Meeker Massacre (in which they played no part), a government treaty council forced the Upvalley to sell all their land.

Under armed escort they were then moved to an area just south of the Uintah Reservation in Utah where new reservation was established by executive order in 1882 and named Ouray after the Upvalley chief" (*Handbook of North American Indians, Vol. #4*).

The Ute Tribes continue to use the park for cultural purposes in spite of their forced removal to a reservation by the government. As a result, possible vision sites and other sacred areas still exist within the park. Continual consultation with the Ute Tribes is presently being done on an as-needed basis.

Impacts of Alternative B. At the present time, no ethnographic surveys have been done for the cultural groups who occupied the park. New interpretive programs would be developed in alternative B, and future consultation with Ute Tribes could include completion of an ethnographic survey. No oral histories that typify the area's American Indian culture have been recorded. This could be completed before Ute tribal elders take the Spirit Trail. Possible efforts to do ethnographic surveys could be completed by Ute tribal members through possible future contracts or agreements with the National Park Service.

Alternative B would continue consultation with the Ute Tribes regarding vision quest and other sacred areas to monitor and mitigate possible impacts of visitor traffic.

SURROUNDING LANDS AND LAND PROTECTION

There are limited impacts on resources and visitor enjoyment because of the rural location of the park, the park's undeveloped quality, and the stable economy in the region. The scenic viewshed is expansive, and development within the view of the park on either rim would impair scenic values. Public Law 98-357 of July 13, 1984, provides for protection of the North Rim viewshed; but there is no comparable protection for the South Rim viewshed.

The scenic viewshed of the North Rim includes 2,000 acres of private lands within the boundary. The private lands are covered by the stipulations within scenic easement purchases. Management of these lands requires oversight by park staff to ensure the conditions of these scenic easements and the legal obligations of Public Law 98-357 are met. The park is responsible to the private owners to ensure that their interests as private landowners within the boundaries of a national park area are not infringed upon by the visiting public. Most of the park boundary is adjacent to private lands, which are presently used for hunting, grazing, and ranching operations. Property values are increasing, and the area is becoming better known for summer and year-round homesites. The character of the surrounding land is changing and will require more intensive management by the National Park Service. A few of these residences are already present along the North Rim boundary.

A 120-acre private tract borders the East Portal Road and is visible from the entrance and campground roads. This tract of land does not have a scenic easement and faces the risk of being developed. If development occurs and is done in an inappropriate manner, it could severely impact the park resources.

Livestock encroachment on areas of the park is becoming an increasing problem affecting the vegetation complex of the park.

Impacts of Alternative B. Alternative B would require an advisory group to recommend short- and long-term plans that address regional recreation use and resource protection. This would set the stage for further public and agency involvement to monitor and mitigate impacts of surrounding land developments, especially encroaching rural developments on the South Rim.

REGIONAL CONTEXT AND SOCIOECONOMICS

REGIONAL LAND USE

The park is on land administered by the National Park Service with the exception of one privately owned, 120-acre tract of land on the South Rim. The park shares its eastern boundary with the Palvera National Recreation Area. This area provides a Ranger Station, camping facilities, fishing area, and limited access to the park via the canyon floor at the Palvera East Portal site. Downstream to the West, the Bureau of Land Management (BLM) manages its designated area known as the Guene Gorge Special Recreation Area. The

Bureau of Land Management's emphasis is creating recreational opportunities such as backcountry hiking and camping, commercial and private river floating by raft or kayak, and fishing.

The majority of the land uses surrounding the park include open range livestock grazing and sport hunting during the big game season. Although many of the adjacent landowners now lease their property for the big game hunting season, there is an increasing use for recreational and rural homesites. In addition to private land, there are interspersed quadrants owned and administered by the Bureau of Land Management.

The Guene River is a major source of irrigation and hydropower in the area, irrigating 50,000 acres in the Valley. The Dallas Creek Dam is located south of Makin at Ridgeway and supplies additional water for irrigation as well as water-based recreation in the Valley.

The surrounding towns are Makin, Grand, Crawfish, Dove, Ouray, and Cimarron. The town and county seat located closest to the park is Makin. Grand is 62 miles west of the park and is the largest city, with a population of 95,000. The total population for Grand County is 103,000.

Impacts of Alternative B. Information exchanges would continue with local organizations. Alternatives B addresses regional goals and issues by pursuing strategies for creating partnerships.

The partnership group and/or future friends group would continually work together to address regional concerns. Depending on the degree of effort, regional promotional efforts could increase tourism and profits. The Visitor Experience and Resource Protection (VERP) program would provide the necessary resource evaluation studies for monitoring and mitigation and protect resources from overuse.

TRANSPORTATION/ACCESS

The park is in west-central "State," 15 miles east of Makin via U.S. 50 and State 347. Airlines and buses serve Makin, 15 miles west of the park, and Grand, 62 miles west of the park. Rental cars are available in both places.

In order to get to the North Rim of the park from Makin, use either U.S. 50 east and State 92 west through Palvera National Recreation Area to Crawfish; or use U.S. 50 west and State 92 east through Dove to Crawfish. From Crawfish, a gravel road leads to the North Rim.

Impacts of Alternative B. Alternative B calls for new trails and additions to existing parking areas. Therefore, the impacts to transportation and access in the park unit would be minimal. For instance, the Developed MP of alternative B has allocated 1 percent of the total 32,066 acres of land for possible future developments. This is 0.9 percent more than allocated in the no-action alternative. The development of new trails could provide visitors more opportunities to enjoy the resource by creating a sense of security and by making the resources more inviting.

An increase in visitor understanding, awareness, and appreciation of the park resources could result in an increase in visitor satisfaction from the development of new trails.

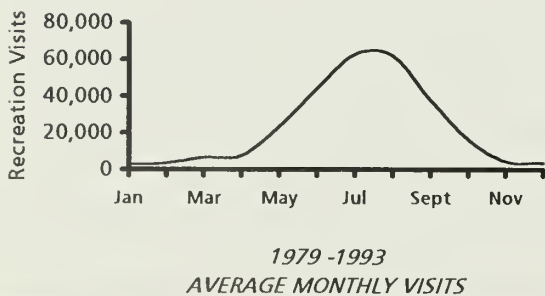
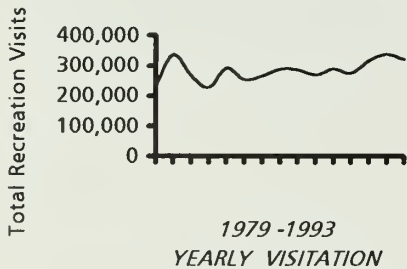
VISITOR USE AND EXPERIENCE

Visitation figures for the park are shown on the graphs below. Peak visitation occurs in July and August. The main visitor season runs from Memorial Day through Labor Day. Area visitors participate in a variety of activities, including camping, general sight-seeing, picnicking, hiking, backpacking, bicycling, fly fishing, kayaking, rock climbing, and attending interpretive programs. A few of the facilities meet ADA (American Disabilities Act) standards, accommodating a wider range of users.

The majority of visitors spend only a part of the day stopping at overlooks and the visitor center, walking a few trails, learning a little bit about how the canyon was formed, and enjoying the wildlife and magnificent scenery. Those that camp, on average, spend only one night.

Although return visits are common, many are first-time visitors. Those looking for hiking opportunities may enjoy the many shorter trails on the South Rim, but the North Rim offers greater challenge for rim trails. Hikes into the inner-canyon are very strenuous, and may not meet the needs of many visitors. Fishing the Guene River is a popular activity for those hiking to the river. The State Division of Wildlife classifies this stretch of river as Gold Medal Waters, with some of the best fishing in the state.

Many visitors use lodging, restaurants, and services in nearby communities. The value of these recreationists and sight-seers to the local economies is great. Statistical analysis using the NPS Money Generation Model (Socioeconomic Studies Division) was applied using 1995 input data. Through this modeling, estimates can be made of benefits to local economies. Assumptions of the model include direct expenditure by visitors in the local market, indirect and induced benefits from these expenditures, purchases by government and through salaries of government employees, expenditures by and through commercial services, benefits derived through state and local tax structures, and the number of jobs supported by all of these elements. Results from the 1995 Money Generation Model are:



- Total visits: 221,100
- Total Combined sales: \$12,275,973
- Total Increased Tax Revenue: \$1,081,710
- Total New Jobs Created: 307

Impacts of Alternative B. Since the alternative B theme is to encourage visitors to enjoy canyon depths from above, there would be more developed opportunities on the South Rim than on the North Rim. Within the Cliff Top Resource Opportunity Area, both rims would give the visitor viewing opportunities within a range of social settings, ranging from a very developed recreation opportunity to a more primitive recreation opportunity.

Since there may be more interest in viewing the canyon from above at a universally accessible location, impacts to soil and vegetation and wildlife could be less frequent because of those few who are interested in hiking down to the river. Since 90 percent of park visitors are day-users who stay an average of four hours, developed visitor facilities would carry most of the visitor traffic impacts along the South Rim. Panoramic viewing by automobile is the primary method for using park resources, and interpretive trails near developed overlooks would absorb much of this impact.

Developed recreational opportunities would be emphasized along the South Rim, whereas the North Rim would provide for primitive experiences. A future Visitor Resource Protection Plan and Backcountry Plan would be

developed to ensure visitor and resource protection from inner canyon and backcountry use. Rock-climbing activities are increasing along with efforts to prevent resource damage and human injury. Backcountry wilderness use also must be controlled and monitored for the same reason.

VISITOR SERVICES

Visitor Services include a visitor center, two campgrounds (one on each rim), overlooks along the South Rim road, trails, and backcountry use by permit only. The North Rim area is managed for primitive backcountry opportunities, whereas the South Rim offers more developed opportunities. Roads to view each rim are also available to visitors.

Impacts of Alternative B. Impacts to visitor services would include expanding opportunities for visitors who come to enjoy the park resource for a variety of reasons. Use of access routes to the river resource could increase as rock climbing becomes more popular. Panoramic viewing opportunities may become a more popular pastime for those who drive canyon rim roads or who are unable to use other recreational opportunities. As recreational opportunities increase, the impacts to the resource could increase without effective monitoring and mitigation measures.

PARK OPERATIONS

Park operations would continue at the present levels with an emphasis on protecting resources, serving the public, and responding to incidents as they occur. The park staffing level of 14.8 full-time equivalents operates with an annual budget of \$670,800.

Park administrative, management, and operational functions are sometimes shared with the adjacent park unit. The administrative office is outside the park in Makin, Colorado. Current permanent staffing for the monument is as follows:

CURRENT STAFFING

Function	FTE
<i>Perm. Staff</i>	
• Administration	2.0
• Concessions	0.1
• Resource Management	2.0
• Interpretation	1.0
• Visitor Protection/Fees	0.5
• Maintenance	3.0
<i>Seasonal Staff</i>	
• Administration	0.0
• Concessions	0.0
• Resource Management	0.8
• Interpretation	1.1
• Visitor Protection/Fees	2.3
• Maintenance	2.0

Impacts of Alternative B. Immediate and long-term impacts of the proposal include: 1) an increase in personnel and funding required for more interpretation programs, operation and maintenance from existing and new developments, staff emergency operations training, and law enforcement for additional services on the South Rim and in the wilderness areas of the monument; 2) an increase in construction activities and associated traffic would create small inconveniences to park staff and visitors. Traffic management and other short-term plans would be created to reduce disruptions and dangers to the visitors and park

staff. In addition, the short-term plans would allow for efficient and economical functions of the park unit to proceed; 3) an increase in solid waste could result from an increase in construction and replacement of buildings, day-use areas, and water and sewage systems; 4) an increase in the cost of waste disposal could also occur at the same time.

CUMULATIVE EFFECTS

Cumulative effects are defined as the aggregate impacts resulting from all other actions bearing on the same resource in addition to the proposal. Prior to future, more-detailed resource allocation actions, cumulative effects will need to be reassessed as a part of each specific planning and design project conducted in Phase III. The environmental assessment or environmental impact statement prepared for each planning and design project will identify other development actions that will be going on at the same time as the proposed action. Such projects will include those within the park and the adjacent area beyond the park boundary. Once these projects have been identified the plan will provide an overall assessment as to what the cumulative effects will be (localized, temporary, long-term, unknown, etc.) and what steps might be taken to mitigate impacts.

DEVELOPMENT ACTIONS

The following development actions would be occurring simultaneously or chronologically within the period of the General Management Plan. Compliance requirements would be completed prior to any of these actions.

- Minor improvements on existing facilities on the North Rim would occur.
- Viewing facilities on the South Rim would be maintained and improved.
- South Rim visitor center would be upgraded or a new visitor center would be constructed.
- Additions to existing parking areas would be done.
- Architectural theme enhancements would be completed.
- New trails would be constructed.

Other resource restoration and rehabilitation projects are also planned to be completed within the park over the life of this general management plan. Cooperative efforts with the state of "State," educational institutions, and other federal agencies would be continued in order to maintain, monitor, and preserve the natural resources and establish baseline data for future resource management.

Activities outside the park are occurring that cumulatively affect the collective ecosystem. They are listed as follows:

- Livestock grazing is considered one of the major land uses of the area surrounding the park unit.
- Planned housing development is occurring on a large tract of land near the South Rim entrance road.
- Private land adjacent to the park unit is used for hunting, grazing, and ranching operations.
- Property values are increasing and the area is becoming popular for summer and year-round homesites.

CONCLUSION

The cumulative effects of these actions within the park on most wildlife species are local to the project area. Although these localized effects appear temporary, the lasting effects are unknown. However, the small amount of development in the park is located within the development management prescription area and along roadways, areas that park wildlife have an awareness of and tend to avoid.

Nonmobile resources have the highest risk of being disturbed from the development of previously undisturbed land. To lessen this impact, all steps possible would be taken to mitigate any negative cumulative impacts. The first step is avoidance. If that is not possible, data recovery plans for cultural resources and restoration of wetlands and other natural habitats are planned. These steps would decrease the cumulative effects on the monument ecosystem. Most of the construction projects are short term and would not entirely disrupt visitor enjoyment of the monument during their entire visit. Accurate and timely information for visitors and area residents would help alleviate inconveniences.

BIBLIOGRAPHY

Include a bibliography of references used to prepare this document.

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