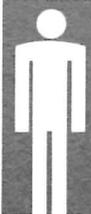


backcountry management plan  
and environmental assessment

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ARCHES



NATIONAL PARK / UTAH

FINDING OF NO SIGNIFICANT IMPACT

ARCHES NATIONAL PARK

BACKCOUNTRY MANAGEMENT PLAN

AND

ENVIRONMENTAL ASSESSMENT

The subject plan establishes guidelines for public use and agency management of the lands contained within the sections of Arches National Park identified as backcountry. A complete representation of alternatives and environmental considerations that went into selection of the final plan can be obtained by referring to the ENVIRONMENTAL ASSESSMENT, BACKCOUNTRY MANAGEMENT PLAN, Arches National Park.

The plan and environmental assessment have undergone public review. As a result of the public comments, a few minor changes have been included in the final plan; however, no substantive changes were required. The majority of public comments were supportive of the need for the plan and its content.

The plan, as approved, formalizes the procedure to be followed by the National Park Service at Arches National Park for managing backcountry areas of the park. No actions proposed are designed to protect the natural environment and maintain as natural a condition as possible while permitting public use. The plan does not constitute a major federal action significantly affecting the quality of the human environment, thus an environmental impact statement will not be prepared.

RECOMMENDED: Paul D. Macey DATE: 01/27/88  
Superintendent  
Arches National Park

Barney D. Dickerson DATE: 1/27/88  
Superintendent  
Canyonlands National Park

APPROVED: Lorraine Mitzinger DATE: 2-11-88  
Regional Director  
Rocky Mountain Region

BACKCOUNTRY MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT

ARCHES NATIONAL PARK

UTAH

Recommended by: Wanny R. Sims  
Acting Superintendent

9/10/87  
Date

Approved by: Lorraine Montgomery  
Regional Director

2-11-88  
Date

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ARCHES NATIONAL PARK  
BACKCOUNTRY MANAGEMENT PLAN

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ARCHES NATIONAL PARK  
BACKCOUNTRY MANAGEMENT PLAN

I. Introduction

A. Arches National Park

Arches National Park contains 73,379 acres, nearly 70,000 of which have been recommended as wilderness or potential wilderness. Arches is best known for the many natural rock openings it contains. It is thought that the park may contain the largest concentration of naturally occurring stone arches of any location in the world and one of the longest natural stone spans documented. While Arches is primarily known for its outstanding natural features, it also contains cultural resources in the form of archeological and historic sites.

The rocky high desert terrain requires careful management to maintain the fragile desert ecosystem. Hazardous terrain and lack of drinking water confront the backcountry visitor during most of the year. Overnight backcountry use and day hiking activity has been increasing over the last 10 years. The balance between plant and animal life and the environment is often a delicate one and easily disturbed.

Arches is administered as one unit. Access to many key features is readily available via 21 miles of paved roads and 11 miles of dirt and gravel two-wheel-drive roads. There are approximately 18 miles of four-wheel-drive routes and a limited trail system that penetrates the backcountry, but the vast majority of backcountry access is by way of unmarked hiking routes.

B. Objectives of the Backcountry Management Plan

1. To provide for visitor enjoyment and high quality backcountry experience compatible with the park's purpose and resources.
2. To preserve the natural and cultural resources, maintain ecological processes, and minimize the environmental impacts of visitor use in the backcountry.
3. To create an "action plan" to:
  - a. Guide the park staff in its day-to-day management of backcountry use.

- b. Identify and justify appropriate and necessary projects which should be incorporated in budgetary programs.

The three objectives are intended to be considered and applied jointly rather than assigning priorities to them.

C. Scope of the Backcountry Management Plan

The scope of this Backcountry Management Plan is subservient to and an extension of the General Management Plan. The General Management Plan planning process began in 1986 and the Backcountry Management Plan will be integrated into this overall management document. Revisions to the Backcountry Management Plan will be subservient to the Arches General Management Plan and complimentary to the Cultural Resource Management Plan, Natural Resource Management Plan, and Concessions Management Plan.

Backcountry defined: All lands and waters within the boundaries of Arches National Park will be considered as backcountry with the exception of:

1. Development and historic zones as identified in the Arches Statement for Management which was approved in 1985 and subsequent planning documents which might alter the 1985 plan.
2. Class "A" and "B" trails. These trails are limited to short, highly developed access systems suited to use by visitors with limited experience and varying physical abilities. They originate from primary, two-wheel-drive road systems and lead to key overlooks or points of interest.
3. Areas contained within two-wheel-drive corridors designated for general use by all categories of passenger vehicles. Dimensions for these corridors are defined as 150 feet from the centerline of paved roads and 75 feet from the centerline of non-paved two-wheel-drive roads unless a topographic feature provides a closer and more functional natural boundary.

Four-wheel-drive roads are included within the backcountry definition and will be managed as a portion of the backcountry system. The four-wheel-drive corridor is defined as the disturbed portion of the road and parking areas.

## II. BACKCOUNTRY MANAGEMENT SYSTEM

### A. Zoning Categories

Backcountry areas have been identified under a zoning concept. Zones are identified according to geographic boundaries, types of use, and the nature of visitor experience that can be expected. They are also used to identify areas requiring special resource protection. See Appendix III Land Classification Categories and Backcountry Zones.

Visitors are able to spend as much time as they want in Arches but will be required to move from one zone or land classification area to another according to length of stay limits set under Section III-A, "Visitor Activities and Use Limits".

### B. Backcountry Use Permits

Permits are required for all overnight use. Permits are available at the Arches National Park Visitor Center.

### C. Information and Education

An extensive program will be developed and maintained to inform and educate backcountry users. Primary topics to be covered are backcountry regulations, minimum impact camping, archeological resource protection, and safety guidelines.

### D. Facilities and Maintenance

#### 1. Trails and Hiker Access

Trails are classified according to the degree of development and level of use. The system identifies a range of trails from those suited for users of all physical abilities to those with minimal development which are best suited to experienced wilderness trail users. Cross country hiking will continue as an approved activity.

#### 2. Four-Wheel-Drive Roads

Backcountry vehicle routes are classified as public road systems subject to all applicable state and federal vehicle rules and regulations. Maintenance is limited to that necessary to make the roads negotiable by an experienced backcountry driver without resulting in damage to a properly equipped vehicle and maintenance needed to prevent

resource damage.

### 3. Campground and Picnic Sites

There are no designated backcountry camping areas in Arches. If visitor use and resource degradation increase, designated camping areas may be considered to mitigate resource damage.

Visitors are free to choose spots to picnic or may use designated picnic sites which are provided at major trailheads or destinations in vehicle corridors. Facilities may include tables and toilets, but no camping is allowed at these locations.

### 4. Sanitation Facilities

Vault toilets are located at major trailheads and picnic areas in vehicle corridors.

No trash containers will be placed in the backcountry. Visitors are required to carry out all trash.

### 5. Signs

The number of signs used will be the minimum necessary for resource protection and visitor orientation and safety. Reddish-brown wood signs with routed, white lettering are used in vehicle corridors and in roadless areas. Specialized signs may be used in response to concerns identified within natural and cultural resource plans.

### 6. Water Sources

Springs will be left in their natural undeveloped conditions.

## E. Review of Backcountry Management

Review of the plan and its management actions will be done on a continual basis through a park team appointed by the Superintendent and under direction of the Arches Unit Manager.

A system of public participation will be developed and used on a continuing basis to aid oversight of backcountry management.

F. Updating the Plan

Backcountry visitation and consequent environmental impacts will be monitored and evaluated to assure protection of natural and cultural resources and to maintain a high quality backcountry experience. It is possible that environmental impacts and crowding in the backcountry due to increased visitation will require restrictions in the future.

The plan will be reviewed annually by the backcountry management team. The review will include public participation with the degree of involvement depending upon the nature of proposed changes.

III. VISITOR ACTIVITIES AND USE LIMITS

A. Length of Stay

There is no limitation on the total number of nights per trip, but a maximum of seven nights per designated backcountry zone is allowed. The total trip length can be extended by moving to a different location. See Appendix III for a list of zones.

B. Group Size

Day Use: No limit on group size.

Overnight Use: 12 people. Larger groups must split into smaller units and must either camp at least one mile apart or in different zones as subgroups, but may come together for daytime events.

C. Restricted Use Areas

See Appendix II.

Day Use Only: Salt Valley, to 5,040' contour on east and west sides  
Fiery Furnace  
Klondike Bluffs (T23S R20E - sections 22, 23, 26, 27). Day use only from January 1 through July 15.

Closed Areas: Critical wildlife or resource areas may either be closed or limited through public notification.

D. Pets

Pets are not permitted in any backcountry roadless area or on any hiking trail. They may be transported in vehicles on backcountry roads.

Any pet outside of a vehicle must be on a leash not more than six feet in length or must be otherwise physically confined at all times. Pets may be walked on a leash but may not be walked outside the vehicle corridor.

Pets may be left unattended by vehicle owners under the following conditions:

1. Pets must be secured in a location where they will not interfere with wildlife or with normal travel by other visitors.
2. Pets which bark excessively or exhibit aggressive behavior may not be left unattended.
3. Pets may not be left unattended if temperature or conditions could endanger the pet's health.
4. No pet may be left unattended overnight.
5. Pets must be secured in a manner which will avoid resource damages (e.g. No nails or anchors in trees, avoid cryptogamic soils, etc.).

E. Camping

Visitors may select their own backcountry campsites if there are no special restrictions at that location. Information on restrictions will be provided when backcountry permits are issued.

All camping must be:

1. Backcountry campsites must be at least one mile from any designated road and one-half mile from any designated trail. Campsites also must be out of sight of trails and arches named on U.S.G.S. topographical maps.
2. 300 feet from non-flowing water sources and recognizeable archeological sites. 300 feet is recommended from flowing water and 100 feet is required except for the Colorado River.

F. Fires

Various types of portable stoves are permitted throughout the park, however, the Superintendent may close any areas to any type of fire during periods of high fire danger. Open fires are limited to the designated frontcountry campground and picnic areas where metal fire pans are provided. Firewood must be brought in from outside the park. Gathering wood in the park is prohibited.

G. Pack Stock and Horse Use

Pack stock and horse use is allowed in accordance with the Superintendent's policy.

H. Off-Trail Hiking

Trail use is encouraged but cross country travel is permitted with the exception of specific closed areas. Minimum impact techniques are strongly encouraged.

I. Vehicle Use

All vehicles and operators must be licensed by the Department of Motor Vehicles in their home state. Vehicles must use designated roads, must comply with all regulations and must park where resource damages and/or road blockage will not occur.

J. Technical Rock Climbing

Climbing must be done in accordance with the Superintendent's directive.

K. Mountain Bikes

Bicycles are classified as vehicles and use is limited to designated vehicle routes.

L. Cross Country Skiing

Cross country skiing is allowed. The use of wash bottoms and designated roads and trails is encouraged to reduce possible damage to vegetation and cryptogamic soils.

M. Use of Water Resources

The following water use procedures are enforced to prevent contamination and to allow for wildlife access:

1. A 300 foot minimum camping and horse tethering distance must be maintained from non-flowing water sources.
2. A 300 foot minimum camping and horse tethering distance is recommended from continually flowing water and a 100 foot distance is required.
3. Biodegradable soaps are required. The use of soaps of any kind must be no closer to water sources than the camping distances described above.
4. Swimming is prohibited in catch basin potholes but is allowed in pools which are continuously supplied.

N. Aircraft

Aircraft (including ultralights and hang gliders) are prohibited from taking off or landing within the park. Pilots are requested to maintain a 2,000 foot altitude in accordance with FAA advisory Circular 91-36A. Exceptions will be allowed for approved management purposes, search and rescue, and emergencies beyond pilot control.

O. Sanitation Practices

Toilet facilities must be used when available. Human waste must otherwise be buried in soil 4 to 6 inches deep and 300 feet from water sources, campsites, roads or trails. Toilet paper must be carried out.

Commercial vehicle tour operators must comply with the terms of their permits.

All garbage must be carried out.

IV. COMMERCIAL BACKCOUNTRY TOUR SERVICES

Commercial backcountry tour services are authorized upon the basis of an assessment of need for the particular services. Commercial use decisions will be based upon a balance between protecting and preserving the park and of providing adequate and appropriate visitor services at a reasonable price. Commercial services can only be provided by an operator holding the appropriate permits.

Use allocation will not be assigned, but the park retains the right to set limits in future years if the need is indicated. Allocations would not be set in the future without the opportunity for public input.

commercial operators will be considered in establishment of any new sites.

Commercial operators are required to submit a variety of information and data related to their use. This will be done in place of issuing backcountry permits to commercial operators.

The following types of commercial use are recognized as necessary and/or appropriate for public use and enjoyment of Arches.

A. Vehicle Tours

Up to five concession permits may authorize backcountry vehicle tours in Arches; however, restrictions imposed by the Public Service Commission of Utah enable only three of the current concessioners to provide tours in Grand County.

B. Guided Horseback and Pack Stock Tours

Two outfitters are currently authorized to provide commercial horse and pack stock services in Arches; however, only one does so on a regular basis.

C. Other Commercial Backcountry Services

Inquiries are occasionally received concerning commercial backcountry services which are in addition to and different from those provided by the tour companies authorized to provide specific services through a concessions permit. Examples of such services include guided mountain bike tours, climbing guides and similar services. Commercially organized backcountry group activities, normally identified as wilderness experience programs or special emphasis workshops, are also popular.

Activities within these "other commercial backcountry services" categories may be authorized under a commercial use license.

D. Commercial Activities Defined

It is often necessary to administratively determine whether an activity is to be considered commercial or non-commercial prior to issuing a permit or commercial use license for backcountry use. The following tests will be used to make that determination and to determine when a commercial use license will be required.

### Definition of Commercial Trips

A trip is commercial if one or more of the following conditions exists:

1. actual costs are not shared equally by all trip participants
2. a fee is charged for services
3. profit is a goal of the trip, and
4. there is public advertising (including college catalogs) for participants.

### Commercial Permit Requirements May be Waived for

- a. infrequent front country day use
- b. predominantly front country use by groups camping in the front country with a tour originating over 100 miles outside the park, and
- c. activities resulting in tangible benefit to the park.

## V. MANAGEMENT ACTIVITIES

### A. Archeological/Historic Site Protection

Given the large number and variety of sites in the park and their wide distribution, the park has developed a separate Cultural Resource Management Plan. Only approximately one-third of the park has been surveyed for archeological sites and incomplete information exists on historic sites.

Cultural resource protection actions affecting backcountry use include:

1. Campsites must be 300 feet from any recognizable archeological or historical site.
2. Enforce National Park Service and other federal regulations on archeological or cultural resources.
3. Publish new literature to inform and educate the park visitor on the nature of the preservation problem and the ways to avoid damage to the cultural resource.

B. Resource Management, Monitoring, and Research

Resource management activities are carried out for natural and cultural resources. Understanding and protection of habitats is the purpose of all natural resource management. Preservation of park historic and prehistoric resources is the purpose of cultural resource management.

Some visitors may be affected by ongoing resource management activities but efforts will be taken to minimize these situations whenever possible. Work will be done during low use periods when feasible to do so. The park staff will also make every effort to alert the backcountry visitor to resource activities and the locations before the visitor enters the backcountry.

C. Emergency Operations

All backcountry emergency operations are guided by the appropriate emergency operations plan. The Chief Ranger is responsible for initial coordination and implementation of all Arches emergency operations. If additional personnel are needed, the Arches Unit Manager will request the use of resources from other locations.

Helicopters, fixed wing aircraft, and motorized equipment may be used in backcountry emergency operations if approved by the Superintendent or his designated representative. No permanent improvements (heliports, roads, etc.) will be established in the backcountry for emergency operations. Temporary improvements will be removed and the area rehabilitated to a natural appearance immediately at the end of the operation.

Commercial operators will be financially responsible for costs of emergency operations as set forth in their concession permits.

The Superintendent may close roads, trails and specific backcountry areas to public use during emergency situations.

D. Aircraft Use

Aircraft use including landings is permitted only:

1. In emergencies involving the health and safety of people in the park.
2. In emergencies involving the protection of park

resources and wildland values.

3. As necessary to accomplish park management responsibilities identified through National Park Service policy, planning documents.

Additional guidelines for reducing or eliminating the impact of aircraft use in the backcountry are as follows:

4. Aircraft operations will be authorized only when functions cannot be effectively performed by other means.
5. Use of aircraft must be scheduled at such times, locations and altitudes as will cause minimum disturbance of visitor enjoyment and will not interfere with wildlife.
6. Landing of aircraft in the backcountry must have previous approval of the Superintendent or his designated representative. The administration of emergency operations is an exception to this guideline.
7. Heliports, helipads and airstrips are not permitted in the backcountry. Natural terrain may be used as heliports, but no permanent site markings or improvements of any type are permitted. After use, the site will be restored.

## Appendix I

### TRAIL CLASSIFICATION

#### Class "A" Trails

Class "A" trails are major short trails and walks which may also be accessible to the handicapped.

These trails have the highest maintenance standards and first maintenance priority. Class "A" trails are improved and maintained for highly concentrated visitor use by visitors of all abilities. These trails normally provide access to major visitor attractions or specific interpretive themes. They are highly developed and contain all necessary major structural elements such as bridges, metal culverts, puncheon, drainage aids, railings, steps, mortared or dry rock retaining walls, etc., of smooth cement, asphalt, or soil cement. Minimum tread width is 24 inches; maximum width will be as visitor useage dictates. Vegetation shall be cleared one and one-half feet beyond the tread margin.

#### Class "B" Trails

Class "B" trails are primary trails. These trails have high maintenance standards and second maintenance priority.

Class "B" trails are improved and maintained for heavy visitor use by visitors of average physical abilities. These trails normally provide access to major visitor attractions or specific interpretive themes. They are highly developed and contain all necessary major structural elements such as bridges, metal culverts, puncheon, drainage aids, railings, steps, mortared or dry rock retaining walls, etc. to maintain high trail standards. Trail tread is maintained at a high standard for convenience and comfort, utilizing a non-native aggregate wherever native soils prove inadequate to sustain heavy visitor use. The tread is uniformly smooth and free of variations and rock and root protrusions, and composed of fines no larger than one inch in diameter. Slickrock tread may have natural variations. Minimum tread width is 24 inches; maximum width will be as visitor use dictates. Vegetation shall be cleared one foot beyond the tread margin.

#### Class "C" Trails

Class "C" trails are secondary trails. These trails have moderate maintenance standards and third maintenance priority.

Class "C" trails are maintained for heavy to moderate use by inexperienced visitors of intermediate ability. These trails reach important visitor attractions and provide access to other trails. They are moderately developed trails. The trail tread and all necessary structural elements, such as water bars, rock culverts, rock steps, retaining walls, etc. are made with native materials as the general rule, although such structures as ladders and handrails may be made of other material where deemed necessary for visitor safety. The trail tread is relatively smooth and free of extreme variations and abrupt rock and root protrusions higher than two inches. Slickrock tread may have natural variations. Minimum tread width is 18 inches; maximum width is 24 inches, except for short sections along a precipice, steep hillside or other hazardous area where tread widths to 60 inches may be necessary to provide for user safety. Short sections of the trail may be cairns over slickrock or along wash bottoms, etc. Vegetation shall be cleared six inches beyond the tread margin.

#### Class "D" Trails

Class "D" trails are semi-primitive trails. These trails have low maintenance standards and fourth maintenance priority.

Class "D" trails are maintained for moderate to light visitor use and visitors of intermediate to high ability and experience. Trail development is limited to the minimum necessary to maintain trail tread and visitor safety. The tread may have moderate variations and abrupt rock or root protrusions higher than two inches but lower than eight inches. The tread is composed of native materials only. As a general rule, structural work such as water bars and short retaining walls are constructed of local native material, although ladders may be made of other materials where deemed necessary for visitor safety. The trail tread width will be maintained at an 18-inch minimum/maximum width, except for sections along precipices, steep hillsides and other hazardous areas where wider treads may be necessary to provide for visitor safety. Long sections of the trail may be cairns over slickrock or along wash bottoms, etc. Vegetation shall be cleared to the edge of the tread margin.

#### Class "E" Trails

Class "E" trails are primitive trails. These trails have the lowest maintenance standards and fifth maintenance priority.

Class "E" trails are maintained as primitive routes for low visitor use and visitors with experienced wilderness trail ability. No tread is established or maintained and no structural work is attempted. These trails require minimal maintenance such as minor brushing and rock cairns where necessary to establish the route and provide for visitor safety.

as minor brushing and rock cairns where necessary to establish the route and provide for visitor safety.

## Appendix II

### Critical Resource Area Closures

The Superintendent may establish limitation on the use of all or portions of a park based on carrying capacities and resource protection needs. Temporary or permanent closure of backcountry areas to visitors and/or camping may occur for the protection of park resources, for special park management activities (e.g. wildlife management, search and rescue), to avoid crowding and congestion at popular attraction sites, in scientific study areas, and for human safety and health purposes. Areas closed because of wildlife considerations may change due to changes in endangered species status, population fluctuation or visitation impacts. Areas that need special consideration are listed as follows:

#### ARCHES

<u>Area</u>	<u>Designation</u>	<u>Reasons</u>
Klondike Bluffs (T23S R20E - Sections 22, 23, 26, 27)	Day use only from 1/1-7/15	Critical wildlife habitat
Salt Valley (to 5,040' contour on east and west sides)	Day use only	High visibility - campsites cannot be out of sight along the road
Fiery Furnace	Day use only	Camping would interfere with interpretive activities
Bubo (rock climb)	Closed from 1/1-6/30	Critical wildlife habitat
Industrial Disease (rock climb)	Closed from 1/1-6/30	Critical wildlife habitat

## Appendix III

### Land Classification Categories and Backcountry Zones

The Arches backcountry has been divided into zones based on natural topographic boundaries. The zones have been further classified, as listed below, according to the relative amount of use and development in each zone.

#### Land Classification Categories

##### Roadless Areas

##### R-1 (Roadless, Developed)

High use levels (high contact with other visitors)  
Maintained trails (cairns, signs)  
May include campsites when necessary to control resource impacts  
Improvements (privies, campsite markers)

##### R-2 (Roadless, Non-Developed)

High use levels (high contact with other visitors)  
Maintained trails (cairns, signs)  
No designated campsites  
No improvements

##### R-3 (Roadless, Non-Developed)

Moderate use levels (moderate contact with other visitors)  
Maintained trails (cairns, signs)  
No designated campsites  
No improvements

##### R-4 (Roadless, Non-Developed)

Low use levels (low or no contact with other visitors)  
No trails  
No designated campsites  
No improvements

#### Backcountry Zones

#### Classification

Lower Courthouse Wash  
Upper Courthouse Wash

R-3 (no trails)  
R-3 (no trails)

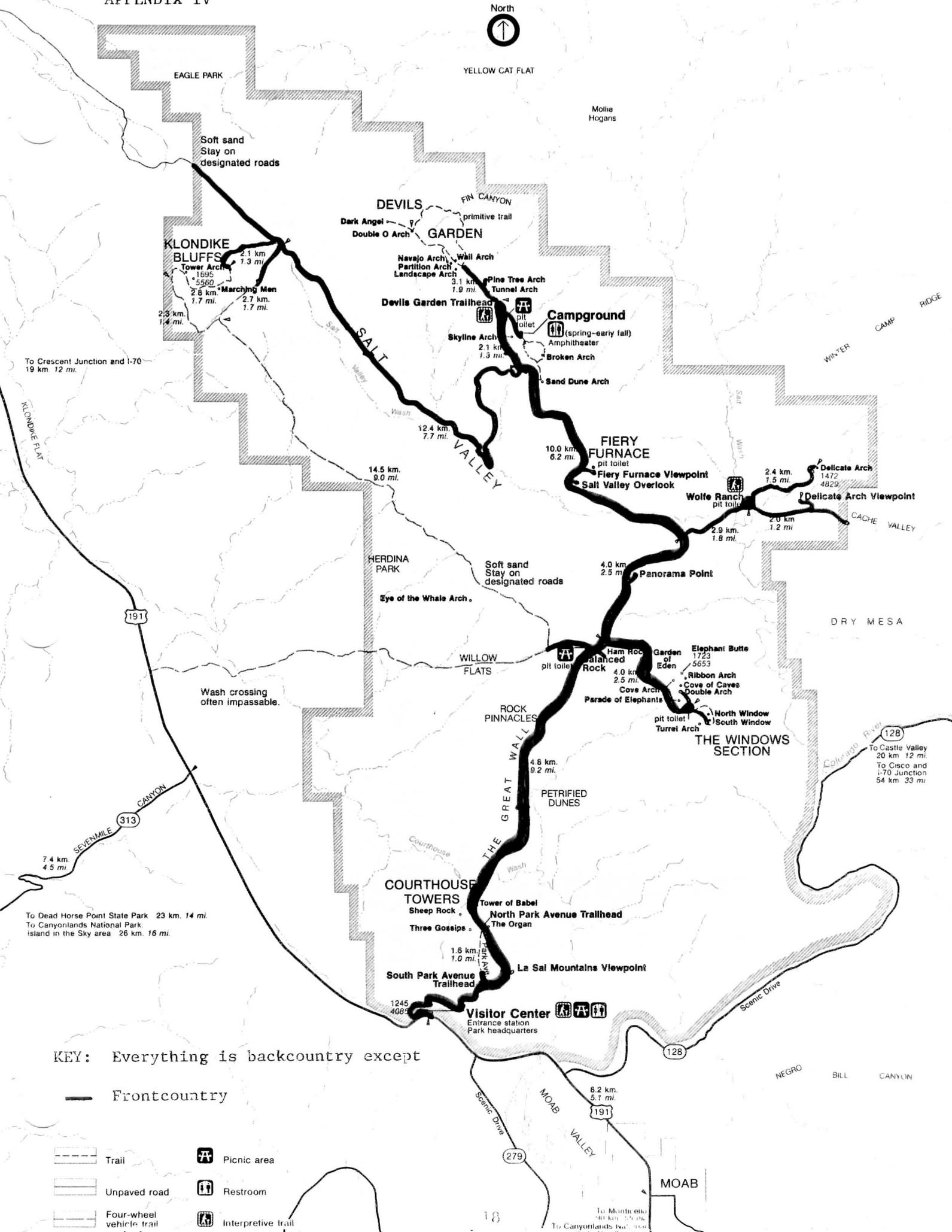
Backcountry Zones

Classification

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Petrified Dunes	R-4
Windows	R-3 (no trails)
Herdina Park	R-4
Willow Flat	R-4
Lower Salt Wash	R-4
Upper Salt Wash	R-4
Delicate Arch	R-2
Devil's Garden	R-2
Klondike Bluffs	R-3
Lost Spring Canyon	R-4
Salt Valley	R-4

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KEY: Everything is backcountry except

— Frontcountry

- Trail
- Unpaved road
- Four-wheel vehicle trail
- Picnic area
- Restroom
- Interpretive trail

To Monticello 50 km 31 mi  
To Canyonlands National Park Headquarters at 27 mi

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ENVIRONMENTAL ASSESSMENT  
BACKCOUNTRY MANAGEMENT PLAN

ARCHES NATIONAL PARK

UTAH

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## I. INTRODUCTION

### Description of the Proposal

The Backcountry Management Plan will provide management direction for: (1) visitor use of the backcountry compatible with the purpose of the park; (2) preservation and protection of park resources; and, (3) mitigation of human use impacts on the backcountry. The draft plan resulting from the alternatives developed in this environmental assessment is the park's preferred alternative. The draft plan provides detail not available in the assessment and should be reviewed along with the assessment.

## II. ASSESSMENT OF ALTERNATIVES

### Explanation

This section combines discussion of alternatives and impacts with an impact rating matrix. The first alternative listed for each topic is the park's preferred alternative. To facilitate reference to the draft backcountry management plan, each topic heading is followed by the corresponding section number for that topic in the draft plan.

The numerical impact rating system can be interpreted for a spectrum of impacts ranging from positive, acceptable, or enhancing impacts to negative, unacceptable, or degrading impacts. A rating of 3 is a neutral rating with no significant positive or negative ratings, or a case where positive and negative impacts balance out.

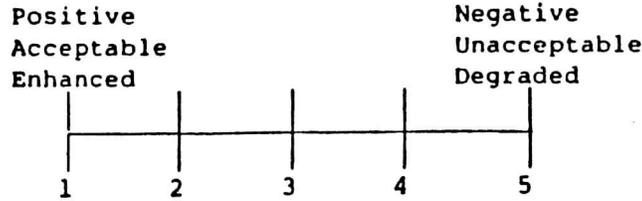
Impacts were evaluated within the guidelines of management policy and objectives, and selected on the basis of professional judgment, resource information, and public comments. In many cases both positive and negative impacts could result from a proposed action. These opposing impacts were evaluated and an overall rating selected which reflects major direction of impact on balance.

In addition to providing for public use of the backcountry, the plan addresses mitigation of impacts. Mitigation is a part of each proposed action, and is therefore not discussed in a separate section of this document.



BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

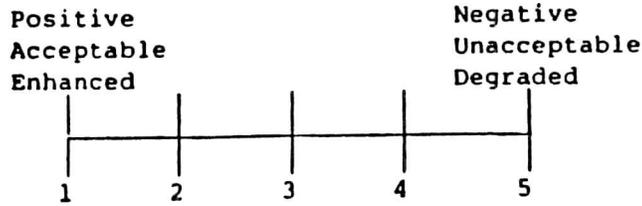
ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft back-country management plan.

	Experience	Visitor Operations	Park Resources	Abiotic Resources	Biological Resources	Cultural Resources
<p>facilities maintenance, visitor safety, patrols, allocation of personnel, resource protection, etc.</p> <p>Resources will not be greatly affected. By monitoring the use each zone received, negative impacts can be mitigated before the effects are irreversible.</p>						
<p>2. No action; continue present management approach.</p> <p>a. Limited identification of critical resource areas.</p> <p>While some critical resource areas have been identified to date, no comprehensive program has been initiated to relate critical areas to potential human disturbance. This is in contrast to alternative 1 where a clear effort would be made to identify and classify critical areas for protection. Without an inventory and classification, many areas may be overlooked, thus jeopardizing the protection of some critical resources.</p> <p>This alternative would have little or no impact on visitor experience. There would be few restrictions and little imposition upon the freedom of visitors. Some visitors may be disturbed that such critical areas are not well inventoried or protected, resulting in a slightly negative impact on a limited number of park visitors.</p>	3	3	4	4	4	
<p>b. No classification relating to types of use and nature of the visitor experience.</p> <p>Visitors would be less likely to match their skills and expectations with available recreational opportunities. Different levels and kinds of use in the same area could result in</p>	4	4	3	3	3	

BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

Visitor Experience	Operations	Park Resources	Abiotic Resources	Biological Resources	Rural Resources
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ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft backcountry management plan.

visitor conflict. Park visitors would not be provided as wide a spectrum of recreational opportunities under this alternative.

Park operations would continue to be hindered due to unclear guidelines and objectives as they influence work planning efficiency and focus. It would be more difficult to determine where and when to allocate personnel for patrols, maintenance, and resource management.

As visitation increased, unacceptable impacts to park resources could occur in some areas because of non-specific management standards or guidelines.

BACKCOUNTRY PERMITS/VISITOR USE DATA [II.B.]

1. Require permits for day use of identified critical resource areas, overnight camping, stock use, and technical climbing.

Some park users may react negatively to this requirement because of its perceived imposition on individual freedom. The increase in National Park Service opportunity to inform the visitor on the safety and resource management values of permits and the visitors' understanding of those values should counteract the negative effects of the permit.

Information provided by backcountry visitors on the permits, and given to the visitor with the permit, will enhance visitor safety, resource protection, resource management, and search and rescue. In addition, data on frequency and amount of use in various locations can assist in maintenance planning by focusing on heavily used facilities and trails which may be in need of work.

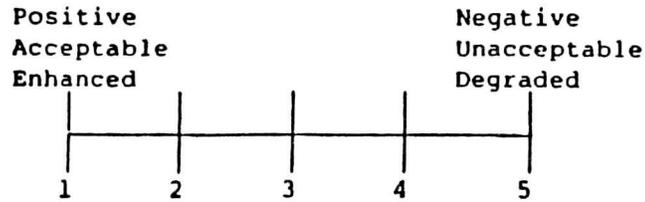
Resources will benefit indirectly as a result of better informed park visitors and better informed

3	1	2	2	2
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BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft backcountry management plan.

INFORMATION AND EDUCATION [II.C.]

1. Upgrade a backcountry information and education program to protect park resources and to enhance visitor knowledge and safety.

The overall visitor experience should be enhanced, because most public comment had indicated strong support of this action as a positive supplement to a park visit.

Much of the human-induced resource degradation which has occurred in the park has been a result of "not knowing". A primary objective of the information and education programs would be to help the visitor better understand the unique and fragile aspects of the parks, as well as its hazards, and to be more reflective of their action. As a result, backcountry visits should be safer and park resources better protected for the future enjoyment of others.

Because this is a mitigation program with its scope dependent on the availability of funding, no additional alternatives are discussed.

TRAILS AND HIKER ACCESS [II.D.1.]

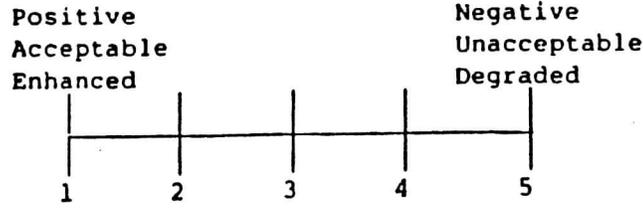
1. Establish a trail classification system to provide a broad spectrum of hiking opportunities (primitive to high standard), protection for critical resources, and clear management guidelines.

This alternative would help match visitor expectations and skills with the appropriate hiking opportunity. It would provide a broad spectrum of opportunities, as well as assure the maintenance of diversity and the freedom to choose among several options.

IMPACT CATEGORIES	Visitor Experience	Operations	Park Resources	Abiotic Resources	Biological Resources	Rural Resources
Information and Education [II.C.]	2	1	1	1	1	1
Trails and Hiker Access [II.D.1.]	2	1	2	2	2	2

BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft back-country management plan.

Clear standards and guidelines will aid the maintenance division in setting priorities and defining the time and effort required to accomplish particular tasks. This system will also help identify major patrol routes in the primary use areas and search and rescue activities can be more clearly planned.

This alternative will help protect park resources by concentrating visitor use impacts along designated trails and reducing more widespread impacts elsewhere. In addition, it will allow for the consideration of sensitive resources in route planning and trail construction.

2. No action; continue present management approach with a variable trail system maintained with no written standards.

Under this alternative, it would be more difficult to match visitor expectations and skills with the hiking opportunities. Such mismatches may result in visitor dissatisfaction. In addition, trails may deteriorate over time, with a final result of poor quality and less diversity in hiking options. Trail deterioration would reduce the aesthetic quality of the visitor experience. Without a classification system, there is no management framework for assuring a broad spectrum of hiking opportunities.

Maintenance operations would continue to be hampered without guidelines for trail maintenance.

Multiple trailing and foot travel through sensitive areas will persist, and no regular assessment of trails or routes would occur. Erosion, vegetation alteration and loss, and reduced scenic quality would result.

Experience	Visitor Operations	Park Resources	Abiotic Resources	Biological Resources	Cultural Resources
4	3	4	4	4	4

BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

Experience	Visitor Operations	Park Resources	Abiotic Resources	Biological Resources	Cultural Resources
3	3	3	3	3	3
2	3	2	2	2	2

ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft backcountry management plan.

FOUR-WHEEL DRIVE ROADS [II.D.2.]

- No action; backcountry vehicle routes are classified as road systems subject to all applicable vehicle rules and regulations. Maintenance is limited to that necessary to make the roads negotiable by an experienced backcountry driver without resulting vehicle damage and maintenance needed to prevent resource damage.

The present road system offers a four-wheel-drive experience for the park visitor. Information about these roads is available.

Some public comment suggested various alternatives of expanding or reducing the scope of the backcountry road system. However, these alternatives are not addressed here, because road systems are controlled by the park's General Management Plan which will be developed in 1986.

CAMPGROUNDS AND PICNIC SITES [II.D.3.]

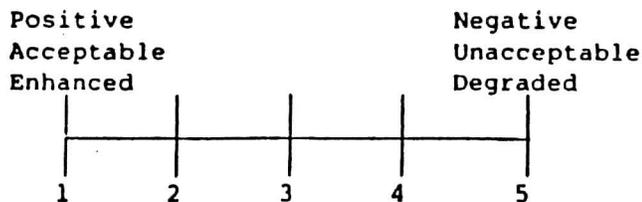
- Maintain existing number of camping areas and picnic sites. Evaluate need for designated backcountry camping areas if visitor use and resource impacts increase.

This alternative supports the present system of having no designated backcountry camping areas and allows for future designation if the need occurs. This provides the widest range of choices for backcountry visitors to choose their own campsites.

Administrative concerns are minimal, with this option, since regular maintenance of designated areas is unnecessary. Patrols continue to be widespread over the entire park and continue to monitor resource impacts.

BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft backcountry management plan.

Resources are protected under this option by the continual monitoring of their condition. If resource degradation increases, the designation of camping areas will reduce widespread impacts in heavily used areas. Assessing campsite additions on a case by case basis will allow for ecologically sound site selection and planning. Cultural and historic resources will be regularly monitored and considered if designation of campsites becomes necessary.

2. Provide fully developed designated backcountry camping areas within the constraints of the Wilderness Act (tent sites, unobtrusive fire grates, and pit toilets).

Full development of sites would reduce the diversity of opportunities available, thus decreasing the overall quality of the visitor experience.

Slightly negative impacts would result from the increased need for campground maintenance by this alternative.

Park resources at the designated camping areas would suffer heavy impacts. Resource damage at other backcountry locations would receive minimal impacts.

3. Designate campsites, but do not provide improvements.

The diversity of recreational opportunities would be limited, thus decreasing the quality of visitor experiences.

Visitors would be less likely to use designated sites without facilities and tend to choose their own camping areas. This would result in the same system that presently exists with the possibly unnecessary addition of little used designated areas.

Visitor Experience	Operations	Park Resources	Abiotic Resources	Biological Resources	Cultural Resources
4	4	2	2	2	
4	3	4	4	3	

BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft backcountry management plan.

SANITATION FACILITIES [II.D.4.]

1. Maintain existing system of having vault toilets and trash containers at all major trailheads and picnic areas.

Toilets and trash containers are generally considered as acceptable conveniences at backcountry entrance/exit points such as trailheads. Presently no toilets or trash containers are provided in the backcountry since there are no designated backcountry camping areas. Many backcountry visitors expect a primitive experience and would consider these facilities an intrusion.

Maintaining the existing system imposes no additional workload on park staff.

Park resources would suffer if visitor use increased to such a point that human waste and trash began to accumulate in heavily used areas. This is not the case now and no locations have been identified as being a problem in this regard under the existing system.

2. Install pit toilets and trash containers at selected locations in the backcountry.

This alternative would be considered to mitigate accumulation of human waste and multiple trailing problems. This alternative would be most appropriate if designated camping areas are determined to be necessary. Presently, this is not the case. If toilets and trash containers were installed in the backcountry without designated camping areas, many visitors would find the facilities intrusive.

Park operations would be greatly impacted due to the increased time and cost of maintaining the facilities.

Visitor Experience	Operations	Park Resources	Abiotic Resources	Biological Resources	Cultural Resources
3	4	2	2	3	
4	5	2	2	2	





BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

ALTERNATIVES

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LENGTH OF STAY [III.A.]

1. No limit on the total number of nights per trip, but a maximum of seven nights per designated backcountry zone.

The primary objective behind establishing a limit on the number of nights per zone per trip is to provide greater opportunity for an undisturbed backcountry experience to as many visitors as possible. The seven night limit per zone offers visitors an opportunity to stay and enjoy one location for more than just a brief visit, but also prevents long term monopoly of a location. Extended trips are not affected, because there is no overall length of stay limit.

The proposed seven night limit per backcountry zone might require more patrol and administrative time to insure compliance.

Little or no impact would occur to park resources as a result of this alternative.

2. Establish a yearly visitation limit for all users regardless of season.

This alternative would unnecessarily restrict visitor use of the park. At this time, there is no indication that long visits or multiple visits are affecting other visitors' opportunities.

A great deal of time and effort would be required for keeping records of individual visitor trips to insure that limits were not exceeded. Costs would far exceed the benefits of the proposed action.

Park resources would be little affected.

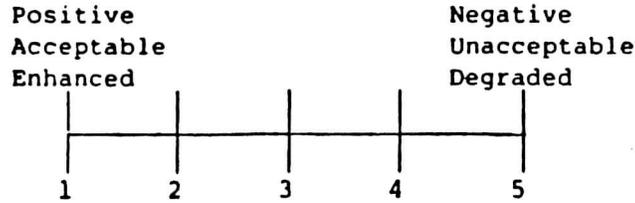
3. No action; continue present policy of no length of stay limits.

	Visitor Experience	Operations	Park Resources	Abiotic Resources	Biological Resources	Cultural Resources
1. No limit on the total number of nights per trip, but a maximum of seven nights per designated backcountry zone.	2	4	3	3	3	3
2. Establish a yearly visitation limit for all users regardless of season.	4	5	3	3	3	3
3. No action; continue present policy of no length of stay limits.	4	5	3	3	3	3



BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

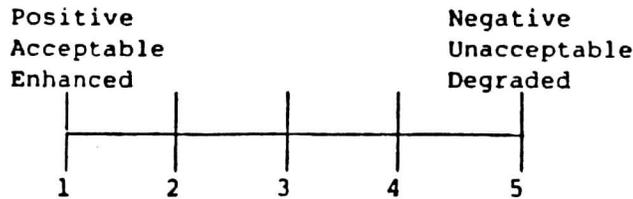
ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft back-country management plan.

	Visitor Experience	Park Operations	Abiotic Resources	Biological Resources	Cultural Resources
<p>Group size in excess of 12 is considered larger than appropriate for a primitive backcountry experience by many visitors. Excessively large groups result in vegetation and soils damage, disruption of fauna, and possible water resources deterioration. Although special resource concerns would be considered, many other areas could be negatively impacted. Unlimited group size could also result in greater chance of damage to cultural resources.</p>					
<p><u>RESTRICTED USE AREAS [II.C.]</u></p> <p>1. Certain park areas would be subject to restricted uses. These restrictions would be applied to protect critical resource areas and the visitor experience.</p> <p>While some visitors may dislike restrictions, this alternative will enhance the visitor experience by reducing possible crowding and unaesthetic biophysical impacts. By placing controls only in critical resource areas, visitors will still have the opportunity to use other areas with freedom of choice.</p> <p>Additional work will be necessary to patrol restricted areas.</p> <p>The primary objectives are: (a) to protect especially sensitive park resources and (b) to protect the visitor experience from other conflicting uses. Adverse impacts to natural and cultural resources should be reduced.</p>	2	3	2	2	2
<p>2. No action; the use of critical resource areas would not be restricted.</p> <p>Lack of restrictions could result in conflicting visitor uses and reduce the opportunity of visitors to view wildlife and unique park resources due to reproductive failure by the species and greater possibilities of vandalism.</p>	4	3	4	4	4

BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft backcountry management plan.

Visitor Experience	Operations	Park Resources	Abiotic Resources	Biological Resources	Cultural Resources
4	2	3	2	2	
4	4	4	4	4	4

While this alternative might appear to reduce the need for patrols, it could result in user conflicts requiring park response or increased time spent rehabilitating impacted areas.

Sensitive park resources (such as breeding wildlife and nesting birds) might be severely impacted by uncontrolled visitor access in certain locations. The visual resource might be impacted by uncontrolled camping in areas with unobstructed views or heavy hiking use areas.

PETS [III.D]

- Pets would not be permitted in any backcountry roadless area or on any hiking trail. They may be transported in vehicles on backcountry roads.

Most visitors do not take pets into the backcountry. Those who want to exercise their pets must confine them to road corridors where they must be under physical control at all times. This alternative allows pets to be exercised and transported on backcountry roads. Other visitors are still able to have a backcountry experience without encountering pets in the backcountry.

Conflicts between pets and visitors or wildlife in the backcountry will be eliminated by this alternative. Leash laws will still have to be enforced in road corridors.

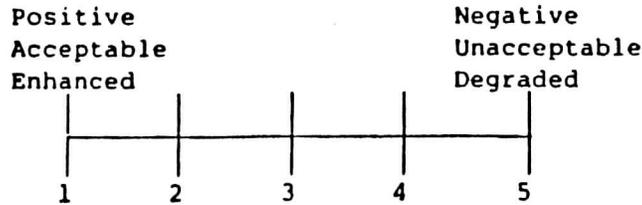
The potential of resource impacts occurring along park roads still exists, but the roadless area impacts will be reduced.

- Pets would be allowed anywhere in the backcountry under physical restraint.

For many people, pets are an intrusion in the

BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft backcountry management plan.

backcountry. This results in conflicts between visitors and between pets and visitors.

Past conflicts concerning pets, visitors, and park resources have required NPS attention for resolving problems. Restraint regulations are often ignored.

Pets have caused adverse impacts to park resources in the past and such impacts will continue to occur under this alternative.

CAMPING [III.E.]

Visitors would choose their own campsites within the following guidelines: (a) Backcountry campsites must be at least one mile from any designated road and one-half mile from any designated trail. Campsites also must be out of sight of trails and arches named on U.S.G.S. topographical maps, and (b) 300 feet from non-flowing water sources and recognizable archeological sites. Critical resource areas may be closed to camping on a seasonal or permanent basis.

This alternative provides visitors with the greatest amount of freedom in backcountry camping, while still protecting the visual experience of frontcountry visitors. It also helps protect the backcountry from becoming an overflow camping area when the frontcountry camping area fills, a use the backcountry is not intended for and cannot absorb without severe impacts. The specified distances are necessary to protect water sources, archeological sites, and identified critical resource areas from deterioration which could result from indiscriminate visitor camping activity. The park experience of all visitors is better assured of success by these minimal restrictions as well.

Permit visitor campsite selection anywhere the activity would not significantly harm natural or cultural resources.

Experience	Visitor Operations	Park Resources	Abiotic Resources	Biological Resources	Cultural Resources
2	2	1	1	1	1
4	4	4	4	4	4



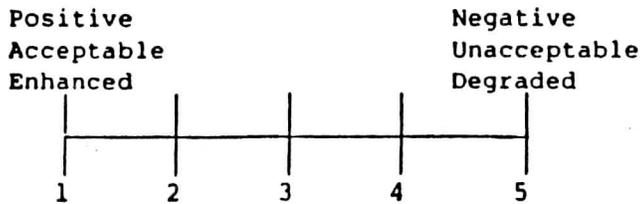






BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

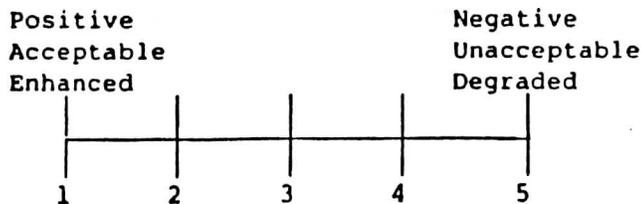
ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft backcountry management plan.

	Visitor Experience	Operations	Park Resources	Abiotic Resources	Biological Resources	Cultural Resources
<p>Many trail and travel routes have been established with cultural resources in mind. Unrestricted off-trail travel could increase the vulnerability of these sites to vandalism and disturbance, particularly those sites in areas not patrolled on a regular basis by park personnel.</p>						
<p>2. Prohibit all off-trail hiking.</p> <p>This alternative would deprive visitors of the opportunity of off-trail travel which may be considered a basic element of "wilderness experience" and a primary way to obtain the solitude sought by many visitors. Solitude is one of the primary resources of Arches.</p> <p>Off-trail hiking has not been identified as causing great impacts to natural resources at this time. Consequently, prohibiting off-trail hiking would appear to have minimal positive impact on these resources.</p> <p>Cultural resources would be better protected under this alternative by eliminating travel in remote areas where sites could be visited and vandalized without the knowledge of park personnel.</p>	4	2	2	2	2	2
<p>3. Designate specific zones where cross country hiking would be permitted.</p> <p>Restricting off-trail hiking would lessen the diversity of opportunities available to visitors, but it is likely that restrictions with clear rationale would be accepted by most users.</p> <p>This alternative would allow for the identification and protection of particularly sensitive and critical natural and/or archeological areas. This type of restriction is provided for under the zoning of critical resource areas as discussed at the beginning of the plan.</p>	4	3	2	2	2	3

BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

Experience	Visitor Operations	Park Resources	Abiotic Resources	Biological Resources	Cultural Resources
3	2	3	3	3	3
4	3	2	2	2	2
4	3	4	4	4	4
4	3	2	2	2	3

ALTERNATIVES

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VEHICLE USE [III.I.]

1. All vehicles must operate on designated roads in accordance with applicable Federal and State regulations.

This alternative is a requirement of the regulations mentioned and thus no alternatives are listed.

TECHNICAL ROCK CLIMBING [III.J.]

1. No action; continue to allow rock climbing in accordance with Superintendent's Directive. Areas are closed to climbing to protect natural, cultural, or scenic resources.

Although some climbers might object to any limitations on rock climbing, a multitude of climbing opportunities remain for climbers of all skill levels.

Closing certain areas to climbing will protect park resources.

2. Allow unrestricted technical rock climbing.

Unrestricted rock climbing would appeal to most climbers.

Without restrictions, significant cultural, natural, and scenic resources could be adversely affected.

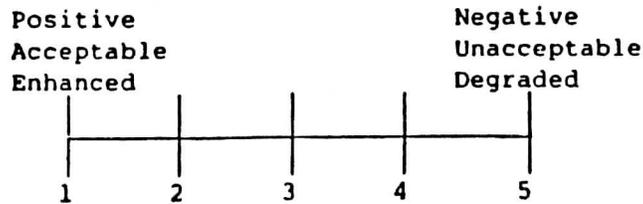
MOUNTAIN BIKES AND CROSS COUNTRY SKIING [III.K. & L.]

1. Allow use of mountain bikes on designated vehicle routes only. Allow cross country skiing and encourage the use of wash bottoms and designated roads and trails.

Although visitors participating in these activities may be displeased with such restrictions, aesthetic

BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

Visitor Experience	Operations	Park Resources	Abiotic Resources	Biological Resources	Cultural Resources
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ALTERNATIVES

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and environmental impacts and visitor conflicts among user groups could be a problem. In natural areas such as Arches, mountain bikes are restricted to public roads by regulation. Therefore, no other alternative is listed for use of mountain bikes.

The areas recommended for cross country skiing are those already receiving impacts or regular natural cleansing in wash bottoms. This alternative prevents or mitigates impacts and reduces the development or proliferation of new impacts.

2. Allow cross country skiing anywhere in the park.

Allowing cross country skiing anywhere could provide a greater diversity of recreational opportunities, but there are many areas in which this activity would be impossible due to rugged rocky terrain and inconsistent shallow snow cover.

Permitting unrestricted skiing could cause vegetation and soils damage, particularly in areas of light snow cover, which is the common situation in the park.

BATHING AND USE OF WATER [III.M.]

1. Maintain a minimum of 300 feet from water sources for use of soap (biodegradable only), camping, and tethering of horses. Swimming is permitted only in waters continuously resupplied with flowing water. Prohibit washing at all water sources.

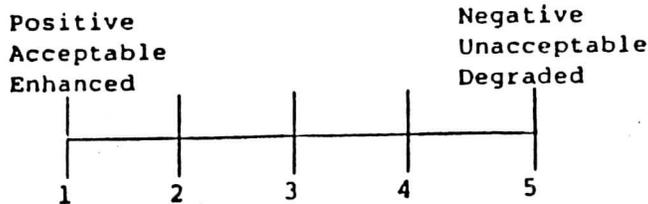
While visitors will have to resist the great temptation in the heat of the desert to cool off in potholes and other water sources, this alternative will enhance the visitor experience by ensuring good water quality for consumption. Potholes and isolated pools are a critical water source for backcountry users, and must be protected for that use. Water sources that are continuously resupplied are

2	3	4	4	3
2	3	2	2	3



BACKCOUNTRY MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT

IMPACT RATING SCALE



IMPACT CATEGORIES

Visitor Experience	Park Operations	Abiotic Resources	Biological Resources	Cultural Resources
2	3	2	2	2
3	3	2	2	3
2	2	2	2	2

ALTERNATIVES

(1 = preferred alternative); numbers in brackets following subject headings indicate corresponding subjects in draft back-country management plan.

where special regulations are adopted. No such special regulations exist for the park and none are contemplated. Such use would conflict with the park wilderness recommendation and wilderness values. Therefore, no other alternatives are considered.

SANITATION PRACTICES [III.0.]

1. Visitors are required to use toilet facilities where they exist. In other areas human waste must be buried in soil 4-6 inches deep at least 300 feet from any water source, campsite, roads or trails. All garbage must be carried out.

These practices are required to mitigate environmental impacts and to protect public health. Discussion of alternatives is addressed in the Sanitation Facilities section.

COMMERCIAL BACKCOUNTRY TOUR SERVICES [IV.]

1. Commercial tour services would be subject to all provisions of the Backcountry Management Plan and the terms of their permits. Because tour services are subject to all provisions of the plan and use impacts are not significantly different than for non-commercial use, no other alternatives are listed.

MANAGEMENT ACTIVITIES [V.]

1. The activities addressed in this section are protection, mitigation, and restoration actions in response to existing or potential environmental impacts. Therefore, no alternatives are discussed.

