



Monticello Field Office Bureau of Land Management Environmental Assessment

EA Number: UT-090-00-47

Preparation Date: July 29, 2004

Field Office: Monticello Field Office
State of Utah
P.O. Box 7
Monticello Utah, 84535

Project Title: Indian Creek Corridor Plan and Environmental Assessment

Project Type: Special Recreation Area Management Plan and EA

Table of Contents

1.0	Purpose and Need	1
1.1	Introduction	1
1.2	Proposed Action	4
1.3	Purpose and Need of the Proposed Action.....	4
1.4	Decisions to be Made.....	5
1.5	Conformance with Land Use Plans and Regulation.....	6
1.5.1	San Juan Resource Management Plan.....	6
1.5.2	Relationship to Statutes, Regulations, or Other Policies	6
1.6	Scoping and Issue Identification	7
1.6.1	Issues Relevant to the Decisions to be Made	8
1.6.2	Issues Not Carried Forward	9
2.0	Alternatives	15
2.1	Alternatives Considered but Eliminated from Detailed Analysis.....	15
2.2	Alternatives Analyzed in Detail.....	18
2.2.1	Management Objectives Common to All Alternatives	19
2.2.1	Management Objectives Common to All Alternatives	20
2.2.2	Alternative A- No Action Alternative	21
2.2.3	Alternative B- Preferred Alternative.....	24
2.2.4	Alternative Comparison Matrix	31
3.0	Affected Environment.....	38
3.1	General Setting.....	38
3.2	Critical and Other Elements of the Human Environment.....	38
3.2.1	Cultural and Historic Resources	39
3.2.2	Floodplains	39
3.2.3	Vegetation and Soils.....	40
3.2.4	Invasive, Non-native Species	41
3.2.5	Wildlife	42
3.2.6	Threatened, Endangered, or Candidate Species	44
3.2.7	Water Quality.....	44
3.2.8	Wetlands/Riparian Zones	45
3.2.9	Visual Resources Management	46
3.2.10	Safety	46
3.2.11	Recreation Values.....	47
3.2.12	Wilderness Values.....	49
3.2.13	ACECs	51
3.2.14	Socio-Economic Conditions	51
4.0	Environmental Consequences	53
4.1	Introduction	53
4.2	Issue 1: The extent to which uses in Indian Creek are managed to protect natural resources ..	54
4.2.1	Alternative A: No Action Alternative.....	54
4.2.2	Alternative B: Preferred Alternative.....	56
4.3	Issue 2: The extent to which uses in Indian Creek are managed to protect cultural resources.	59
4.3.1	Alternative A: No Action Alternative.....	59
4.3.2	Alternative B: Preferred Alternative.....	60
4.4	Issue 3: The extent to which visitor services should be provided to meet the needs of the users	60
4.4.1	Alternative A: No Action Alternative.....	61

4.4.2	Alternative B: Preferred Alternative.....	62
4.5	Cumulative Impacts.....	64
4.5.1	Alternative A: No Action Alternative.....	64
4.5.2	Alternative B: Preferred Alternative.....	65
4.6	Mitigation and Monitoring.....	67
5.0	Consultation & Coordination.....	71
5.1	List of Preparers.....	71
5.2	Persons, Groups, and Agencies Consulted.....	71
	References.....	72
	Appendices & Attachments.....	73
	Appendix A—Specific Area Site Plans.....	73
	Appendix B—Critical Mexican Spotted Owl Habitat.....	80
	Appendix C—Wilderness Proposals in the Indian Creek Corridor.....	81

List of Tables

Table 1.	Issues carried forward for further analysis.....	8
Table 2.	Issues not carried forward for further analysis.....	10
Table 3.	Alternatives Considered but Eliminated.....	15
Table 4.	Alternative Comparison Matrix.....	32

Document Structure

The BLM has prepared this Environmental Assessment in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This Environmental Assessment discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into five chapters:

1.0 Introduction

This section includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the BLM informed the public of the proposal and how the public responded.

2.0 Comparison of Alternatives, including the Proposed Action

This section provides a more detailed description of the agency's proposed action as well as alternative methods for achieving the stated purpose. These alternatives were developed based on issues raised by the public and other agencies through scoping. This discussion also includes possible mitigation measures. Finally, this section provides a summary and comparison table of the alternatives.

3.0 Affected Environment

This section describes the critical elements of the human environment, or resources, which may be impacted by implementing the proposed action. This analysis is organized by critical element. The analysis is broken into critical elements carried forward for additional analysis in Chapter 4.0 Environmental Consequences, and critical elements not carried forward.

4.0 Environmental Consequences

This section describes the environmental effects of implementing the proposed action and other alternatives. This analysis is organized by issue. Within each section, the affected environment is described first, followed a description of the effects of the No Action Alternative and the Preferred Alternative.

5.0 Agencies and Persons Consulted

This section provides a list of preparers and agencies consulted during the development of the environmental assessment.

Appendices

The appendices provide more detailed information to support the analyses presented in the environmental assessment.

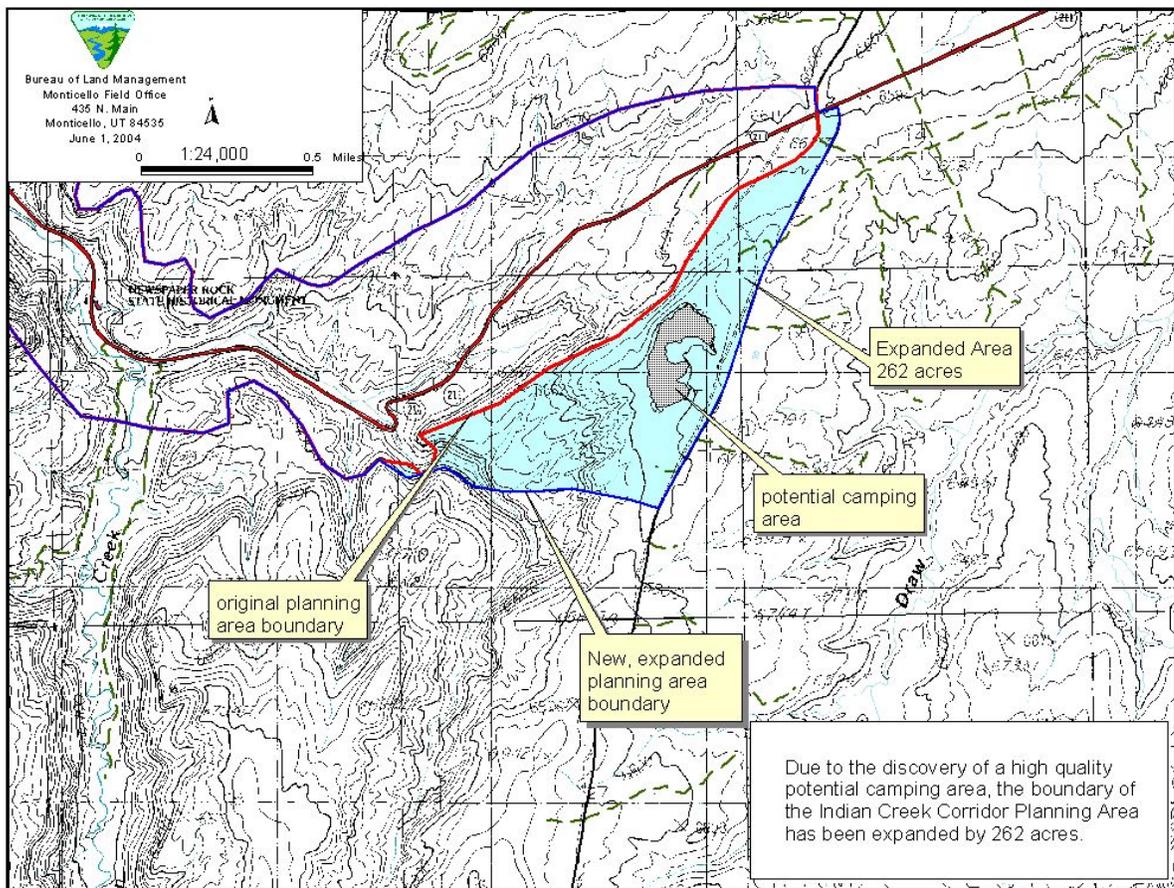
Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the BLM Monticello Field Office, Monticello, Utah.

1.0 Purpose and Need

This chapter includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the BLM informed the public of the proposal and how the public responded.

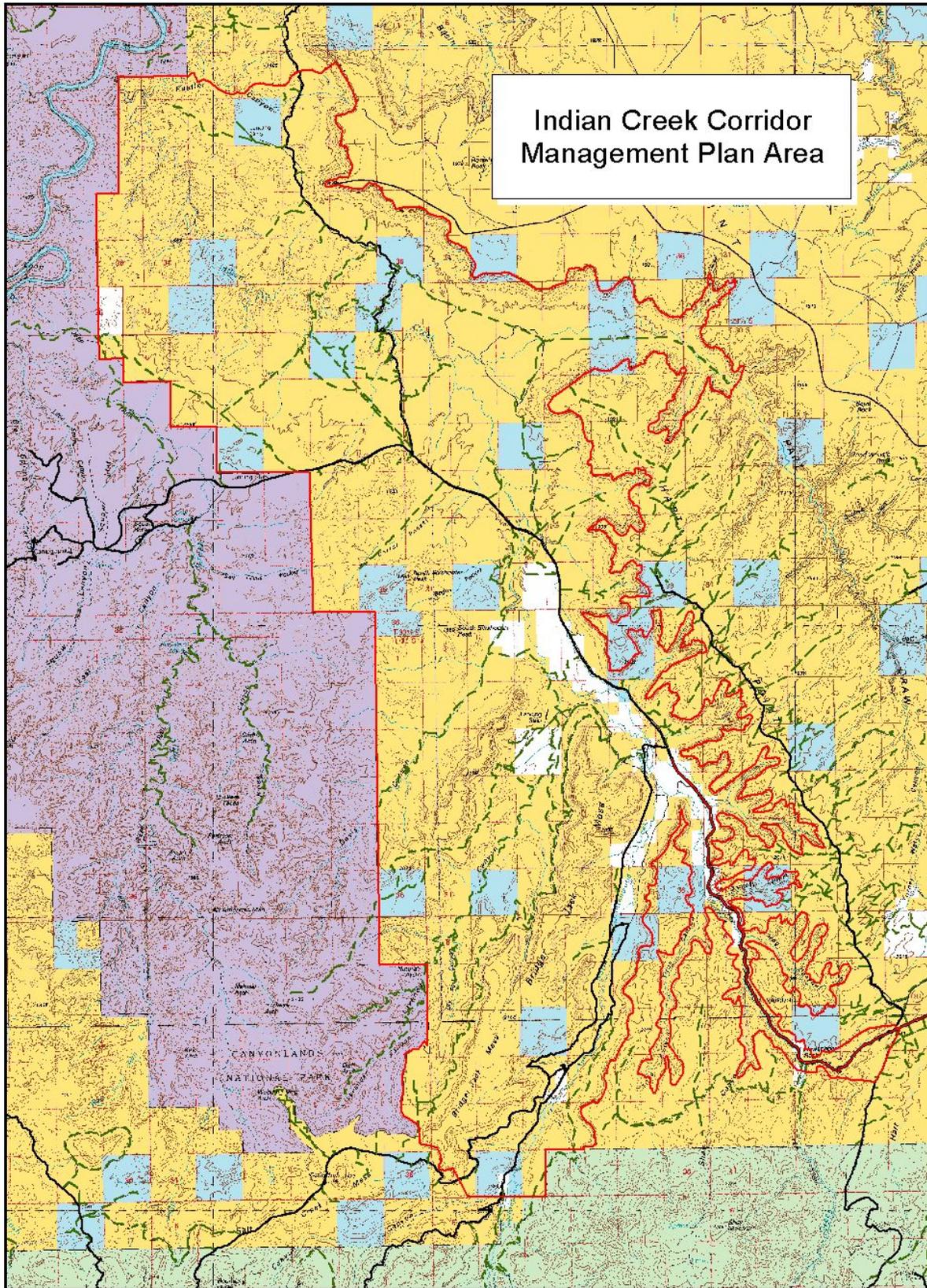
1.1 Introduction

The Bureau of Land Management (BLM) Indian Creek Corridor planning area is located in San Juan County, Utah. The boundaries of the planning area are indicated in the Indian Creek Corridor planning area map on the following page. Generally, the planning area's southern border reaches to the boundary of the Manti La Sal National Forest. The western border reaches to the boundary of Canyonlands National Park. The northeastern border extends up into Harts Draw to the rim of the Wingate sandstone cliffs, but does not include the land above the rim. The Rustler Canyon drainage serves as the northwestern border. The eastern border follows the cliff line and extends just beyond the junction of Highway 211 and the Harts Draw Road. The planning area initially ended at this junction, but was expanded by 262 acres because of the identification of a high potential campground site just outside of this initial boundary.



Special areas within the planning area include Newspaper Rock, the Shay Canyon Area of Critical Environmental Concern (ACEC), the Indian Creek Riparian Demonstration Area, the Indian Creek ACEC, the Bridger Jack Mesa ACEC, and the Lavender Mesa ACEC. The project area also encompasses the BLM lands surrounding the Nature Conservancy's Dugout Ranch, operated by Heidi Redd, and the Bar MK Ranch in Harts Draw, owned and operated by Val Dalton.

Indian Creek Corridor Management Plan Area



SCALE 1:125,000



1 inch equals approximately 2 miles



Area of Coverage



Bureau of Land Management
 Monticello Field Office
 435 N. Main
 Monticello, UT 84535
 June 2, 2004

This product may not meet BLM Standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.

1.2 Proposed Action

The BLM Monticello Field Office proposes to prepare and implement a plan to manage certain resources and uses in the Indian Creek Corridor, in conformance with the San Juan RMP, to meet the following objectives:

- Protect natural resources,
- Protect cultural and paleontological resources, and
- Provide for a variety of safe visitor services to campers, climbers, and other user groups.

The proposed action does not include activities that are addressed as part of the broader management policies in the San Juan Resource Management Plan, including:

- 1) Modifying the existing management of OHVs within the Indian Creek Corridor planning area.
- 2) Modifying the existing management of oil and gas exploration and production within the Indian Creek Corridor planning area.
- 3) Modifying the terms of the existing grazing permits.
- 4) Modifying the management of Wilderness Study Areas (WSAs), or ACECs.

1.3 Purpose and Need of the Proposed Action

The BLM San Juan Resource Management Plan, March 18, 1991, states that activity level plans are to be completed for Special Recreation Management Areas (SRMA) within the San Juan Resource Management area. Because the level and type of use in the Indian Creek corridor is different than the rest of the Canyon Basins SRMA, it was determined that a specific activity plan for this area would be more appropriate than a plan that encompasses the entire Canyon Basins SRMA.

The Indian Creek Corridor planning area has experienced significant increases in visitation and use over the last decade due to a number of factors. Increased visitation to the Needles District of Canyonlands National Park has brought more visitors to the Indian Creek area, and has necessitated the use of the Indian Creek Corridor as overflow for the park's camping areas. Indian Creek has also become an increasingly popular recreation destination. Visitation to Indian Creek for its superb rock climbing and other recreation opportunities has exploded in recent years, bringing with it thousands of new visitors to the Corridor. Indian Creek's proximity to Moab, and Canyonlands and Arches National Parks, make it a convenient alternative to these busier recreation destinations.

Increased visitation within Indian Creek corridor has generated resource and visitor management challenges that need to be addressed if the

natural and cultural resources of the planning area are to be maintained. Conflicts are arising in this area as a result of increases in the total number of visitors to the area, as well as the diversity of types of users (climbers, mountain bikers, campers, OHV users, etc.). The natural and cultural resources of the Corridor are being increasingly impacted. Soils and vegetation are being lost in the lower Indian Creek area as a result of unrestricted camping and OHV use. Several types of cultural and paleontological sites have been the target of various forms of vandalism. The loss and degradation of these resources is of serious concern to BLM, the National Park Service (NPS), Dugout Ranch, and many of the public land users.

This plan and Environmental Assessment (EA) is needed to satisfy the requirements of the San Juan Resource Management Plan to develop SMRA activity level plans, and also to meet the objectives of the Monticello Field Office to:

- Protect natural resources,
- Protect cultural resources, and
- Provide a variety of safe visitor services to the users of the Indian Creek Corridor.

1.4 Decisions to be Made

The Monticello Field Office of the BLM must decide:

- 1) Whether to implement a plan to manage recreational resources and certain uses in the Indian Creek Corridor, and if so
- 2) How should resources and certain uses be managed to best protect natural resources?
- 3) How should resources and certain uses be managed to best protect cultural and paleontological resources?
- 4) How should resources and certain uses be managed to best provide for a variety of safe visitor services to campers, climbers, and other user groups?

Details of these decisions are reflected in Section 1.6, Issues, and in Chapter 2.0 Alternatives.

1.5 Conformance with Land Use Plans and Regulation

1.5.1 San Juan Resource Management Plan

The proposed action has been reviewed for conformance with the San Juan Resource Management Plan (RMP) (43 CFR 1610.5, BLM MS 1617.3). The San Juan RMP outlines broad management objectives and directions for the entire San Juan Resource Area as well as specific directions for ACECs including: the Bridger Jack Mesa, Indian Creek, Lavender Mesa, and Shay Canyon ACECs.

The RMP specifies directions for the management of several resources including: oil/gas/mineral resources, rights-of-way, forest resources, grazing, wilderness, recreation, visual resources, soil, water, wildlife, endangered species, air quality, and fire management. The proposed action is an implementation of the management directions prescribed in the existing San Juan RMP, and would require no change or modification to this RMP.

1.5.2 Relationship to Statutes, Regulations, or Other Policies

The proposed action is consistent with San Juan County's Master Plan of 1996. The plan recognizes the travel, tourism, outdoor recreation and the film industry are playing a stronger role in San Juan County's economy. Several objectives in the plan address the enhancement of the county's economy while maintaining a rural lifestyle.

The Federal Land Policy and Management Act of 1976 (FLPMA) contains the BLM's general land use management authority over public lands. The proposed action poses no conflicts with FLPMA.

The proposed action is also consistent with the following Federal natural resource related policies and laws:

- Archeological Resources Protection Act of 1979(16 U.S.C. a)
- National Historic Preservation Act of 1966 and 1999 amendment (16 U.S.C. 470 et seq.)
- Native American Graves and Repatriation Act of 1990 (43 CFR 7)
- National Parks and Recreation Act of 1978 (16 U.S.C. 1242-1243)
- Endangered Species Act of 1973 (16 U.S.C. 1531 et seq. as amended)
- National Environmental Policy Act of 1969 (42 U.S.C. 4321)
- Recreation and Public Purposes Act of 1926, as amended (43 U.S.C. 869 et seq.)
- Federal Water Pollution Control Act of 1977 (Clean Water Act) (33 U.S.C. 1251 et seq.)
- Executive Order 11988 Floodplains

Background

The Indian Creek Corridor planning process initially began in 1991 with the approval of the San Juan Resource Management Plan, which specified for the development of Special Recreation Management Area plans. Although the Indian Creek Corridor would have geographically fallen under the Canyon Basins SRMA plan, the BLM decided that management for the Indian Creek Corridor would be best addressed in a separate plan.

Issue identification began in the early 1990s. Two public scoping periods were held, and coordination with key stakeholders was ongoing. The first version of this plan, originally called the “U-211 Management Plan” and later the “Indian Creek Partnership Plan” was completed in draft in December 1993. Due to a shift in work priority and declining staff, this draft was never finalized. A later version of the plan entitled, “Indian Creek Corridor Recreation Facilities Plan and Environmental Assessment,” was not written until 2000. Because of personnel changes, funding issues, and other factors the draft was never completed.

In summer of 2003, the BLM contracted a third party consultant to complete the EA, and work on the “Indian Creek Corridor Plan and EA” resumed.

Current Process

The issue identification process for this new effort began on July 9, 2003, with a site visit to the Indian Creek Corridor. Attendees included Dugout Ranch, The Nature Conservancy, the project consultants, and the BLM.

Scoping of the general public began on July 29, 2003, with a scoping newsletter mailed to approximately 100 persons and organizations identified by the BLM as interested parties. The scoping newsletter provided a summary of the Indian Creek planning process, provided background on the planning area, identified preliminary issues to be addressed in the EA, and solicited public comment. A total of 32 written comments were received in response to this newsletter.

A stakeholder meeting was held on September 29, 2003, with the BLM, the Access Fund, Dugout Ranch, and The Nature Conservancy. The purpose of this meeting was to discuss the issues raised in the scoping comments, and give these interested parties opportunity to identify any additional issues.

A second public scoping notice was published on September 30, 2003, in the San Juan Record, the Blue Mountain Panorama, the Times Independent, the Cortez Journal, and the Durango Herald. This notice extended the scoping comment deadline to October 24, 2003, and was published in an effort to solicit additional comments. Written comments received before this deadline totaled 330. Nine (9) comments were received after the deadline.

On October 27, and 28, 2003, interviews were conducted with San Juan County, the National Park Service, and the United States Geological Survey. These entities did not provide scoping comments, and these

interviews were held in an effort to solicit comment from these key stakeholders.

Additional interviews were held on December 15 and 16, 2003, with the Manti-La Sal National Forest, the Utah Department of Transportation, the National Park Service, Dugout Ranch, and the Access Fund. The San Juan County Commission was also briefed on the planning effort during their meeting on December 15, 2003. The purpose of these meetings was to discuss preliminary plan alternatives and get feedback from stakeholders on these draft ideas.

Upon identification of a high potential campground location just outside of the Indian Creek Planning Area, a public notice and map was posted on the BLM website (<http://www.blm.gov/utah/monticello/IC-index.htm>) announcing a change in the Planning Area boundary.

1.6.1 Issues Relevant to the Decisions to be Made

The following issues have been identified by the project Interdisciplinary Team as consistent with the scope of the analysis, pertinent to the decisions to be made, and appropriate for the development of a range of reasonable alternatives including the proposed action. These issues are based on public comment, resource evaluations of the affected area, and BLM knowledge of the Corridor and its use.

Table 1. Issues carried forward for further analysis	
Issue	Evaluation Criteria
Issue 1: <i>The extent to which certain uses in Indian Creek are managed to protect natural resources.</i>	<p>Evaluation Criteria used to compare alternatives include:</p> <ul style="list-style-type: none"> • A qualitative description of the extent to which each alternative may affect: <ul style="list-style-type: none"> ○ Vegetative cover ○ Soil erosion ○ Water quality ○ Riparian and wetland area ○ Visual resource management ○ Wildlife and wildlife habitat ○ Threatened, endangered, or candidate species
Issue 2: <i>The extent to which certain uses in Indian Creek are managed to protect cultural and paleontological resources.</i>	<p>Evaluation criteria used to compare alternatives include:</p> <ul style="list-style-type: none"> • A qualitative description of the extent to which each alternative may affect cultural and paleontological resources within or adjacent to the planning area.

<p>Issue 3: <i>The extent to which visitor services should be provided to meet the needs of the users.</i></p>	<p>Evaluation criteria used to compare alternatives include:</p> <ul style="list-style-type: none"> • A qualitative description of the impacts of campsites alternatives on users and uses. • A qualitative description of the impacts of restroom alternatives on users and uses. • A qualitative description of the impacts of trail alternatives on users and uses. • A qualitative description of the impacts of fees on visitor services, natural and cultural resources, and the relocation of users. • A qualitative description of the impacts of parking on visitor services, natural and cultural resources, and users. • A qualitative description of the impacts of each alternatives on user and visitor safety.
---	---

1.6.2 Issues Not Carried Forward

The following issues were identified during the public scoping process and discussed by the BLM project Interdisciplinary Team. It was determined that these issues were beyond the scope of this analysis, or directly related to the decisions to be made. These issues were not used in the development or evaluation of the proposed action or associated alternatives. Table 2 summarizes the issues not carried forward.

Table 2. Issues not carried forward for further analysis

Issue	Rationale
Off Highway Vehicles (OHV's)	<p>This issue is not carried forward for further analysis because the proposed action does not include any changes to the management of OHVs.</p> <p>The BLM's policies for OHV are outlined in the San Juan RMP, and this proposed action is constrained to the management directions set forth in the RMP. Changes in the management of OHVs in the Indian Creek Corridor would require amendments to the RMP, and are therefore not discussed in this EA.</p> <p>The RMP is currently under revision, and this issue is being addressed as a broader policy issue in this revision.</p>
Oil, Gas, and Minerals	<p>This issue is not carried forward for further analysis because the proposed action does not include any changes to the management of oil, gas, or minerals leasing or development.</p> <p>The BLM's policies for extractive industries are outlined in the San Juan RMP, and this proposed action is constrained to the management directions set forth in the RMP. Changes in the management of extractive industries in the Indian Creek Corridor would require amendments to the RMP, and are therefore not discussed in this EA.</p> <p>The RMP is currently under revision, and this issue is being addressed as a broader policy issue in this revision.</p>

<p>Grazing and Agriculture</p>	<p>The BLM's policies for grazing uses are outlined in the San Juan RMP, and this proposed action is constrained to the management directions set forth in the RMP. Changes in the management of agricultural uses in the Indian Creek Corridor would require amendments to the RMP, and are therefore not discussed in this EA.</p> <p>The RMP is currently under revision, and this issue is being addressed as a broader policy issue in this revision.</p>
<p>WSAs and ACECs</p>	<p>This issue is not carried forward for further analysis because the proposed action does not include any changes to the management of WSAs or ACECs.</p> <p>The BLM's policies for the management of these areas are outlined in the San Juan RMP, and this proposed action is constrained to the management directions set forth in the RMP. Changes in the management of WSAs or ACECs in the Indian Creek Corridor would require amendments to the RMP. The RMP is currently under revision, and this issue is being addressed as a broader policy issue in this revision.</p> <p>Although the proposed action would have no impact on WSAs and ACECs, further discussion on these issues is located in Chapter 3.0 Affected Environment to provide context.</p>
<p>Reintroduction of Native Colorado Cutthroat Trout</p>	<p>This issue is not carried forward for further analysis because the proposed action does not include any changes to the management of fisheries in the Indian Creek Corridor.</p> <p>BLM and UDWR recent surveys have not found that Indian Creek supports a trout fishery on BLM lands. Because of recent drought conditions, low annual precipitation for the area, and upstream diversions, it is not likely that Indian Creek would maintain sufficient in-stream flow to support Colorado Cutthroat in the near future.</p>

Land Acquisitions or Exchanges	<p>This issue is not carried forward for further analysis because the proposed action does not include any proposed land acquisition or exchange within the Indian Creek Corridor.</p> <p>However, SITLA inholdings may present an opportunity to address management issues. SITLA land exchanges or adjustments may be recommended for consideration during the current revision of the RMP.</p> <p>Similarly, land exchange possibilities may exist with The Nature Conservancy or with the Kelly Ranch, just east of Newspaper Rock. Such exchanges would be explored and may be recommended for consideration in the RMP revision.</p>
Environmental Justice	<p>The proposed action includes only public lands which are available to the entire public. This proposed action would not place any burden which could be considered an environmental injustice on any segment of the population, and therefore this issue has not been carried forward for further analysis.</p>
Hazardous Materials	<p>No hazardous substance as defined by CERCLA would be used in the proposed action. No RCRA hazardous wastes would be generated. Since hazardous materials are not an issue associated with the current conditions or the proposed action, this issue has not been carried forward for further analysis.</p>
Air Quality	<p>There are currently no air quality issues within the Corridor, and the proposed action would have no measurable effect on air quality in the area. This issue was therefore not carried forward for further analysis.</p>

<p>Wild and Scenic Rivers</p>	<p>Indian Creek has been identified as an eligible Wild and Scenic River in the BLM Monticello Field Office's August 2003 report, "Preliminary Eligibility Determination of Wild and Scenic Rivers," for its outstanding and remarkable cultural resources. The 5-mile segment of the Creek which has been identified as eligible runs from the Manti-La Sal National Forest boundary to Donnelly Canyon.</p> <p>The Proposed Action would not change the free flowing nature of the river, nor would it impact the river's Outstandingly Remarkable Values. This issue was therefore not carried forward for further analysis.</p>
<p>Prime or Unique Farmlands</p>	<p>Dugout Ranch, owned by The Nature Conservancy and operated by Heidi Redd, is located within the Indian Creek Corridor planning area. The 5,200-acre Dugout Ranch is an operating cattle ranch with 250,000 acres of grazing allotments on BLM land. Much of the ranch lands are irrigated alfalfa fields. The Conservancy is managing the Dugout Ranch to preserve and enhance the property's ecological and open space features. The property is used for ecological research, biological management, and natural and cultural history interpretation. It is being maintained as an economically viable and ecologically sustainable cattle ranching operation.</p> <p>Although the irrigated farmlands of the Dugout Ranch are considered to be prime or unique farmlands, the proposed action would have no effect on these lands. This issue was therefore not carried forward for further analysis.</p>

Native American Religious Concerns	Several Native American Tribes have cultural affiliation with the area within the ICCP. The Hopi Tribe, in particular, has visited Newspaper Rock National Historic Site and considers it among other sites in the area to be a Traditional Cultural Property. Protection for all prehistoric cultural sites is a concern for The Hopi Tribe as well as other Tribes who were associated with this area in the past and maintain some association today (see appendix for tribal consultation list).
------------------------------------	--

2.0 Alternatives

This chapter describes the range of alternatives considered as part of the Indian Creek Corridor Plan and EA process. All alternatives considered are consistent with the resource management objectives stated in the 1991 San Juan Resource Management Plan, and address unique characteristics of the Indian Creek Corridor planning area.

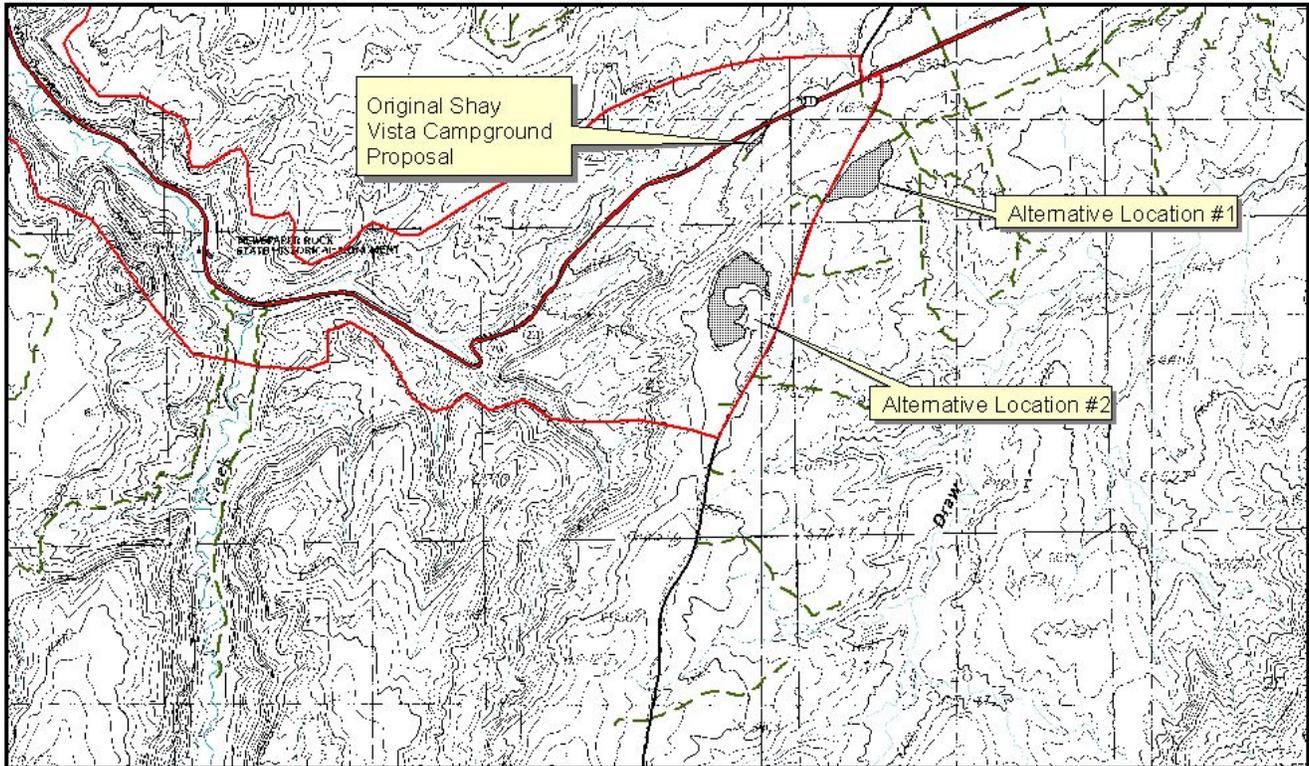
2.1 Alternatives Considered but Eliminated from Detailed Analysis

The following alternatives were identified and considered by the BLM project Interdisciplinary Team. It was determined that these alternatives would not be carried forward for detailed analysis. Table 3 summarizes the alternatives considered but eliminated.

Alternative	Rationale
Developing and improving Indian Creek Falls campground.	<p>Although the RMP directs the BLM to designate a campground in this area, such an action would be in conflict with cultural resources protection. In order to protect these sensitive resources, this alternative was eliminated from the analysis.</p> <p>This plan recommends that the San Juan RMP be revised to recognize the constraints posed by the need to protect cultural resources in this area.</p>
Identifying the Superbowl area as a designated campground.	<p>In the Superbowl area, there is a concentration of decaying cottonwood trees that pose a potential risk to campers and picnickers under these trees. It is recommended that camping not be encouraged at Superbowl, and that campers be encouraged to use the Creek Pasture area as a safer alternative. Therefore, this alternative was eliminated.</p>

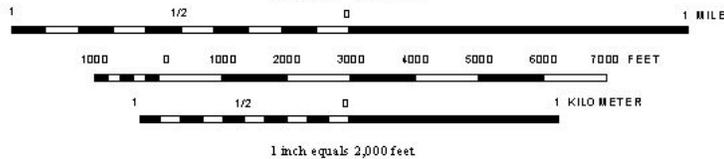
<p>Leaving existing camping at Newspaper Rock.</p>	<p>There are a number of resource and safety concerns which make this an unreasonable alternative. Part of the existing campground is located in the Indian Creek floodplain, and was inundated twice between 2002 and 2003. Camping in a floodplain and riparian area also poses questions about the protection of water quality, wildlife habitat, riparian vegetation, stream banks, and other resources. Furthermore, according to Executive Order 11988 on Floodplains, no construction or development should occur in a floodplain if practicable alternatives exist. For these reasons, this alternative was eliminated.</p>
<p>Identifying the Cottonwood area as a designated campground.</p>	<p>In the Cottonwood area, there is a concentration of decaying cottonwood trees that pose a potential risk to campers and picnickers under these trees. It is recommended that camping not be encouraged at Cottonwood, and that campers be encouraged to use the Bridger Jack area as a safer alternative. Therefore, this alternative was eliminated.</p>
<p>Implementing a toll booth type entrance station along Highway 211 at Newspaper Rock.</p>	<p>The BLM has received suggestions that a toll booth type of entrance station be placed on Highway 211 for all visitors entering the Indian Creek Corridor. Funds generated by this entrance station would be used for Corridor needs such as visitor education, law enforcement, facilities maintenance, and natural and cultural resource protection and monitoring.</p> <p>At this time, the BLM has decided not to pursue this option. This option may be more seriously considered in the future. Prior to the implementation of such a system, the BLM and NPS would have to work jointly together to determine the appropriate fee structure since Canyonlands NP is currently charging all visitors who enter through the Needles District Entrance Station.</p>
<p>Installing toilets at Bridger Jack, Superbowl, Creek Pasture, Cottonwood camping areas.</p>	<p>A trial period pack-in/pack-out alternative for these areas was selected instead, but includes a provision for adding permanent restrooms if deemed necessary in the future. Parameters of this trial period are outlined in Section 2.2.3 of this chapter.</p> <p>Negotiations are underway with outdoor equipment manufacturers which may be interested in assisting the BLM with funding or maintaining waste facilities and/or toilets.</p>

<p>Charging fees at Bridger Jack, Superbowl, Creek Pasture, Newspaper Rock, Cottonwood, and Indian Creek Falls.</p>	<p>It was determined that charging fees for using these areas is not necessary at this time, and this alternative was eliminated. If permanent restrooms or other services were deemed necessary in the future, fees would be charged to cover the costs or installation and maintenance.</p>
<p>Closing the Indian Creek Corridor to undesignated dispersed camping.</p>	<p>The BLM considered closing the Indian Creek Corridor to undesignated dispersed camping in response to problems with human waste disposal. Closing the area to dispersed camping is in conflict with the current RMP, and this alternative was therefore eliminated from further study.</p> <p>A trial pack-in/pack-out policy has been considered as an alternative to removing all undesignated dispersed camping. The BLM may still consider making a recommendation to the RMP to allow for the closure of certain areas to dispersed camping as needs arise.</p>
<p>Locating a campground near the gravel area at the top of the Highway 211 switchbacks.</p>	<p><i>Original Shay Mountain Vista Campground Location:</i> Because of unsuitable topography (steep slopes, stream crossings, etc.) and the length of new road needed to access this site, this alternative was considered but eliminated.</p> <p><i>Shay Mountain Vista Alternative Location #1:</i> An alternative campground location was identified near this same area which was also eliminated as an alternative because of a variety of issues and impacts. Although the campground location would provide nice scenery for camping, there was concern that several of the campsites would be visible from Highway 211. Additionally, the site could interfere with a sagebrush restoration project that is currently being planned. It would also break up cow movement between feeding areas and several watering ponds in the area, and interfere with a fencing project that is currently being planned.</p> <p>These alternatives and the alternative selected to carry forward for detailed analysis (alternative location #2) are illustrated in the following graphic.</p>



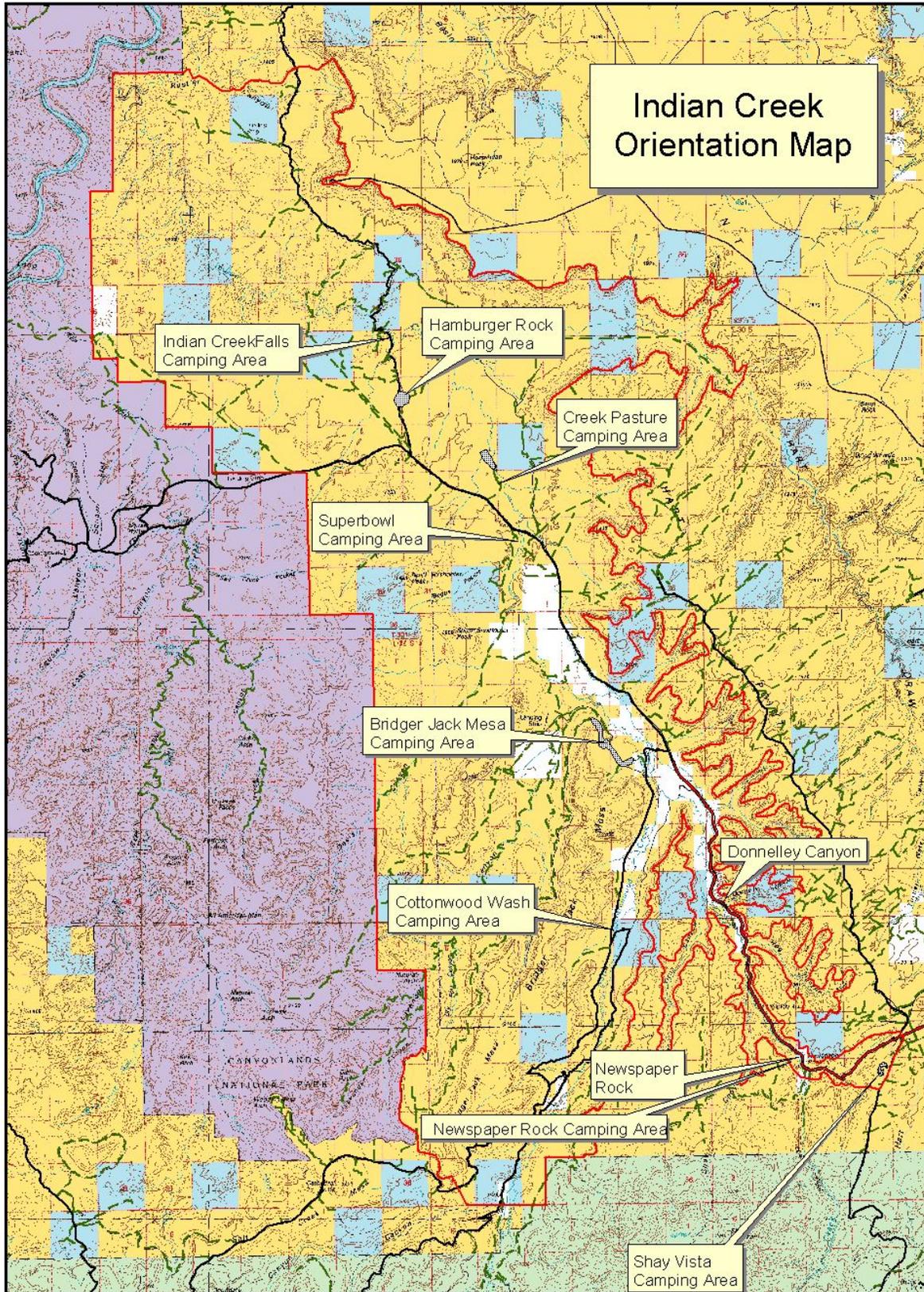
Bureau of Land Management
 Monticello Field Office
 435 N. Main
 Monticello, UT 84535
 June 2, 2004

Alternative Campground Locations
 For the Indian Creek Management Plan
 SCALE 1:24,000



2.2 Alternatives Analyzed in Detail

The following orientation map illustrates the location of specific areas identified in the alternatives. These include proposed and existing camping areas, a proposed day-use area, and camping areas proposed for removal.



Indian Creek Orientation Map

Indian Creek Falls
Camping Area

Hamburger Rock
Camping Area

Creek Pasture
Camping Area

Superbowl
Camping Area

Bridger Jack Mesa
Camping Area

Cottonwood Wash
Camping Area

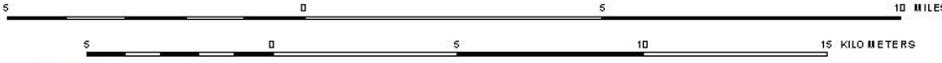
Donnelley Canyon

Newspaper
Rock

Newspaper Rock
Camping Area

Shay Vista
Camping Area

SCALE 1:125,000



Bureau of Land Management
Monticello Field Office
435 N. Main
Monticello, UT 84535
June 2, 2004

1 inch equals approximately 2 miles
N
This product may not meet BLM Standards for accuracy and content. Different data sources and digitization may cause some misalignment of data layers.

Camping Areas	Bureau of Land Management (BLM)	Water
Indian Creek Corridor Management Area	US Forest Service (USFS)	
County Road Data	US Wilderness Area	
B Road	National Park Service (NPS)	
D Road	State	
State Highway	Private	

2.2.1 Management Objectives Common to All Alternatives

In addition to San Juan Resource Area-wide BLM management objectives, the Interdisciplinary Team identified several Indian Creek Corridor-specific management priorities and impact mitigation measures. Collectively, these objectives are common to all alternatives considered.

Resource management objectives and impact mitigation measures applicable to the Indian Creek Corridor plan include the following:

Riparian Area, Stream Corridors, and Wetlands

- Facilities, trails, or activities will not be allowed to encroach on wetlands or occur within stream corridors.
- Soil disturbing activities in wetlands, floodplains, or riparian areas will be avoided when possible.

Watershed, Soils, and Water Quality

- Water quality and soil productivity will be maintained and protected.
- Activities will not be allowed if the associated water quality impacts cannot be mitigated.
- Water quality monitoring will continue along Indian Creek.

Historic and Cultural Resources

- Cultural and paleontological resources will be protected and preserved.
- A cultural resource clearance survey will be done for proposed actions and consultation with the Utah State Historical Preservation Office (USHPO) and Native American Tribes will take place.
- Activities and uses impacting known cultural and paleontological resources will not continue prior to a complete evaluation, consultation and implementation of mitigation measures.

Trail Construction and Maintenance

- Trails will be constructed with minimal soil and vegetation disturbance.
- As necessary, trails will be reconstructed or realigned to improve public safety, prevent erosion, and avoid sensitive areas.

Visual Resources

- Visual resources will be managed to retain the quality of naturally occurring landscapes.
- Any facilities will be constructed to be consistent with the surrounding natural environment.

Wildlife

- Riparian corridors will be preserved and managed to maintain wildlife habitat.
- Activities and uses impacting wildlife will not continue prior to a complete evaluation and, where appropriate, implementation of mitigation measures.

Vegetation

- Vegetation and vegetative cover will be maintained and protected.
- Activities and uses impacting vegetation will not continue prior to a complete evaluation and, where appropriate, implementation of mitigation measures.

Threatened, Endangered, and Candidate Species

- Management will provide for the protection of threatened, endangered, and candidate plant and animal species as identified.

2.2.2 [Alternative A- No Action Alternative](#)

Under Alternative A, the Indian Creek Corridor would continue under current management. There would be no change to the location, designation, or establishment of campsites, trails, restroom facilities, parking areas, or recreation sites. There would also be no change to the management of water quality, vegetative cover, wildlife, riparian or wetland areas, or scenic quality. Likewise, there would be no change to the management of cultural resources in the planning area.

The management directions under the No Action Alternative have been broken into two sections: Area-Wide Management Directions, and Specific Area Management Directions.

No Action Alternative: Area-Wide

These management directions are currently being applied to the entire Indian Creek Corridor and would continue under the No Action Alternative.

Rock Climbing

Climbing in the Indian Creek Corridor would be open to the public with minimal regulations and restrictions. The establishment of new routes and placing of bolts and anchors would be allowed. There would be no regulations for fixed anchors. The use of chalk would be allowed. No climbing would be allowed on routes which may adversely impact cultural resources such as rock art. Anchors may be removed on any route found to be in conflict with cultural resources. The BLM also has the authority to seasonally close climbing routes which adversely impact nesting raptors.

Trails

As needed, the BLM would evaluate and develop access trails to popular recreational sites as identified in the Rocky Mountain Field Institute study, "Recreation Inventory and Report: Rock Climbing and Related Activities in Indian Creek Canyon, Utah." RMFI and the BLM would continue to develop access trails and climbing recreational sites. Individual Environmental Assessments would be required to analyze the impacts of each trail project.

Parking

There would be no parking regulations enforced within the Corridor. Parking would continue in user-created turn-outs along Highway 211. On busy days, cars would be allowed to park along the roadside. No established parking areas would be identified or improved.

Undesignated Dispersed Camping

Under the existing closure notice, dispersed and undesignated camping has not been allowed since 1997 (Federal Register doc. 97-34187). However, the BLM currently does not have the staff to enforce the no camping closure. With the exception of Newspaper Rock, Hamburger Rock, and Indian Creek Falls, no camping is provided within the Corridor under this closure. These campgrounds would not be further developed, and no new camping areas would be designated.

Sanitation and Garbage

The restrooms at Newspaper Rock, Hamburger Rock, and Indian Creek Falls would continue to be the only permanent restrooms within the corridor. These facilities would be maintained as they are currently, and no improvements would be made to them. Standards for the management of human and other waste would be consistent with Leave No Trace principals. Most human waste at campsites and popular recreation areas would be buried in "cat holes." Neither current, nor future, demands for restrooms and sanitation would be met.

Fires

Under the current closure notice, campfires within one half mile of a motorized routes may only be built in BLM constructed fire rings, designated fire rings, or fire pans. Further, wood gathering within one half mile of a motorized route would be prohibited. If this alternative is selected, the BLM would enforce the closure as funding and staff allow, or rescind the closure and address the existing management concerns in RMP revisions.

Dogs

Pets would continue to be allowed throughout the Corridor without regulations or leash restrictions. The burial of pet waste or other appropriate disposal would be encouraged.

Education

The information kiosks at Donnelly Canyon and Indian Creek Falls would remain and would be maintained sporadically. The Access Fund climbing brochure on Indian Creek would be available at these kiosks.

Fees

Fees would be charged according to the level of service and facilities provided. Fees would continue to be charged at the Newspaper Rock Campground and Hamburger Rock Campground to cover the maintenance costs of the facilities provided at these locations. No fees would be charged for use of any other area within the Corridor.

No Action Alternative: Specific Area

These management directions are currently being applied to specific sites within the Indian Creek Corridor planning area and would continue under the No Action Alternative.

Shay Mountain Vista Campground

This campground would not be developed. No facilities or services would be provided, and therefore no fees would be charged in this area.

Newspaper Rock

This campground would be maintained as it is currently, and sites within riparian or floodplain areas would not be relocated. The site would provide camping areas, picnic tables, and fire rings. Sites located within the Indian Creek 100-year floodplain may be temporarily inundated in flooding events. Fees would be charged for use of this area to maintain the existing restroom and parking area.

Bridger Jack Mesa

Under the existing closure notice, camping at Bridger Jack Mesa is not currently allowed. However, the BLM currently does not have the staff to enforce the no camping closure. This area would not be designated as a dispersed camping area, and no specific campsites would be identified. No facilities or services would be installed. No restrooms would be installed, nor a pack-in/pack-out policy enforced. Most human waste would be buried in "cat holes." No fees would be charged for use of this area. This area would continue to receive heavy use despite the existing closure notice. The BLM would enforce the closure as funding and staff allow, or rescind the closure and address the existing management concerns in RMP revisions.

Donnelly Canyon

This area would continue to be one of the most heavily used climbing and recreation sites within the Corridor. No designated parking areas would be established, and users may frequently park along Highway 211 and on private property. No restrooms would be installed and no fees would be charged. User-created trails would continue to be used and expanded through use.

Cottonwoods

This area would continue to receive use despite the existing closure notice. The BLM would enforce the closure as funding and staff allow, or rescind the closure and address the existing management concerns in RMP revisions. No facilities or services would be implemented, and therefore no fees would be charged. No restrooms would be installed, nor a pack-in/pack-out policy enforced. Most human waste would be buried in "cat holes."

Superbowl

This area would continue to receive heavy use despite the existing closure notice. The BLM would enforce the closure as funding and staff allow, or rescind the closure and address the existing management concerns in RMP revisions. No facilities or services would be implemented, and therefore no fees would be charged. No restrooms would be installed, nor a pack-in/pack-out policy enforced. Most human waste would be buried in “cat holes.” This area would continue to receive heavy use and no limits would be placed on the number of campers here.

Creek Pasture

This area would continue to receive use despite the existing closure notice. The BLM would enforce the closure as funding and staff allow, or rescind the closure and address the existing management concerns in RMP revisions. No facilities or services would be implemented, and therefore no fees would be charged. No restrooms would be installed, nor a pack-in/pack-out policy enforced. Most human waste would be buried in “cat holes.” This site would continue to have light use, as most people would choose to camp at the nearby Superbowl area.

Hamburger Rock

This area would continue to provide limited designated camping. Camping opportunities would be limited to the existing sites, and no new picnic tables or fire rings would be installed. The restrooms at this site would continue to be maintained as they are now, and no improvements would be made to their design or construction. This site would continue to have heavy use, and fees would be charged on an honor system basis for use of this area.

Indian Creek Falls

This area would continue to provide designated camping, despite known conflicts with cultural resources. Existing camping opportunities would be maintained, and no new picnic tables or fire rings would be installed. The existing information kiosk would remain and would be maintained sporadically. The existing restroom would be maintained. This site would continue to have heavy use, and fees would be charged for use of this area.

2.2.3 Alternative B- Preferred Alternative

The BLM Monticello Field Office proposes to update the management practices for the Indian Creek Corridor planning area to better meet the increasing resource and visitor management needs of the area. The management directions for the Indian Creek Corridor have been divided into two sections: Area-Wide Management Directions, and Specific Area Management Directions.

Preferred Alternative: Area-Wide

These management directions would apply to the entire Indian Creek Corridor planning area under the Preferred Alternative.

Rock Climbing

Climbing in the Indian Creek Corridor would continue to remain open to the public. The establishment of new routes and placing of bolts and anchors would be allowed. When placing fixed anchors, climbers should

limit their impact by all reasonable means. All fixed anchors should be camouflaged to minimize visual impact. Climbers should refrain from placing bolts where removable protection is feasible and safe. The use of chalk would be allowed. Climbers should avoid slings or use rock-colored webbing as permanent anchors. Alteration of the rock surfaces by gluing, chipping, or chiseling would not be allowed. Gardening, or removal of vegetation, would be prohibited.

No climbing would be allowed on routes which may impact cultural resources. As the BLM learns of climbing routes which are in conflict with the protection of cultural resources, they would be closed. Known cultural sites would be signed to alert climbers about restrictions. The BLM would also seasonally close and post climbing routes which adversely impact nesting raptors. Because raptors can, and do, change nesting areas from year to year, seasonal closures would be flexible to protect the most current situation. Should any threatened, endangered, or candidate species become an issue, appropriate mitigation actions would be taken.

Trails

As needed, the BLM would evaluate and develop access trails to popular recreational sites as identified in the Rocky Mountain Field Institute study, "Recreation Inventory and Report: Rock Climbing and Related Activities in Indian Creek Canyon, Utah," and any appendices or updates which are made to this study. Individual trail building projects would not require individual Environmental Assessments, as their impact is addressed in this document. The development of any trail would be subject to cultural, paleontological inventory, consultation, and biological clearance surveys.

Parking

Designated parking areas have been identified and would be developed according to the Indian Creek Corridor Parking Plan, Appendix A, to meet current and future parking demands. In areas where safety concerns arise, parking along the shoulder of Highway 211 would not be allowed. Signs would be posted in these areas. The BLM would work closely with the Utah Department of Transportation to design and develop transportation betterment projects along Highway 211.

Undesignated Dispersed Camping

Under this alternative, the closure notice which has been in place since 1998, would be lifted. Undesignated dispersed camping within the Indian Creek Corridor would be allowed as outlined in the existing San Juan RMP. As needs are identified, closure of areas to dispersed camping would be addressed through RMP revisions or emergency closures. Such areas may include:

- Areas which can only be accessed by crossing private land.
- Areas in which camping is found to be in conflict with cultural resources.
- Areas in which camping is found to be in conflict with natural resources.

Sanitation and Garbage

A one-year trial period pack-in/pack-out policy would be enforced for all areas without restrooms and garbage receptacles. If problems with human waste persist or increase, portable toilets would be required or restrooms would be installed in these areas.

The following standards would be applied and enforced during the trial period:

- Adherence to the Leave No Trace standards is required
- Provision and use of bag system or portable toilet is required.
- Use of cat holes is prohibited.
- Leaving or burying toilet paper is prohibited.
- Packing out all trash and garbage is required.
- Screening or filtering of grey water is required before dumping.

The BLM would hold responsibility for educating the public on the above standards, enforcing the pack-in/pack-out policy, and determining the effectiveness of the policy. This may be accomplished by creating a new BLM climbing ranger position, or with assistance from others such as an independent inspector or an academic field intern. Negotiations are underway with equipment manufacturers to discuss potential sponsorship of a BLM climbing ranger or independent inspector.

The BLM has identified the following benchmarks and monitoring measures to determine the level of compliance and effectiveness of the pack-in/pack-out policy:

- The BLM would conduct regular site visits to educate the public and enforce the pack-in/pack-out policy.
- The pack-in/pack-out policy would be determined to be working if regular inspections find that:
 - People have toilets or bags, and seem to be using them;
 - Toilet paper and/or evidence of human waste is not found in camping areas; and
 - Used toilet bags are not found in the area.
- The pack-in/pack-out policy would remain in place as long as:
 - The public thinks that it is working; and
 - The BLM thinks that it is working.

Long-term monitoring of the level of compliance and effectiveness of the pack-in/pack-out policy is essential. Regular site visits and camp inspections must continue after the end of the one-year trial period. If at any time in the future, the BLM determines that the pack-in/pack-out policy is no longer effective, permanent restrooms would be installed and fees would be charged to cover the costs of construction and maintenance of the restrooms.

Fires

Campfires are restricted to fire rings where fire rings are available. Where fire rings are not available, and in dispersed camping areas, fires would be subject to "Leave No Trace" standards. Wood collecting would be prohibited throughout the entire Indian Creek Corridor planning area.

Dogs

Dogs and other pets would continue to be allowed within the Indian Creek Corridor. If dogs become a nuisance, to other users or to livestock, they must be leashed. Dog waste must be buried or disposed of properly. BLM would provide information at kiosks about properly controlling dogs and avoiding conflicts with livestock, wildlife, and other public land users.

Education

The BLM has identified the need for a climbing ranger, but funding is not currently available to support this additional staff. The BLM is in communication with outdoor equipment manufacturers to discuss possible sponsorship of a climbing ranger for the Indian Creek Corridor.

Under this alternative, the BLM would expand education and outreach efforts in the Corridor. Information kiosks, signs, and brochures would provide the public with information which may include:

- Leave No Trace practices
- Protection of cultural resources
- Protection of natural resources
- OHV etiquette
- Camping etiquette
- Climbing etiquette
- Respect for private and public property
- Control of invasive and noxious weeds
- Dogs
- Fire safety
- Purpose and use of user fees
- Human waste disposal

These educational materials would be placed at various locations which may include:

- Newspaper Rock picnic area
- Parking areas
- Designated campgrounds
- San Juan County Visitors Center
- Canyonlands National Park Visitor Center
- Along Highway 211
- Monticello and Moab BLM Field Offices

Fees

Fees would be charged according to the level of service provided at each site. In areas where the trial pack-in/pack-out policy for human waste is implemented, no fees would be charged. If it is determined that the trial policy is not working, fees would be charged to cover the installation and maintenance cost of toilets.

In areas where more developed facilities and services are provided, fees would be charged. These areas include Hamburger Rock Campground and Shay Mountain Vista Campground.

Preferred Alternative: Specific Areas

These management directions apply to specific sites within the Indian Creek Corridor planning area.

Shay Mountain Vista Campground

This new designated campground would be developed and constructed following the Shay Mountain Vista Campground Site Plan, Appendix A. This site plan may include restrooms, picnic tables, fire rings, garbage collection, fencing, campsite marker posts, gravel roads, delineated parking areas, and educational kiosks or signs. This campground would operate under a fee system to cover cost of site facilities and services. This campground would provide camping opportunities for a range of users including tent and recreational vehicle (RV) campers. Development of this site would be subject to biological and cultural survey findings.

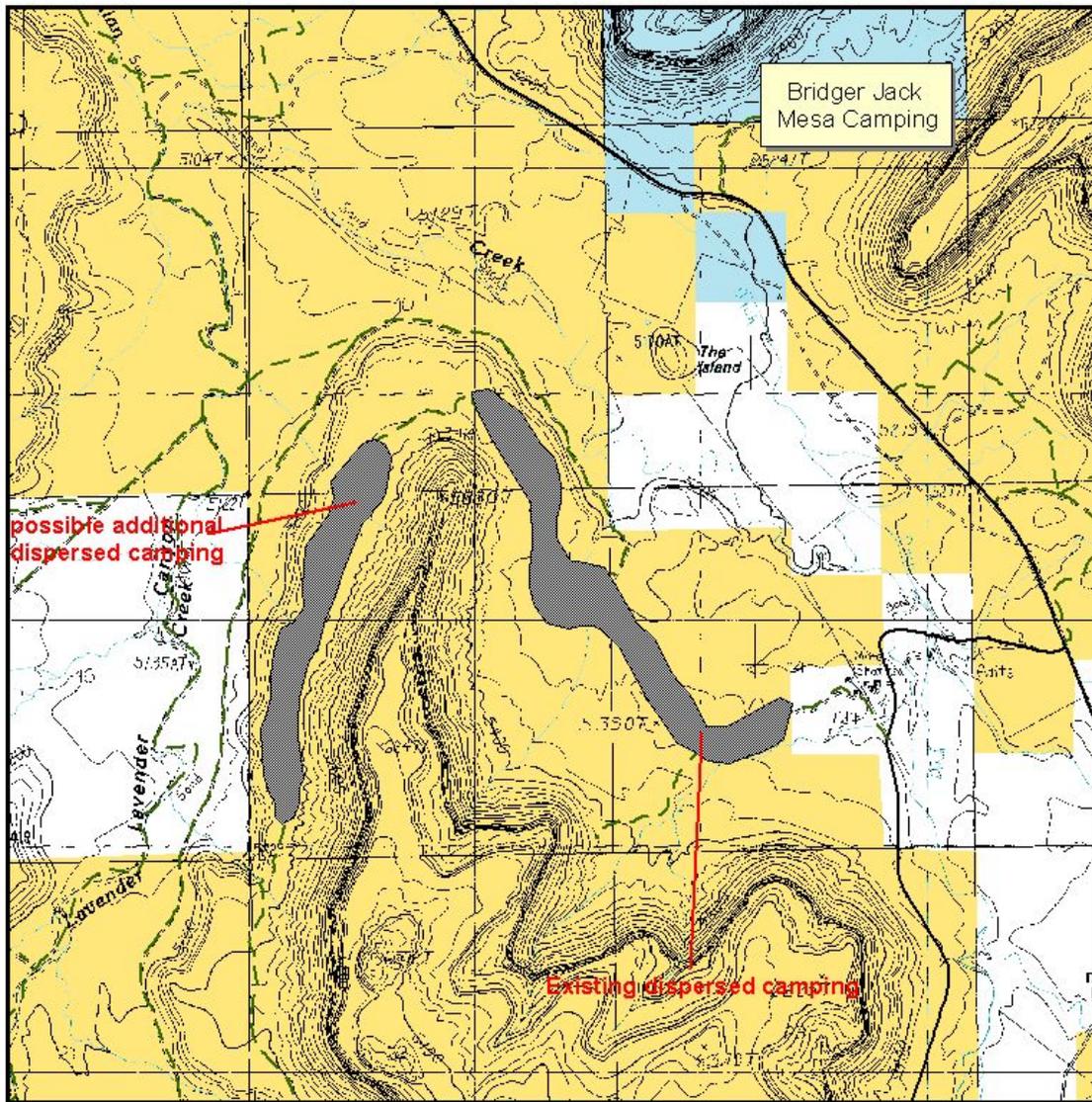
Newspaper Rock

All camping and picnic tables at the Newspaper Rock campground would be removed and this area would be rehabilitated. This closure would only occur after the Shay Mountain Vista Campground has been developed. A new designated picnic area would be developed on the East side of Hwy 211 as outlined in the Newspaper Rock Site Plan, Appendix A. Existing restroom and parking facilities would be maintained and an educational kiosk or signs would be installed. No fees would be charged for use of this picnic area. Development of this site would be subject to biological and cultural survey findings.

Bridger Jack Mesa

This area would be designated and developed according to the Bridger Jack Mesa Designated Dispersed Camping Area Site Plan, Appendix A. Facilities at this site may include the installation of fire rings, educational kiosks or signs, delineated parking areas, and campsite marker posts, and toilets. A one-year trial pack-in/pack-out policy would be enforced for handling human waste issues. If waste problems persist or increase, portable toilets would be required or restrooms would be installed. No fees would be charged for use of this area unless it is determined that restrooms are needed. At that point, options for covering the cost of installation and maintenance of restrooms would be explored. Development of this site would be subject to biological, cultural, and paleontological inventory and required consultation findings.

It is anticipated that demands for camping opportunities will continue to increase over time. The Bridger Jack Mesa has been identified as an area for potential camping area expansion as this demand increases. Additional camping areas would be located around the back side of Bridger Jack Mesa as indicated in the following figure. This area would also be subject to the pack-in/pack-out policy for human waste, unless the BLM determines that permanent toilets are necessary. Facilities at this expanded camping area would be consistent with those in the existing Bridger Jack Designated Dispersed Camping Area.




 Bureau of Land Management
 Monticello Field Office
 435 N. Main
 Monticello, UT 84535
 June 3, 2004

- County Road Data
 B Road
 D Road
 State Highway
 Land State
 Bureau of Land Management (BLM)
 US Forest Service (USFS)
 USFS Wilderness Area
 National Park Service (NPS)
 State
 Private
 Water



SCALE 1:24,000



1 inch equals 2,000 feet

This product may not meet BLM Standards
 for accuracy and content. Different data
 sources and input scales may cause some
 misalignment of data layers.

Donnelly Canyon

This area would be developed according to the Donnelly Canyon Recreation Area Site Plan, Appendix A. Adequate parking and restroom facilities are the primary needs for this area. The placement and location of these facilities is dependent on land ownership boundaries. A request has been placed on the BLM cadastral survey list, and the BLM is currently working to secure funding for this survey.

In addition to a parking area and restroom, the Donnelly Canyon site plan may include the installation of educational kiosks or signs, and the establishment of recreational access trails as outlined in the Rocky Mountain Field Institute study. No fees would be charged for use of this area. Development of this site would be subject to biological, cultural, and paleontological inventory and required consultation findings.

Cottonwoods

Camping in the Cottonwoods area would not be designated. Dispersed camping would be allowed, but not encouraged. No facilities or services would be implemented, and therefore, no fees would be charged. A one-year trial pack-in/pack-out policy would be enforced for this area. If at the end of the trial period, this policy is not found to be effective, a recommendation would be made to the RMP to close this area to dispersed camping.

The BLM has not determined if the public has legal access to this area. If surveys determine that access to this area requires the crossing of private land, a recommendation to the RMP would be made to close this area to camping.

Superbowl

Camping in the Superbowl area would not be designated. Dispersed camping would be allowed, but not encouraged. No facilities or services would be implemented, and therefore, no fees would be charged. A one-year trial pack-in/pack-out policy would be enforced for this area. If at the end of the trial period, this policy is not found to be effective, a recommendation would be made to the RMP to close this area to dispersed camping.

Creek Pasture

This area would become a designated camping area and would be developed according to the future Creek Pasture Designated Dispersed Camping Area Site Plan, Appendix A. Facilities at this site may include the installation of fire rings, picnic tables, educational kiosks or signs, delineated parking areas, campsite marker posts, and toilet facilities. Fencing would be required to protect cultural resources near this site. A one-year trial pack-in/pack-out policy would be enforced for human waste. If human waste becomes a problem, portable toilets would be required or restrooms would be installed. No fees would be charged for use of this area unless it is determined that restrooms are needed. At that point, fees would be charged to cover the cost of installation and maintenance of restrooms. Development of this site would be subject to biological and cultural survey findings.

Hamburger Rock

This campground would continue to provide designated camping opportunities for the public and would be improved according to the Hamburger Rock Campground Site Plan, Appendix A. Existing facilities and services including restrooms, fire rings, and picnic tables would be maintained and improved. Tent pads, a staging area, and educational kiosks or signs may be included in improvements to this area, but no new campsites would be developed under this alternative. This campground would operate under a fee system to cover cost of site facilities and services.

Similar to the Bridger Jack Mesa Designated Camping Area expansion, the BLM has identified Hamburger Rock as another area for potential expansion as demands for camping spaces increase over time. This expansion may include adding an outer ring of campsites around Hamburger Rock. Preliminary site design drawings have been developed, but the actual layout would be dependent on cultural, biological, and visual impact surveys.

Indian Creek Falls

Existing designated camping which is impacting cultural resources would be removed. Removing camping from this site would be in conflict with the existing San Juan RMP. This plan recommends that this issue be addressed as part of the current RMP revision. The existing restroom and educational kiosk at this site would be maintained unless found to be in conflict with cultural resources. No new facilities or services would be implemented for this site, and therefore no fees would be charged. Existing dispersed camping would be allowed if found not to be in conflict with cultural resources, but camping here would not be encouraged. This plan recommends that options for developing a management agreement with the State Institutional Trust Lands Association be addressed in the current San Juan RMP revision effort. Such an agreement would be helpful since a large part of this area, including the Indian Creek waterfalls themselves, lies within State ownership.

2.2.4 Alternative Comparison Matrix

The following table provides a summary comparison of the alternatives carried forward for detailed analysis in this Environmental Assessment.

Table 4. Alternative Comparison Matrix

AREA/TOPIC	ALTERNATIVE A—NO ACTION	ALTERNATIVE B—PREFERRED ALTERNATIVE
Area-Wide		
Rock Climbing	<ul style="list-style-type: none"> ▪ Climbing in the Indian Creek Corridor would be open to the public with minimal regulations and restrictions. ▪ The establishment of new routes and placing of bolts and anchors would be allowed. ▪ There would be no regulations for fixed anchors. ▪ The use of chalk would be allowed. ▪ No climbing would be allowed on routes which may impact cultural resources. Routes would be closed if they are found to be impacting cultural resources, and anchors on these routes would be removed. ▪ The BLM would seasonally close climbing routes which adversely impact nesting raptors and post those closings. 	<ul style="list-style-type: none"> ▪ Climbing in the Indian Creek Corridor would continue to remain open to the public. ▪ The establishment of new routes and placing of bolts and anchors would be allowed. ▪ Climbers should refrain from placing bolts where removable protection is a safe and feasible alternative. ▪ All fixed anchors must be camouflaged to minimize visual impact. ▪ The use of chalk is allowed. ▪ Alteration of the rock surfaces by gluing, chipping, or chiseling is not allowed. ▪ No gardening, or removal of vegetation, is allowed. ▪ No climbing would be allowed on routes which may adversely impact cultural resources such as rock art. Routes would be closed if they are found to be impacting cultural resources, and anchors on these routes would be removed. ▪ The BLM would seasonally close climbing routes which adversely impact nesting raptors and post those closings.
Trails	<ul style="list-style-type: none"> ▪ Rocky Mountain Field Institute and BLM would continue to develop access trails and climbing recreational sites. ▪ Individual Environmental Assessments would be required to analyze the impacts of each trail project. ▪ The development of any trail is subject to cultural and paleontological inventory and required consultation, and biological clearance surveys. 	<ul style="list-style-type: none"> ▪ BLM would evaluate and develop access trails to popular recreational sites as identified in RMFI study and its updates. ▪ Individual environmental review under NEPA would not be required for trail building efforts identified in the RMFI study and its amendments. ▪ The development of any trail is subject to cultural and paleontological inventory and required consultation, and biological clearance surveys. ▪
Parking	<ul style="list-style-type: none"> ▪ There would be no parking regulations enforced within the Corridor. ▪ Parking would continue in user-created turn-outs along Highway 211, and on busy days, cars would be allowed to park along the roadside. ▪ No established parking areas would be identified or improved. 	<ul style="list-style-type: none"> ▪ Designated parking areas have been identified and would be developed in conjunction with UDOT. ▪ In areas where safety concerns arise, parking along the shoulder of Highway 211 would not be allowed. ▪ Signs would be posted in these areas.

AREA/TOPIC	ALTERNATIVE A—NO ACTION	ALTERNATIVE B—PREFERRED ALTERNATIVE
Undesignated Dispersed Camping	<ul style="list-style-type: none"> ▪ Undesignated dispersed camping is not allowed under the current closure notice. Newspaper Rock, Hamburger Rock, and Indian Creek Falls, provide the only legal camping opportunities in the Corridor. ▪ Under this alternative either the closure would be enforced, or the management of dispersed camping would be addressed in RMP revisions. ▪ Campgrounds would not be further developed, and no new camping areas would be designated. 	<ul style="list-style-type: none"> ▪ The closure notice, which has been in place since 1998, would be lifted. ▪ Undesignated dispersed camping within the Indian Creek Corridor would be allowed as outlined in the existing San Juan RMP. ▪ As needs are identified, closure of areas to dispersed camping would be addressed through RMP revisions or emergency closures.
Sanitation and Garbage	<ul style="list-style-type: none"> ▪ The restrooms at Newspaper Rock, Hamburger Rock, and Indian Creek Falls would continue to be the only permanent restrooms within the corridor. ▪ There would be no regulations or standards for the management of human and other waste. ▪ Most human waste at campsites and popular recreation areas would be buried in “cat holes.” 	<ul style="list-style-type: none"> ▪ A one-year trial period pack-in/pack-out policy would be enforced for all areas without restrooms and garbage receptacles. ▪ If at any time, the BLM determines that the pack-in/pack-out policy is no longer effective, permanent restrooms would be installed and fees would be charged to cover associated costs.
Fires	<ul style="list-style-type: none"> ▪ Campfires would continue to be allowed throughout the Corridor without regulation. ▪ Limited wood collection for campfires would be allowed. 	<ul style="list-style-type: none"> ▪ Campfires are restricted to fire rings where fire rings are available. ▪ Where fire rings are not available, and in dispersed camping areas, fires would be subject to “Leave No Trace” standards. ▪ Wood collecting would be prohibited throughout the entire Indian Creek Corridor planning area.
Dogs	<ul style="list-style-type: none"> ▪ Pets would continue to be allowed throughout the Corridor without regulations or leash restrictions. ▪ There would be no requirements for disposal of pet waste, although burial or other appropriate disposal would be encouraged. 	<ul style="list-style-type: none"> ▪ Dogs and other pets would continue to be allowed within the Indian Creek Corridor. ▪ If dogs become a nuisance to other users or to livestock they must be leashed. ▪ Dog waste must be buried or disposed of properly. ▪ BLM would provide information about properly controlling dogs and avoiding conflicts with livestock, wildlife, and other public land users.
Education	<ul style="list-style-type: none"> ▪ The information kiosks at Donnelly Canyon and Indian Creek Falls would remain and would be maintained sporadically. ▪ Information posted would consist of the Access Fund climbing brochure. 	<ul style="list-style-type: none"> ▪ The BLM would expand education and outreach efforts in the Corridor. ▪ Information kiosks, signs, and brochures would be installed providing the public with a wide variety of information.

AREA/TOPIC	ALTERNATIVE A—NO ACTION	ALTERNATIVE B—PREFERRED ALTERNATIVE
Fees	<ul style="list-style-type: none"> ▪ Fees would be charged according to the level of service provided at each site. ▪ Fees would be charged for use of the Newspaper Rock, Hamburger Rock, and Indian Creek Falls Campgrounds. 	<ul style="list-style-type: none"> ▪ Fees would be charged according to the level of service provided at each site. ▪ Fees would be charged for use of the Shay Mountain Vista and Hamburger Rock Campgrounds. ▪ No fees would be charged for use of any other area as long as the pack-in/pack-out policy remains in place. If at any point, the BLM feels that the pack-in/pack-out policy is no longer working, fees would be charged to cover the costs of toilet facilities.
Site-Specific		
Shay Mountain Vista Campground	<ul style="list-style-type: none"> ▪ This campground would not be developed. ▪ No fees would be charged for use of this area. 	<ul style="list-style-type: none"> ▪ This new designated campground would be developed and constructed following the Shay Mountain Vista Campground Site Plan. ▪ This site plan may include restrooms, picnic tables, fire rings, garbage collection, fencing, and educational kiosks or signs. ▪ The campground would provide a range of camping opportunities ranging from tent sites to RV sites. ▪ This campground would operate under a fee system to cover cost of site facilities and services.
Newspaper Rock	<ul style="list-style-type: none"> ▪ This campground would be maintained as it is currently, and sites within riparian or floodplain areas would not be relocated. ▪ The site would provide camping areas, picnic tables, and fire rings. ▪ Sites located within the Indian Creek 100-year floodplain may be temporarily inundated in flooding events. ▪ Fees would be charged for use of this area. ▪ The existing restroom would be maintained. 	<ul style="list-style-type: none"> ▪ All camping and picnic tables at the Newspaper Rock campground would be removed and this area would be rehabilitated. ▪ A new designated picnic area would be developed on the East side of Hwy 211 following the Newspaper Rock Site Plan. ▪ Existing restroom and parking facilities would be maintained and an educational kiosk or signs would be installed. ▪ No fees would be charged for use of this picnic area.

AREA/TOPIC	ALTERNATIVE A—NO ACTION	ALTERNATIVE B—PREFERRED ALTERNATIVE
Bridger Jack Mesa Designated Dispersed Camping Area	<ul style="list-style-type: none"> ▪ This area would not be designated as a dispersed camping area, and no specific campsites would be identified. ▪ No pack-in/pack-out policy would be implemented nor would toilets be installed. Most human waste would be buried in “cat holes.” ▪ No fees would be charged for use of this area. ▪ This area would continue to receive heavy use despite the existing closure notice. ▪ The BLM would enforce the closure as funding and staff allow, or rescind the closure and address management concerns through RMP revisions. 	<ul style="list-style-type: none"> ▪ This area would become a Designated Dispersed Camping Area and would be developed according to the Bridger Jack Mesa Dispersed Camping Area Site Plan. ▪ Facilities at this site may include the installation of fire rings, educational kiosks or signs, campsite marker posts, and delineated parking areas. ▪ A one-year trial pack-in/pack-out policy would be enforced for handling human waste issues. If waste problems persist or increase, portable toilets would be required or restrooms would be installed. ▪ No fees would be charged for use of this area unless it is determined that restrooms are needed. At that point options for covering the cost of installation and maintenance of restrooms would be explored.
Donnelly Canyon Recreation Area	<ul style="list-style-type: none"> ▪ This area would continue to be one of the most heavily used climbing and recreation sites within the Corridor. ▪ No designated parking areas would be established, and users may frequently park along Highway 211 and on private property. ▪ No restrooms would be installed. ▪ User-created trails would continue to be used and expanded through use. ▪ No fees would be charged for use of this area. 	<ul style="list-style-type: none"> ▪ This area would continue to be one of the most heavily used climbing and recreation sites within the Corridor. ▪ A parking area would be developed here subject to an agreement with Dugout Ranch. ▪ A restroom, educational kiosks or signs, and access trails would be developed or installed. ▪ No fees would be charged for use of this area.
Cottonwoods	<ul style="list-style-type: none"> ▪ This area would continue to receive use despite the existing closure notice. ▪ The BLM would enforce the closure as funding and staff allow, or rescind the closure and address management concerns through RMP revisions. ▪ No pack-in/pack-out policy would be implemented nor would toilets be installed. Most human waste would be buried in “cat holes.” ▪ No facilities or services would be provided, and therefore no fees would be charged for use of this area. 	<ul style="list-style-type: none"> ▪ Camping in the Cottonwoods area would not be designated. ▪ Dispersed camping would be allowed, but not encouraged. ▪ A mandatory pack-in/pack-out policy would be enforced for this area. ▪ No facilities or services would be provided, and therefore no fees would be charged for use of this area.

AREA/TOPIC	ALTERNATIVE A—NO ACTION	ALTERNATIVE B—PREFERRED ALTERNATIVE
Superbowl	<ul style="list-style-type: none"> ▪ This area would continue to receive heavy use despite the existing closure notice. ▪ The BLM would enforce the closure as funding and staff allow, or rescind the closure and address management concerns through RMP revisions. ▪ No facilities or services would be provided, and therefore no fees would be charged for use of this area. ▪ No pack-in/pack-out policy would be implemented nor would toilets be installed. Most human waste would be buried in “cat holes.” 	<ul style="list-style-type: none"> ▪ Future camping in the Superbowl area would not be designated. ▪ Dispersed camping would be allowed, but not encouraged. ▪ A mandatory pack-in/pack-out policy would be enforced for this area. ▪ No facilities or services would be provided, and therefore no fees would be charged for use of this area.
Creek Pasture Designated Dispersed Camping Area	<ul style="list-style-type: none"> ▪ This area would continue to receive use despite the existing closure notice. ▪ The BLM would enforce the closure as funding and staff allow, or rescind the closure and address management concerns through RMP revisions. ▪ No facilities or services would be provided, and therefore no fees would be charged for use of this area. ▪ No pack-in/pack-out policy would be implemented nor would toilets be installed. Most human waste would be buried in “cat holes.” ▪ This site would continue to have light use, as most people would choose to camp at the nearby Superbowl area. 	<ul style="list-style-type: none"> ▪ This area would become a designated campground and would be developed according to the Creek Pasture Dispersed Camping Area Site Plan. ▪ Facilities at this site may include the installation of fire rings, picnic tables, educational kiosks or signs, campsite marker posts, and delineated parking areas. ▪ A one-year trial pack-in/pack-out policy would be enforced for human waste. If human waste becomes a problem, portable toilets would be required or restrooms would be installed. ▪ No fees would be charged for use of this area unless it is determined that restrooms are needed. At that time fees would be charged to cover the cost of installation and maintenance of restrooms.
Hamburger Rock Campground	<ul style="list-style-type: none"> ▪ This area would continue to provide limited designated camping. ▪ Camping opportunities would be limited to the existing sites, and no new picnic tables or fire rings would be installed. ▪ The restrooms at this site would continue to be maintained as they are now, and no improvements would be made to their design or construction. ▪ This site would continue to have heavy use, and fees would be charged on an honor system for use of this area. 	<ul style="list-style-type: none"> ▪ This campground would continue to provide designated camping opportunities for the public. ▪ Existing facilities and services would be maintained and improved. Tent pads, a staging area, and educational kiosks or signs would be developed. ▪ This campground would operate under a fee system to cover cost of site facilities and services. ▪ The BLM is also considering expansion of this campground to include an outer ring of campsites around Hamburger Rock.

AREA/TOPIC	ALTERNATIVE A—NO ACTION	ALTERNATIVE B—PREFERRED ALTERNATIVE
Indian Creek Falls Campground	<ul style="list-style-type: none"> ▪ This area would continue to provide designated camping, despite known conflicts with cultural resources. ▪ Existing camping opportunities would be maintained, and no new picnic tables or fire rings would be installed. ▪ The existing information kiosk and restroom would remain and would be maintained. ▪ This site would continue to have heavy use, and fees would be charged for use of this area. 	<ul style="list-style-type: none"> ▪ Existing designated camping in this area that is impacting cultural resources would be removed. ▪ The existing restroom and educational kiosk at this site would be maintained unless found to be in conflict with cultural resources. ▪ No new facilities or services would be implemented for this site, and therefore no fees would be charged for use of this site. ▪ Existing dispersed camping would be allowed, but not encouraged, subject to cultural and biological survey findings.

3.0 Affected Environment

This chapter describes the existing environmental resources of the area that would be affected by the alternatives if they were implemented. This description, combined with the description of the No Action Alternative in Chapter 2.0 and the predicted effect of the No Action Alternative in Chapter 4.0, establishes the baseline condition against which the decision makers and the public can compare the effects of the proposed action and the agency-preferred alternative.

The issues identified in scoping which may be affected by the proposed action are brought forward for detailed analysis in Chapters 3.0 and 4.0.

3.1 General Setting

The Indian Creek Corridor is located 50 miles southwest of Moab, and 30 miles northwest of Monticello, Utah. The landscape of the Indian Creek corridor is dominated by the Chinle talus slopes and Kayenta and Wingate cliffs that form the gateway to the Needles District of Canyonlands National Park. Other dominant landforms include mesa tops and the canyon bottomlands.

This is a semi-desert environment, and the vegetation and wildlife have adapted to high summer temperatures, cold winter nights, and very little precipitation. There are two perennial streams which run through the Corridor, Indian Creek and North Cottonwood Creek. Extensive riparian areas border these streams and the associated vegetation provides shade and habitat for the area's wildlife.

The Indian Creek Corridor has historically been a relatively remote area with few visitors. This has changed dramatically over the last decade because of the extraordinary resources and recreational opportunities the Corridor provides. Rapidly increasing popularity of the area has severely increased the impact of humans on the Corridor environment, and has created a demand for additional visitor services and facilities.

Additionally, all visitors to the Needles District of Canyonlands National Park, pass through the Indian Creek Corridor on Highway 211. As popularity of the Park increases, so does the visitation to the Corridor.

3.2 Critical and Other Elements of the Human Environment

The BLM Interdisciplinary Team held several meetings to discuss the impacts of the proposed action on the critical elements of the human environment, as well as other elements. If it was determined that the proposed action may impact an element, the element was carried forward for detailed analysis in Chapter 4.0. These elements are discussed below.

3.2.1 Cultural and Historic Resources

Cultural

The geographic area that the Indian Creek Corridor Plan (ICCP) includes has about 250 known, recorded cultural sites. Based on average site density numbers obtained from survey data within the ICCP plan boundary and adjoining National Park Lands, this number most likely represents about 30% of the total number of cultural properties present (Tipps and Hewitt, 1989; Thompson, 1979; Shearin, 1998, 1999). These cultural resources include several site types such as rock art, lithic reduction loci, structural habitation and storage, proto-historic Native American camps and historic Anglo including sites associated with the cattle industry, oil and gas exploration and minerals mining. Human use and occupation of this area spans the range of identified cultural occupations for Southeastern Utah including Paleo-Indian: 10,000-7,000 BC, Archaic Period: 7,000 BC-500 AD, Late Prehistoric Period: 500 AD-1300 AD, Proto-historic Period: 1300 AD-1850 AD, Historic: 1850 AD-1950 AD (Tipps and Hewitt, 1989).

Paleontology

The ICCP has several geological formations from the Triassic Period of the Mesozoic Era where vertebrate fossils and dinosaur track-ways have been identified. These include track-ways for Late Triassic bipedal theropods in the Chinle Formation and vertebrate fossils in the Permian Formation of the Paleozoic Era (Stokes, 1986; DeCourten, 1998).

3.2.2 Floodplains

In 1983, the Division of Water Resources conducted a floodplain study for the area around Newspaper Rock. This study found that the most part, that a 100-year flood would generally be contained within the stream channel. The study identified two areas where the a 100-year flood would overflow the stream channel: at the southern and northern ends of the Newspaper Rock area. This study found that the Newspaper Rock campground, only proposed at that time, would not be located within the 100- or 500-year floodplains.

A second floodplain study, conducted by the BLM Moab Field Office in 1997, had different findings. This study surveyed seven cross-sections of the Indian Creek floodplain to determine the water elevations of the 2-, 5-, 10-, 25-, 50-, and 100-year flood occurrences. This study determined that all of the Newspaper Rock campground is located within the 100-year floodplain, and one site even fell within the floodplain of a 2-year flood occurrence.

Annual precipitation in the Corridor ranges from eight to eleven inches. July, August, and December are typically the wettest months. Summer rainstorms are common in July and August. The heavy rainfall associated with these storms contributes to frequent flash floods.

On August 3, 2003, a flash flood of Indian Creek closed Highway 211, and did significant damage to the Newspaper Rock Campground. The flood hit the area between the switchbacks and Shay Canyon. The

stretch of Highway 211 from Mile 6 to Mile 8 and adjacent areas was washed out or covered in mud and debris. Shay Canyon was not flooded, but the hiking trail there was severely washed out. The parking lot at Newspaper Rock was washed over with runoff but the silting was minimal. The campground was flooded and a section of the road and a culvert were nearly washed out. Picnic tables and fire rings were buried with silt from the flood. The unimproved camping areas just up-stream from the Campground were flooded, taking out part of a fence and leaving a large amount of mud over the entire area.

3.2.3 Vegetation and Soils

The vegetation in the Indian Creek Corridor can be divided into three groups: riparian, upland, and relict plant communities.

Riparian vegetation is found alongside Indian Creek and North Cottonwood Creek, the only two perennial streams which flow through the corridor: Fifty percent (50%) of the riparian areas in both Indian Creek and North Cottonwood Creek are in properly functioning condition (PFC), and the other fifty percent (50%) are functioning at risk (FAR). Identified impacts were associated with drought conditions, impacts from adjacent roads, and overall area management. These riparian areas contain narrowleaf (*Populus angustifolia*) and Fremont cottonwood (*Populus fremontii*) plant associations, with Fremont cottonwoods occurring more frequently at lower elevations.

The uplands are semi-desert habitats typical of lower to middle elevations of the Colorado Plateau. The majority of the planning area is dominated by the desert shrub vegetation type which includes blackbrush (*Coleogyne ramosissima*), shadscale (*Atriplex confertifolia*), fourwing saltbush (*Atriplex canescens*), Indian ricegrass (*Oryzopsis hymenoides*), sand dropseed (*Sporobolus cryptandrus*), and galleta grass (*Hilaria jamesii*). Scattered pinyon pine (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*) are confined primarily to the slopes of the canyons and along the mesas.

These upland plant communities are associated with relatively low precipitation amounts and specific soil characteristics. The soil in the Corridor is very permeable and does not hold water well. This, coupled with limited precipitation, limits vegetative cover to plants which are drought tolerant. Additionally, the soils in the Corridor tend to be highly erosive when disturbed. Wind erosion is the primary concern. In field visit conducted on February 26, 2004, very little if any erosion was identified. There was some erosion occurring on one of climbing access trails which could be mitigated with trail hardening. Most of the soils in the high concentration areas have been compacted; this eliminates the vegetation but is not an erosion problem.

Many soil surfaces of the lower-elevation sites are covered with cryptobiotic soil, a highly fragile "living skin" that helps slow erosion processes and also provides a source of nitrogen to the desert plants. In places where this soil crust is damaged, the underlying soil layers are highly susceptible to wind. Soils types in the Indian Creek Corridor

include: Rock Outcrop, Moenkopie, Hoskinnini, Thoroughfare, Sheppard, and Nakai.

The planning area also includes some “relict”, or “near relict”, vegetation areas that generally represent pre-settlement condition. These areas are located in areas with limited human disturbance, such as the tops of Bridger Jack Mesa and Lavender Mesa. These relict, or near relict, areas provide important base line information to scientists evaluating range restoration.

3.2.4 Invasive, Non-native Species

While the Corridor is primarily vegetated with native species, there are some invasive and non-native species which are establishing themselves. Invasive weeds, such as saltcedar (*Tamarix ramosissima*) and cheatgrass (*Bromus tectorum*), are becoming a problem.

Saltcedar, or tamarisk, is becoming an increasing problem in the lower stretches of Indian Creek and North Cottonwood Creek. Saltcedars are fire-adapted species and have long tap roots that allow them to intercept deep water tables and interfere with natural aquatic systems. Saltcedar disrupts the structure and stability of native plant communities and degrades the native wildlife habitat by out-competing and replacing native plant species, monopolizing limited sources of moisture, and increasing the frequency, intensity, and effect of fires and floods. It is known to sequester salts in its lower leaves. The leaves are then shed, resulting in increased salt content of surface soils as the litter degrades and suppressed understory vegetation. Although it provides some shelter, the foliage and flowers of saltcedar provide little food value for native wildlife species that depend on nutrient rich native plant resources.

Cheatgrass, or downy brome, is also becoming more and more prevalent in the Corridor. It is found in several user-created parking areas along Highway 211. Because parking is limited, these vehicle turn-out areas are expanding and the cheatgrass is spreading. The plant competes with more desirable perennial grasses for moisture because of its winter and early spring growth habit. After maturity it becomes a nuisance and a fire hazard. In areas within the state of Utah where cheatgrass has replaced native shrubland ecosystems, it has changed fire cycles from intervals of 35 to 50 years to less than 3 years. This has drastically altered the natural ecosystems of the state. Cheatgrass is also a common crop seed contaminant as it is very difficult to separate from grass seed.

3.2.5 Wildlife

Wildlife species are diverse within the planning area. A herd of approximately 100-200 head of elk (*Cervus elaphus*) winter on the west bench of Bridger Jack Mesa and the surrounding area depending on the severity of the winter. Critical mule deer (*Odocoileus hemionus*) winter range lies to the east and south of the Indian Creek area, but numerous mule deer do winter and migrate through the planning area. Desert bighorn sheep (*Ovis canadensis nelsonii*) use the talus slopes in Lockhart Basin, south and east of Needles Overlook into Hart Draw. Bighorn rams have been documented to occasionally frequent the planning area.

Limited raptor surveys have found a number of nesting raptors, including golden eagle (*Haliaeetus leucocephalus*), prairie falcon (*Falco mexicanus*), peregrine falcon (*Falco peregrinus*), American kestrel (*Falco sparverius*), Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), and great-horned owl (*Bubo virginianus*). Numerous wild turkey (*Meleagris gallopavo*) inhabit the area. The Indian Creek riparian bottomlands is the key area where these birds spend the majority of their time. Wild turkey nests have been found within 400 yards of Newspaper Rock.

Other avian species which may occur in the Indian Creek Corridor include the following:

western yellow-billed cuckoo	(<i>Coccyzus americanus</i>)
white-faced ibis	(<i>Plegadis chihi</i>)
chukar	(<i>Alectoris chukar</i>)
mourning dove	(<i>Zenaida macroura</i>)
Canada goose	(<i>Branta canadensis</i>)
pinyon jay	(<i>Gymnorhinus cyanocephalus</i>)
rock wren	(<i>Salpinctes obsoletus</i>)
canyon wren	(<i>Catherpes mexicanus</i>)
dark-eyed junco	(<i>Junco hyemalis</i>)
finch	(<i>Carpodacus</i> spp.)
mountain bluebird	(<i>Sialia currucoides</i>)
horned lark	(<i>Eremophila alpestris</i>)
sparrow species	(<i>Spizella</i> spp.)
black-headed grosbeak	(<i>Pheucticus melanocephalus</i>)
lazuli bunting	(<i>Passerina amoena</i>)

Numerous other species of migratory waterfowl, shorebirds and neotropical migrant birds pass through the planning area. These migratory birds rest, feed, and nest within the planning unit, especially at the Dugout Ranch irrigation reservoir and within the Indian Creek riparian zone.

The white-faced ibis, along with other shore bird species, are frequently observed within the planning area during their annual fall and spring migrations. Game birds include chukar, mourning dove, species of duck, Canada geese, and wild turkey.

Mammals which commonly inhabit the planning area include the following:

raccoon	(Procyon lotor)
ringtail cat	(Bassariscus astutus)
desert cottontail rabbit	(Sylvilagus audubonii)
black-tailed jackrabbit	(Lepus californicus)
deer mouse	(Peromyscus maniculatus)
white-tailed antelope ground squirrel	(Ammospermophilus leucurus)
bat	Order Chiroptera
coyote	(Canis latrans)
bobcat	(Felis rufus)
mountain lion	(Felis concolor)
black bear	(Ursus americanus)
red fox	(Vulpes vulpes)
beaver	(Castor canadensis)

Beaver were released within their historic range in the spring of 1997. The area of release included private and National Forest lands within, or adjacent to the planning area. Numerous other species of mammal are observed at different times of the year, but are not being identified within this planning document.

Numerous species of reptile inhabit the planning area. Indigenous reptile species include, but are not limited to, the western rattlesnake (*Crotalus viridis*), side-blotched lizard (*Uta stansburiana*), sagebrush lizard (*Sceloporus graciosus*), collared lizard (*Crotaphytus collaris*), western whiptail (*Cnemidophorus tigris*), and Great Basin gopher snake (*Pituophis melanoleucus*).

Amphibian species known to inhabit the planning unit include, but are not limited to, the red spotted toad (*Bufo punctatus*), Woodhouse's toad (*Bufo woodhousei*), Great Basin spadefoot toad (*Scaphiopus intermontanus*) and tiger salamander (*Ambystoma tigrinum*). Amphibian surveys conducted by USGS in 2003 found red spotted toad tadpoles and metamorphs from Newspaper Rock north to Hog Canyon. Red spotted toadlets and tadpoles were also found up and downstream from the falls area.

Indian Creek is the only stream fishery in the Monticello Field Office Area which has been known to be inhabited by species of trout. This fishery has contained both Yellowstone cutthroat (*Oncorhynchus clarki bouvieri*) and rainbow trout (*Salmo gairdneri*), along with hybrids of these species which have traces of the Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*) within their genetic code. This stream has received light recreational fishing pressure.

BLM and UDWR recent surveys have not found that Indian Creek supports a trout fishery on BLM lands. Because of recent drought conditions, low annual precipitation for the area, and upstream diversions, it is not likely that Indian Creek would maintain sufficient in-stream flow to support Colorado Cutthroat in the near future.

There are a number of impacts to wildlife occurring in the Newspaper Rock area. Big game such as mule deer and elk use the corridors along Indian Creek as migration routes. Due to the narrowness of the canyon bottom at this point big game are reluctant to travel through this area when campers are utilizing the area around Newspaper Rock. These animals are frequently encountering campers, children at play, and loose dogs along the creek bottom.

Wild turkey nesting has been disrupted within the Newspaper Rock area due to visitors harassing hens on the nest resulting in losses to reproductive success. Wild turkey have been poached by visitors in this section of Indian Creek. In addition, wild turkey have habituated to campers and frequently scavenge camping sites for food scraps within this area.

3.2.6 Threatened, Endangered, or Candidate Species

Bald eagles have been seen foraging in the area during the winter months. Mexican spotted owl (*Strix occidentalis lucida*) surveys have been conducted in 2002 and 2003 in Donnelly, Shay, Hog, and Titus Canyons and along Indian Creek. No Mexican spotted owls were found through these surveys. Portions of the Indian Creek Corridor planning area is within USFWS designated Mexican spotted owl critical habitat and some of the side canyons and Bridger Jack Mesa cliff sides are considered potential habitat according to the Willey and Spotskey models of 1997 and 2000. There are plans to survey Bridger Jack Mesa in 2004 and 2005 for Mexican spotted owls. If they are found in the area, mitigation may be needed in the future. Appendix B provides a map of the U.S. Fish and Wildlife Service (USFWS) designated Mexican spotted owl critical habitat.

There are no threatened or endangered plant species known to occur within the planning area.

3.2.7 Water Quality

Water is not plentiful in the planning area but several perennial water sources exist. Perennial streams are found in Indian Creek, Lavender and Davis Canyons, and in Cottonwood Canyon. Springs and seeps occur in various locations but are not common. Seasonal water sources include potholes and intermittent streams. Within the planning area boundary are numerous stock ponds, springs and irrigation ponds. These are important and necessary for resident and migratory species. In drought years, these water resources are valuable to both wildlife and livestock.

Although it is not public land, the Dugout Ranch irrigation lake is important to migratory avians. In particular, this water body is frequently utilized by migratory waterfowl and shore birds. Both ducks and geese have been observed to nest here. In 1996, white faced ibis (approximately 25 birds), along with other shore bird species, inhabited this reservoir for several weeks during the fall and spring migrations.

Stream sampling has been conducted by the BLM and State of Utah along Indian Creek since the 1970s. Sampling work included macro-invertebrate surveys, stream habitat surveys, and water quality tests (both field and lab parameters). A section of Indian Creek is currently listed as “impaired” by the State of Utah, meaning the data indicates a problem in meeting state water quality standards. The parameters of concern are pH and phosphorous. The stream segment listed runs from Newspaper Rock to the stream headwaters. More detailed information on water quality sampling methodology and findings is located in the Indian Creek Corridor project record.

3.2.8 Wetlands/Riparian Zones

The entire Indian Creek drainage has extensive riparian areas. The vegetative composition changes significantly between upper and lower Indian Creek due to in part in changes in the availability of water. Scattered riparian areas are found in other canyons such as Davis and Lavender Canyons in the planning area. There are many resource uses within the riparian areas including those of recreation, livestock grazing, and wildlife. All these uses influence the vegetative composition of the riparian zones.

A riparian demonstration area has been established in Indian Creek upstream from the private lands known as the Kelly Ranch. Grazing use has been excluded from within the fenced lower section of the area since 1988. Several types of stream bank stabilization actions are being monitored for effectiveness. The vegetation component within the riparian enclosure has improved dramatically since 1988. Vegetation species composition, plant vigor, reproduction, availability for wildlife species usage and reproduction success have increased for all desirable woody and herbaceous plant species within this riparian enclosure over the last 10 years. Cutbanks are revegetated and healing, and streambanks are now densely vegetated with willow (*Salix* spp.), rush (*Juncus* spp.), sedge (*Carex* spp.), saltgrass (*Distichlis stricta*) and Indian ricegrass (*Upland* Spp.). Grazing use outside the enclosure was reduced from several weeks to one week each spring and fall. Although recovery is not as dramatic, streambanks above the enclosure are also recovering. Indian Creek is still exhibiting higher than acceptable sediment deposition within the creek bed. Two other enclosures were established upstream from the one described above in 2003. These two enclosures touch the boundary of the Manti-LaSal National Forest, and will provide riparian rehabilitation as observed in the initial enclosure.

The riparian area within the Shay Canyon ACEC is functioning at risk, mostly due to recreational use. There is heavy human impact from camping, both in the camp area across from Newspaper Rock and throughout upper Indian Creek from numerous scattered dispersed camping areas. In the scattered 12 acres where camping is currently occurring, there is little or no vegetation on trampled banks as well as, minimal erosion, and sedimentation. In areas away from camp sites, vegetated streambanks are covered with diverse species.

A recent drought trend could alter the riparian conditions in the area. It is also likely that the riparian conditions could change in the future due to the reintroduction of beaver in the spring of 1997. These changes would include the loss of some trees due to beaver tree harvesting activities, and the hoped for creation of beaver dams within Indian Creek.

3.2.9 Visual Resources Management

The Indian Creek Canyon landscape and vegetation possess a diversity of colors, shapes, and textures. Spectacular canyons with precipitous cliffs of Wingate Sandstone leading to expansive mesa tops characterize this area. Narrow ribbons and isolated islands of bright green riparian vegetation along the canyon bottoms contrast with the more muted tones of desert shrub vegetation and scattered juniper trees.

Because of outstanding scenic quality the upper Indian Creek ACEC and the Shay Canyon ACEC are managed for Visual Resource Management (VRM) Class I to preserve the existing character of the landscape. The remainder of the Indian Creek Corridor is managed for VRM Class II to retain the existing character of the landscape.

3.2.10 Safety

As popularity of the area grows, so do safety and fire hazards. With such limited precipitation, the vegetation in the Indian Creek Corridor is extremely dry for much of the year and highly susceptible to fire. A few years ago there was a fire along Indian Creek which had the potential to cause serious damage to Dugout Ranch facilities and farmlands. The fire was contained before such damage could occur.

Limited parking within the Corridor poses additional safety concerns. On the busiest weekends in the Spring and Fall up to 100 cars can be seen parked along Highway 211 at the mouth of Donnelly Canyon. Other popular sites have comparable parking issues. Cars parked along the highway can block the vision of drivers passing through, posing a risk to people and animals walking around or between these cars. Additionally, people often park on both sides of the highway, requiring people to walk across the highway to reach recreation sites.

Another safety concern in certain areas within the Corridor is the existence of hazard trees, or trees which are no longer stable and may fall at any time. For example, Superbowl is one of the most popular camping areas with extensive hazard tree issues. The cottonwood trees in this area are very old, and their roots are not reaching enough water to continue to grow. There are safety concerns with designating campsites or picnic areas under such hazards.

Flooding is another hazard which could pose risks to Indian Creek visitors. Flash floods are common in Utah's red rock country, and have occurred in the Indian Creek Corridor. Most recently, a flood in August 2003 closed Highway 211, and caused significant damage to the Newspaper Rock Campground.

Rock climbing, one of the main recreational activities in the Indian Creek Corridor, is an inherently risky sport. Safe anchoring and climbing practices are the responsibility of climbers visiting the area. Search and rescue activities are coordinated through the San Juan County Sheriff's Office.

3.2.11 Recreation Values

In recent years, visitation to the Indian Creek Corridor has increased significantly due to its association with Canyonlands National Park and the outstanding recreational, scenic, cultural and biological opportunities of the land itself. Public lands administered by the BLM in the Indian Creek Corridor have become a destination for rock climbers, mountain bikers, campers, hikers, sightseers, OHV riders, and others seeking an opportunity to recreate in a stunning red rock setting.

The upper Indian Creek Corridor near Newspaper Rock has become an internationally-known rock climbing destination. Technical rock climbing has been on-going for the past 30 years in Indian Creek. While numerous outstanding climbs are scattered throughout the upper and middle sections of the corridor, the climbing use has been concentrated on private and public land at the mouth of Donnelly Canyon. Donnelly Canyon was previously a main focus point for trail stabilization and maintenance, and revegetation efforts. There are two existing parking areas for climbers at this location. There is a question about whether these parking areas are located on private or public property. A request has been submitted for a BLM cadastral survey. The rapid increase in the popularity of climbing during the last ten years, coupled with national and international publicity about climbing in Indian Creek, has caused a dramatic increase in this activity. The climbs in this area have been featured in numerous climbing magazines and publications, and there are currently at least five book publications that highlight and describe climbing routes in the area. Probably the most popular climbing route in the Corridor, Supercrack, is likely located on private ground.

A number of trails access particular climbing routes. To reduce compaction and/or erosion and multiple social trails, some of these trails have been hardened and continue to be maintained by volunteer groups in conjunction with the BLM. There are other trails in the area that are not specific to rock climbing, including the Shay Canyon trail, the Hog Canyon trail, and a variety of dispersed trails throughout the Corridor.

Recreational use of the area includes a wide range of activities in addition to rock climbing. Sightseeing along State Highway 211 is another common recreational use. Popular stops include Newspaper Rock (in 1999, the visitation at Newspaper Rock was approximately 60,000 visitors) and several undeveloped pullouts along this state-designated Scenic Byway. A small portion of visitors with a special interest in rock art visit other locations in the area. Camping at semi-developed and undeveloped sites are concentrated in a number of locations including along the riparian zone of Indian Creek Canyon, adjacent to Newspaper Rock, along the Lockhart Basin Road in lower Indian Creek, at the base of Bridger Jack Mesa, in the Superbowl area, along North Cottonwood

Creek, and in Davis and Lavender Canyons. OHV users, mountain bikers and rock climbers usually camp in these areas.

The heaviest recreation use occurs in the spring when temperatures are relatively moderate. Recreation use increases again in the fall though it does not approach the peak use of the spring. With the exception of sightseeing, recreation use is relatively light during the hot summer months.

Increased maintenance of the Lockhart Basin road by the San Juan County Road Department has allowed for greater use of the lower Indian Creek area. OHV use is concentrated in lower Indian Creek adjacent to the Lockhart Basin Road. The area around Indian Creek Falls is particularly popular with OHV users. OHV users often visit in large family groups with a majority of this use occurring in the spring. Increasing mountain bike use has been observed along the Lockhart Basin Road, from Hurrah Pass on the north to Utah 211 on the south. This route is touted as an excellent mountain biking trip and as an alternative to the White Rim Trail in Canyonlands National Park. The majority of the visitors to public lands in the area specifically visit the area because they not only enjoy the resources, but they have a preference for the less restricted recreational experience provided by the BLM.

Existing recreation facilities are limited to the interpretive site and semi-developed campground at Newspaper Rock; the semi-developed camping areas at Hamburger Rock and near Indian Creek Falls; and the store, gas station, restaurant, and camping facility operated by the state lessee at Needles Outpost. Needles Outpost is operated on a seasonal basis from spring through fall.

Visitation to the Needles District of Canyonlands increased steadily up into the early 1990's, with a peak of 178,171 visitors in 1993. Visitation has dropped off since then; 2003 total visitation to the Needles district was recorded at 123,027 visitors. Visitation to Canyonlands National Park is seasonal in nature. Spring is the peak season with a second lesser peak in the fall. Visitation drops during summer months, and winter is the slowest.

The Squaw Flat Campground, the only developed campground for this section of the National Park, contains 27 sites. Squaw Flat Campground is typically full from mid March through the end of May, and from the end of September through October. The remainder of the year Squaw Flat Campground is not full and there is no need for visitors to find alternate camping locations. There is virtually no difference in visitation between weekends and weekdays throughout the year. Most visitors to the Needles District are on spring break or vacation. Visitation increases on holiday weekends in the spring and fall, but there is no significant increase in visitation on holidays the remainder of the year. When the Squaw Flat Campground fills, NPS recommends a variety of options:

- 1) Camping in the Needles backcountry (backpacking or 4-wheel-drive vehicle camping).

- 2) Camping at the Needles Outpost (a privately owned campground 1.5 miles from the visitor center).
- 3) Camping at one of the developed BLM campgrounds such as Hamburger Rock, Newspaper Rock, or Windwhistle.
- 4) Staying in one of the private campgrounds in Moab and Monticello.

This information is also posted on bulletin boards and at the Needles Entrance Station. During periods of peak visitation when Squaw Flat Campground is full, many visitors choose to camp at Hamburger Rock or along the Lockhart Basin Road, as this is the closest public land to the park. However, the NPS does not maintain any statistics documenting the number of visitors choosing to camp in this area.

3.2.12 Wilderness Values

The Indian Creek Corridor presents a wide variety of opportunities for solitude or primitive and unconfined recreation, including but not limited to: multi-day backpacking trips, canyoneering, hiking, horseback riding, hunting, cultural and historical exploration, photography, and rock climbing. These lands also have supplemental values such as spectacular scenery and viewpoints, rock-art panels, raptor habitat, bighorn sheep, archeological sites, and natural arches and bridges.

The following history of Monticello Field Office wilderness evaluations is presented to better understand current wilderness practices, concerns, and issues.

In 1979, the BLM began an inventory of 22 million acres of public land in Utah. The BLM ultimately determined that 95 areas (totaling over 3.2 million acres) possessed wilderness character. With completion of the inventory in 1980's, lands with wilderness character became Wilderness Study Areas (WSAs). In the Monticello Field Office, BLM designated thirteen WSAs. The Indian Creek Corridor contains two of these WSAs: Bridger Jack WSA, and Indian Creek WSA.

WSAs are managed under the BLM's Interim Management Policy for Lands under Wilderness Review (IMP). The WSAs are managed so as not to impair their suitability for Congressional designation as Wilderness. Generally this means that no new surface disturbance or permanent placement of structures is allowed, although existing developments and resource uses may continue to be maintained and operated. (Handbook H-8550-1, Chapter 1A. General Policy)

In the 20 years since the BLM's inventory was completed, Utah wilderness has become a national issue with debates over which lands have wilderness character and should be considered for wilderness designation. Because of the debate, and a significant passage of time since the BLM's original inventory, the Secretary of the Interior in 1996 directed the BLM to take another look at the areas in question – lands proposed for wilderness designation in legislation then before Congress (H.R. 1500). The Secretary wished to know if, in the 20 years since BLM

completed its first inventory, conditions had changed on the ground and if there were other lands that possessed wilderness characteristics. BLM determined that some these reviewed lands had wilderness characteristics.

Currently, legislation has been introduced into the US Congress as “America’s Red Rock Wilderness Act of 2003” (H.R. 1796, S. 639). The Act seeks to designate as wilderness the BLM WSAs in Utah, the additional public lands found to have wilderness character through the BLM 1996-1999 wilderness inventory, and other areas proposed for wilderness by the public.

Following resolution of an injunction from a lawsuit that challenged the Secretary’s authority to conduct the 1996 inventory, the BLM completed the inventory in 1998. A year later the BLM released the *1999 Utah Wilderness Inventory*, with a preliminary finding that another 2.6 million acres of public land in Utah had wilderness characteristics. Following the release of the *Inventory*, BLM solicited public comments and held scoping meetings throughout Utah. In response to the comments received, and after conducting numerous field checks, BLM issued a revised final inventory document for the Moab and Monticello Field Offices in 2003.

In the Monticello Field Office, 20 areas totaling about 488,744 acres were found to have wilderness characteristics in the 1999 inventory. These lands are managed under the existing San Juan Resource Area Resource Management Plan.

The Indian Creek Corridor contains three of the areas that were re-inventoried (1999) and were found to have wilderness characteristics. These were: Bridger Jack Mesa, Harts Point, and Indian Creek. These areas have been affected primarily by the forces of nature and retain their natural character. They provide outstanding opportunities for solitude and primitive and unconfined recreation.

BLM solicited new information and comments in the public scoping for its Resource Management Plan revision. All RMP solicited comments (scoping period ended December 30, 2003) have been directed to the BLM contractor and are in process of comment analysis, which is not completed at this time. However a proposal had been submitted to BLM’s Monticello Field Office, by the Southern Utah Wilderness Alliance on behalf of Utah Wilderness Coalition in 2001, indicating that they believe lands in the Harts Point area and Lockhart Basin area of the Indian Creek Corridor possess wilderness characteristics (naturalness, opportunity for solitude and primitive recreation). A subsequent evaluation of these areas found that there was a reasonable probability that the Lockhart Basin may have wilderness characteristics and that the Harts Point area does have wilderness characteristics as updated in the 2003 revision of the *1999 Utah Wilderness Inventory*. A map of these wilderness proposals can be found in Appendix C of this document.

Through its land use revision planning process, BLM will consider all available information to determine the mix of resource use and protection that serves the FLPMA multiple-use mandate. Nothing will be managed

under the Interim Management Plan except for existing WSAs. All other lands will be managed under the framework of the current RMP.

3.2.13 ACECs

The Indian Creek Corridor contains four Areas of Critical Environmental Concern (ACEC). These are: the Shay Canyon ACEC, the Indian Creek ACEC, the Bridger Jack Mesa ACEC, and the Lavender Mesa ACEC. Each of these ACECs was created to protect their cultural, visual, biological, or recreational values.

The Shay Canyon ACEC is 1,770 acres in size and includes two branches of the Indian Creek Drainage. This area is managed under the Cultural Resource Management program, and managed for conservation and public values. The Shay Canyon ACEC is designated Roded Natural at the mouth of the canyon, and the remainder is classified as Semi-Primitive Non-Motorized under the Recreation Opportunity Spectrum (ROS).

The Indian Creek ACEC is 13,100 acres in size and covers an area adjacent to Canyonlands National Park. It is designated under the Recreation/Visual Resource management programs, and managed to maintain scenic quality. Almost all of the ACEC is managed under primitive or semi-primitive non-motorized ROS classifications.

The Bridger Jack Mesa ACEC is 5,290 acres in size, and covers the top of the Bridger Jack Mesa some of the talus slopes below the cliff lines. This area is managed under the Grazing Management Program to provide a baseline for rangeland studies. It is used for comparative studies of ecological sites to study the recovery of near-relict plant communities from the effects of grazing. The Bridger Jack Mesa ACEC is managed under the semi-primitive non-motorized ROS classification.

The Lavender Mesa ACEC is 640 acres in size and covers the top of Lavender Mesa. This ACEC is designated under the Grazing Management program to provide a baseline for rangeland studies. It is used for comparative studies of ecological sites to study the recovery of relict plant communities from the effects of grazing. The Lavender Mesa ACEC is managed under the semi-primitive non-motorized ROS classification.

3.2.14 Socio-Economic Conditions

The Indian Creek Corridor contains two agricultural operations, the Bar MK Ranch and the Dugout Ranch. Agriculture makes up a very small part of San Juan County's economic base. Of the 4,235 employed county residents, only 53 individuals hold farming, fishing, or forestry occupations. These resource-based industries make up only 7.3 percent of San Juan County's total economy. Although agriculture does not play a major role in San Juan County's economy today, it has been an important industry for the area since its settlement. The Bar MK and Dugout Ranches are two of the last large ranching operations in the area.

The economy of the County is primarily service oriented. The largest sectors of employment are educational, health and social services (28.1 percent); and arts, entertainment, recreation, accommodations, and food services (13.2).

Despite the fact that San Juan County's economy is struggling, visitation to the region is increasing every year. As noted above, recreation is the second largest industry in the County. The skyrocketing popularity of Indian Creek is an example of this.

Rock climbers have become one of the largest user groups in the Corridor. In the spring and fall seasons, hundreds of climbers can be found camping in the Corridor. Although this user group may not provide significant support to San Juan County's economy, they spend millions of dollars on outdoor equipment which supports the regional economy. Because the climbing user group is so large and well organized, it is expected that the BLM would face some resistance if this plan does not meet the needs of climbers.

Increased visitation is always accompanied by increased impacts to resources. Changes in management of the Indian Creek Corridor have not kept pace with the popularity and increases in visitation to the Corridor. Visitors to the Corridor like things the way they are, but management changes will be needed in order to protect preserve the unique resources that make this area special. Significant portions of the public, including climbers and ranchers, are asking for a change in management direction. Public comments indicate that the BLM is already not meeting current demands for services and facilities, and these demands and needs will only increase in the future.

Changes in management are needed to bring recreation use under greater management control in order to decrease recreation related impacts to sensitive resources. Proactive management practices would have an overall positive effect on recreation within the Indian Creek Corridor, and would ultimately provide a safe and healthy visitor experience.

Improvements in management and increasing visitor services would require resources. Without charging fees, the development of additional visitor services would be extremely limited. There is a high demand for facilities and services in certain places in the Corridor, and scoping comments indicated that most visitors would support fees if some services in return. On the other hand, many users prefer not to pay fees. It is important that free options are provided in the Corridor. The amount charged in certain areas should correlate directly to the level of services and facilities that are provided for the users.

4.0 Environmental Consequences

This chapter summarizes the physical, biological, social and economic environments of the affected project area, and the potential changes to those environments due to implementation of the alternatives. It also presents the scientific and analytical basis for comparison of alternatives presented.

4.1 Introduction

Under the No Action Alternative (Alternative A), the Indian Creek Corridor would continue under current management. There would be no change to the location, designation, or establishment of campsites, trails, restroom facilities, parking areas, or recreation sites. There would also be no change to the management of water quality, soil erosion, vegetative cover, wildlife, riparian or wetland areas, or scenic quality. Likewise, there would be no change to the management of cultural resources in the planning area.

The BLM's proposal (Alternative B) involves several area-wide and site-specific management directions intended to help meet the BLM's objectives of protecting natural and cultural resources while providing a variety of safe visitor services for the users of the Corridor. These include: implementing site plans for designated campgrounds, developing parking areas, and outlining specific considerations for the management of natural and cultural resources and activities occurring within the Corridor.

These alternatives are analyzed below for their direct, indirect and cumulative effects on the issues identified in Chapter 2.0, and on the critical elements identified in Chapter 3.0.

Direct effects are those caused by the action and occurring at the same time and place of the proposed event. For example, in this EA direct effects are considered those caused by the development of a campground on a previously undeveloped area or an area that is currently used for another purpose.

Indirect effects are those caused by this action, but occur later in time or farther removed in distance, yet are still reasonably foreseeable. For this EA, indirect effects are caused by implementation of the action, but are farther removed in space (throughout the entire Monticello Field Office Area) and time (perhaps over years) from the actual time of implementation.

Cumulative effects are those effects which, when viewed with other direct or indirect effects, have cumulatively significant effects.

4.2 Issue 1: The extent to which uses in Indian Creek are managed to protect natural resources

As noted in Chapter 2, the analysis of the environmental consequences associated with each alternative is based on issue-specific “evaluation criteria.” For ease of reference, these criteria are reprinted below.

Evaluation Criteria used to compare alternatives includes:

- A qualitative description of the extent to which each alternative may affect:
 - Vegetative cover
 - Soil erosion
 - Water quality
 - Riparian and wetland areas
 - Visual resources
 - Wildlife and wildlife habitat
 - Threatened, endangered, or candidate species

4.2.1 Alternative A: No Action Alternative

4.2.1.1 Direct and Indirect Effects

Vegetative Cover

Vegetative cover would be impacted by the No Action Alternative. Current uses and activities within the Corridor are having an impact on this resource, and if no action is taken their impacts on vegetative cover would expand.

Dispersed camping is currently occurring in several areas, and as popularity of the Corridor grows these dispersed camping areas are expanding into previously undisturbed vegetated areas. Vegetation is being lost to campsite spread, social trailings from campsites, and creation of additional undeveloped campsites. Recovery of vegetation in the areas presently disturbed would not occur.

The limited parking areas within the Corridor are expanding with use, and the impact on vegetation is consequently expanding along with them. Invasive weeds are becoming more established in these areas, and would continue under the No Action Alternative. Access trails to popular recreation sites have been created by the users. As these informal trails are used more frequently they are expanding and posing greater impacts on vegetation.

No impacts would occur to vegetation at the proposed Shay Mountain Vista Campground as it would not be developed under the no action alternative.

Soil Erosion and Compaction

Changes in protective surface crusts and vegetation resulting in exposed surfaces makes these soils more susceptible to wind and water erosion. Compaction and loss of vegetation in dispersed camping areas, trails, parking areas results in accelerated soil erosion (beyond the natural range of variability and soil loss) at these locations. This can lead to degradation of the general site and loss of long-term soil productivity over time, depending on the extent of the impacts.

Water Quality

Water quality in the corridor would continue to decline gradually under the no action alternative. Water quality may be impacted over time by unrestricted camping, improper disposal of human waste, and increased soil erosion. Indian Creek would likely remain on the States Impaired Waters list, and fisheries habitat would continue to decline.

Riparian and Wetland areas

There is currently little to no understory vegetation along Newspaper Rock due to dispersed camping and vehicle parking associated with camping. Both riparian and aquatic habitats would continue to decline in the Indian Creek reach of the Newspaper Rock area. Impacts to riparian habitat caused by uncontrolled dispersed camping would continue.

Visual Resources

Impacts to visual resources caused by uncontrolled dispersed camping would continue. Without closure and rehabilitation of campsites in the upper Indian Creek Canyon riparian area, visual resources would not be enhanced and would continue to decline.

Wildlife and Habitat

Wildlife habitat resources associated with recreation and camping in the Newspaper Rock area would continue to decline in quality and quantity. The negative impacts due to human/wildlife interactions, because of the narrow corridor and the large amount of wildlife species that rely on riparian habitat, would continue into the future. Impacts that have occurred in the past to nesting raptors, big game, and wild turkey would continue. The current decline in wildlife habitat condition within the area of Newspaper Rock could accelerate as the effects of the current situation brought about by recreation camping are compounded over time. Wildlife species would avoid this important habitat with increasing dispersed camping compounded over time.

The potential for “take” occurrences on nesting raptors would continue within the planning area as the seasonal restrictions of recreational rock climbing activities would not occur, making it difficult to protect raptor territories.

Threatened, Endangered, and Candidate Species

Designated critical habitat for Mexican spotted owl could deteriorate over time with uncontrolled recreation and camping in the area. Reduction of the quality of habitat could reduce the quantity of prey species available for Mexican spotted owls and bald eagles that may forage in the area.

4.2.2 Alternative B: Preferred Alternative

4.2.2.1 Direct and Indirect Effects

Vegetative Cover

Vegetative cover within the Corridor would improve overall with implementation of the Preferred Alternative. Designation of campsites would help contain camping activity within the designated sites. This would prevent the spreading and expansion of the site, and minimize new impacts to vegetative cover, thereby allowing some previously impacted areas to rehabilitate.

Similarly, designation of parking areas and access trails would also help contain impacts, prevent the spread and expansion of camping areas and trails, and minimize new impacts to vegetative cover, allowing previously impacted areas to rehabilitate.

There would be some loss of vegetative cover associated with developing the Shay Mountain Vista Campground as proposed in the Preferred Alternative. Development of this campground would require 4,500 feet of road, and would entail 4.6 acres of total disturbance with the construction of the access road, campsites, and loop road. Some pinyon and juniper trees would be removed to construct the campsites and loop road. Installing toilets would require some grading and surface disturbance.

Removing camping from the Newspaper Rock area would mitigate any loss of vegetation as a result of construction of the new Shay Mountain Vista Campground. Currently, the vegetative cover at Newspaper Rock Campground is in poor condition. As camping is removed, this area would be revegetated with riparian vegetation along the Creek. Vegetative cover in this area would, therefore, improve with the removal of the Newspaper Rock Campground.

Throughout the Indian Creek Corridor there would be a decreasing risk of weed invasion accomplished by limiting expansion of sites and social trailings.

Soil Erosion and Compaction

Designation of campsites, access trails, parking areas, and the removal of camping from Newspaper Rock would limit the proliferation of dispersed activities, contain the existing surface disturbance and minimize the expansion of new disturbance, which in turn would result in decreased overall soil compaction and resultant erosion. Restoration of disturbed areas and

elimination of continued disturbance will increase the potential for natural revegetation and recovery, further reducing soil compaction impacts.

Water Quality

Any improvements to the conditions in riparian zones, floodplains, and uplands would help improve stream and water quality conditions. Water quality would improve by restricting camping, designating parking areas, and developing access trails. The Preferred Alternative would help in removing Indian Creek water from the State's Impaired Waters list.

Riparian and Wetland areas

Limitations on dispersed camping would have a positive impact on riparian and aquatic habitat by allowing closed sites to revegetate and become a viable part of the riparian habitat.

Development of the Creek Pasture Designated Dispersed Camping Area may adversely impact riparian habitat. However, it is currently being used as a dispersed camping area and there could potentially be no change in riparian habitat status. Adequate fencing around this camping area would prevent vehicle access along the stream banks and into the stream bed, and would substantially reduce impacts to riparian habitat, and fisheries habitat may improve.

Visual Resources

Several of the actions proposed would have a positive impact on visual resources in the Corridor. Closing camping at the Newspaper Rock campground and revegetating would have an improving effect on the visual quality of this area. Designating campsites and requiring campers to use designated sites throughout the Corridor would stop new campsite "pioneering," which creates new visual impacts.

Designating campgrounds would create some impact on visual quality in the immediate camping area. Placement of picnic tables and fire rings at the Bridger Jack Mesa campground would give the area more of a human presence but would not create a significant overall impact on the visual quality of the area since the changes would be minimal and specific to the camping area.

Improving Hamburger Rock with new tent pads and restrooms would have minimal visual impact. This site is already heavily developed, and improved facilities would not create a sharp contrast to the existing visual conditions. However, if an outer ring of campsites is constructed here, there would be impacts to the visual quality of the existing campsites. The views from these campsites currently look out to the cliff walls which would be obstructed by an outer ring of campsites.

Designating Creek Pasture as a dispersed camping area would not have a large effect on the visual quality of the area. No new

facilities or services are proposed here, and the current visual conditions would continue.

The new picnic area at Newspaper Rock is similarly not anticipated to create any significant visual impacts. This area is already heavily developed, and the picnic area would not create a sharp contrast to the existing visual conditions. Any minor impacts created by the picnic area would be offset by the closure and rehabilitation of the Newspaper Rock Campground.

Development of the Shay Mountain Vista Campground would also not cause significant visual impacts. This proposed campground is located above the canyon floor and would not be easily visible from Highway 211 or the rest of the Corridor. The design of the campground will be done in such a manner to mitigate visual impacts to the surrounding area, particularly the view from the Harts Draw road and Highway 211. Also, the campground itself will be designed to retain as much of a natural feel as possible by utilizing the natural features of the mesa top and leaving as much vegetation in place as possible. There would be some impact on site from surface disturbance and construction of the campground.

The development of some of the existing turn-out parking areas along Highway 211 would not have substantial impact on visual resources. The installation of restrooms at Donnelly Canyon, and the placement of information kiosks throughout the Corridor would create a slight impact on visual resources. Site-specific developments would employ design components to mitigate visual impacts, taking into consideration color, texture, height, orientation, and materials.

Designating Bridger Jack Mesa Dispersed Camping Area would have some visual impact to the Dugout Ranch. Use of this area and nighttime campfires has impacted the Ranch's views; although, from the Ranch headquarters this area is approximately $\frac{3}{4}$ mile away and is difficult to see. Restricting camping to designated sites would help to minimize these impacts by limiting the number of people camping there and restricting the location of the campsites; however, the general site area would continue to be visible from the Ranch.

Wildlife and Habitat

Wildlife habitat would improve as a result of implementing the Preferred Alternative. Specifically, removing camping from the Newspaper Rock campground and rehabilitation of the site would have a positive effect on many of the wildlife issues currently occurring in this area. Big game migratory routes along Indian Creek would open up, with potential contact between visitors and these animals reduced, thereby allowing easier access to the area by wildlife. Additionally, impacts to streamside riparian habitat along Indian Creek would be minimized, which would provide improved habitat for wildlife over time.

The existing Newspaper Rock Campground is located within a golden eagle and peregrine falcon nesting territory. Conflicts between visitors and nesting raptors in this area would be minimized with removal of camping, enhancing the protection of these birds. Likewise, wild turkeys have been disturbed by camping occurring at this site. Removal of camping would also improve conditions for the turkeys.

Development of the new Shay Mountain Vista Campground would have a minimal effect on deer winter range since this area is on the edge of the species' preferred pinyon/juniper and sagebrush habitat, and also on the edge of winter range heavy use areas. Construction of this site would impact 4.6 acres of deer winter range habitat. It could be expected that deer use of the areas within and close to the new campground would decline.

Removing camping from the riparian area along Newspaper Rock would increase riparian habitat, increase potential fish and amphibian habitat, and may contribute to an increase of quality potential threatened and endangered species habitat.

Wildlife and habitat in other areas affected by the Preferred Alternative would not be negatively impacted.

Threatened, Endangered, and Candidate Species

The Preferred Alternative may have a positive effect on threatened, endangered, and candidate species. Designating and controlling camping would increase habitat quality for potential Mexican spotted owl and bald eagle and their prey, and may encourage these species to use the area more frequently for foraging and nesting.

Development of the new Shay Mountain Vista Campground would have no effect on threatened, endangered, or candidate species or their potential habitat.

4.3 Issue 2: The extent to which uses in Indian Creek are managed to protect cultural resources

Evaluation criteria used to compare alternatives include:

- A qualitative description of the extent to which each alternative may affect cultural resources within or adjacent to the planning area.

4.3.1 Alternative A: No Action Alternative

4.3.1.1 Direct and Indirect Effects

The No Action Alternative would allow the current uncontrolled impacts to cultural resources to continue. Camping at Indian

Creek Falls is in direct conflict with several known cultural resources. Allowing designated camping to continue to occur here could eventually lead to the complete loss of important cultural resources.

4.3.2 Alternative B: Preferred Alternative

4.3.2.1 Direct and Indirect Effects

The Preferred Alternative would have a positive impact on cultural resources by providing more control over visitors to selected cultural sites. In particular, removing rock climbing routes impacting rock art, and removing camping from Indian Creek Falls would help protect cultural resources. This positive impact would be achieved by:

- Providing educational materials on how to minimize damage when visiting sites and the potential consequences of vandalizing cultural sites,
- Working with climbing clubs and associations to disseminate information about cultural resource protection for cultural resources near or on climbing routes,
- Identifying cultural sites for protection and removing conflicting uses,
- Closing climbing routes impacting cultural resources, and
- Conducting an inventory of cultural resources within the Corridor and establishing protection measures if necessary.

Indian Creek Falls campsites are currently in direct conflict with protection of cultural resources. There are a number of known cultural sites in this area. Removing camping from this area would have a beneficial effect on protection and preservation of these resources. These conflicts would be resolved through RMP revisions to allow for the removal of developed camping from this area.

4.4 Issue 3: The extent to which visitor services should be provided to meet the needs of the users

Evaluation criteria used to compare alternatives include:

- A qualitative description of the impacts of campsite alternatives on users and uses
- A qualitative description of the impacts of restroom alternatives on users and uses

- A qualitative description of the impacts of trail alternatives on users and uses
- A qualitative description of the impacts of fees on visitor services, users, and uses.
- A qualitative description of the impacts of parking on visitor services, natural and cultural resources, and users.

4.4.1 Alternative A: No Action Alternative

4.4.1.1 Direct and Indirect Effects

Under this alternative, dispersed camping throughout the planning area would continue, and no new campsites would be designated. No new visitor services or facilities would be developed at any of the existing designated campsites or in the Indian Creek Corridor. It is likely that uncontrolled dispersed camping may reach a level where the experience of visitors is degraded due to congestion and resource damage. Human waste would increasingly become a problem as toilets in existing heavily used areas would not be installed, and no pack-in/pack-out policy encouraged.

Camping would continue to be provided at both the Newspaper Rock and Indian Creek Falls areas under this alternative. These are both very popular camping areas and this alternative would maintain recreation at these sites, and impacts to cultural sites at Indian Creek Falls.

The BLM currently has the authority to close climbing routes impacting cultural or natural resources, and such closures could occur under the No Action Alternative. Closure of climbing routes would impact climbing opportunities, but the closures would only apply to a small number of routes.

Hiking and access trails would not be designated under the No Action Alternative. BLM would continue to have trails in Donnelly Canyon maintained. Maintenance and rerouting of other trails would be addressed on a site-specific basis.

BLM has the authority to charge fees in camping areas. Under the No Action Alternative, fees would not be charged for dispersed camping, and fees would be charged for existing developed sites such as Newspaper Rock and Hamburger Rock. Many users prefer not to pay fees and this alternative would provide free camping in many areas. Without charging fees the development of additional visitor services, as needed, would be extremely limited.

Parking would not be designated under the No Action Alternative. Users would continue to park at user-created turn-outs along Highway 211, and these parking areas would continue to expand

in size over time. Uncontrolled parking would continue to adversely impact vegetative cover and soil stability. Parking along the highway would continue to pose safety concerns to pedestrians and those driving through the area. Without conducting cultural surveys on areas currently used for parking, if potentially encroached upon, cultural resources may be adversely impacted or lost completely.

4.4.2 Alternative B: Preferred Alternative

4.4.2.1 Direct and Indirect Effects

The Preferred Alternative would bring recreation use under greater management control in order to decrease recreation related impacts to sensitive resources. The alternative would have an overall positive effect on recreational uses within the Indian Creek Corridor.

Sightseeing along Highway 211, would be enhanced by educational kiosks placed at specific locations along the highway. Educational materials on a variety of topics would enhance the visitor experience by educating them on the value of the resources in the area, on how to minimize impacts on these resources, and on user etiquette to ensure that all visitors have an enjoyable experience.

Designating specific campsites while still maintaining some undesignated dispersed camping opportunities would continue to allow for a variety of camping experiences. Designating camping at Bridger Jack Mesa would change the feel of camping in this area. Currently camping is dispersed and completely unregulated. Pioneering, or extension, of new campsites by users in this area is having an increasing impact on the natural environment and on the adjacent Dugout Ranch. By limiting camping to designated sites, these impacts would be minimized and contained within the overall site. Encouraging trial pack-in/pack-out policies for human waste would have a positive effect on the natural environment at these sites and would ultimately provide for a safer and healthier visitor experience.

Closing Newspaper Rock to camping would relocate many users disappointing some repeat users. Campers enjoy being close to the stream, under the cottonwoods, and the feeling of being in a narrow canyon. However, visitor safety is currently at risk because camping is located within the Indian Creek floodplain, which has experienced two 100-year floods in the last two years. Removing camping from this floodplain would enhance visitor safety.

Users displaced from this site would likely be evenly divided between using the new Shay Mountain Vista site and other designated campgrounds within the Corridor. Additionally, a new picnic area would be developed next to Newspaper Rock

providing new day use opportunities in the area. Locating the picnicking area on the same side of Highway 211 as the parking for Newspaper Rock would enhance visitor safety by eliminating the need for visitors to cross the highway.

The Shay Mountain Vista Campground would be designed to provide safe large-vehicle camping opportunities for visitors, which are currently limited, as well as tent sites. This type of RV camping is currently limited to Hamburger Rock. The Shay Mountain Vista Campground is located in pinyon, juniper, sagebrush vegetation which is different than the vegetation around other designated campgrounds in the Corridor. This campground would include visitor services, such as toilets and possibly garbage disposal, that are currently offered only in limited locations in the Corridor. Providing camping in this area may increase use of the Harts Draw area and Hart's Point.

Discouraging visitors from camping at Superbowl, a current undesignated dispersed camping area, would displace some recreational users. These visitors would be encouraged to use the Hamburger Rock or Creek Pasture camping areas instead. These alternate sites do not have the hazard tree issues that the Superbowl site does, and therefore provide a safer environment for campers than exists at Superbowl. The Creek Pasture site is currently being used, but designation could dramatically increase the level of use of this area.

Removing camping from the Indian Creek Falls area would disappoint and displace some users, but at this point there are only three designated sites there that would be impacted. Much of the use that occurs in this area is day use. By removing camping from the site, day users do not have to feel as though they are intruding on someone else's space and are able to more freely enjoy the area. Closing camping in this area is supported by many other visitors to the Corridor as indicated by scoping comments. If this alternative were selected, visitors could use the nearby Hamburger Rock Campground as an alternate site.

Designating and building access trails is supported and requested by many Corridor users. Trail construction would result in a minimal amount of vegetation loss, soil compaction, habitat loss, and very little dust. The beneficial impacts of trail development from limiting foot travel include: reduced impacts to vegetation, cryptobiotic soil, wildlife habitat, cultural and paleontological resources, and water resources. By designating hiking trails and access trails for climbers, BLM can reroute trails that conflict with other resources, maintain trails at a level of development required for sustained use, and limit or stop trail proliferation. Designating access trails would have a negligible adverse impact on Corridor users, and may contribute to the safety and ease of the climbers reaching their objectives. Most users are respectful of the need to protect natural resources and would be willing to use designated trails and allow closed trails to be rehabilitated.

Charging fees for camping at Hamburger Rock Campground and Shay Mountain Vista Campground could displace some users of the area. Fees would not be charged for use of any of the other areas in the Corridor unless in the future it was decided that additional facilities (toilets, picnic tables, water, garbage collection) were needed and could be provided. Scoping comments indicated that most visitors support charging fees if they are provided some services in return. There is a high demand for such facilities and services in certain places in the Corridor, which can only be provided with additional funding. Fees charged would help cover the installation and maintenance costs of these facilities.

Providing designated parking at trailheads and climbing access routes allows for concentrating impacts to a specific site rather than dispersed impacts over a greater area. It also allows for information and educational materials to be placed at locations where users would see them. Additionally, designated parking and limiting parking along Highway 211 would enhance the safety of pedestrians and visitors driving through the Corridor. Some users may not like designated parking areas, as it could make Indian Creek feel like a more developed area.

BLM currently has authority to close climbing routes for natural or cultural resource protection, but under this alternative these potential closures would be pursued more assertively. Climbing, for the most part, would continue in the same manner that it has in the past. There would be an impact to climbers if routes are closed due to conflicts with cultural resources, although this would impact a very small percentage of the existing climbing routes, and could happen regardless of the alternative selected in this document. Additionally, there could be an impact on climbers in the spring if particular routes are closed for raptor nesting. From previous reports, the areas that have seen nesting are near Cat Wall and on portions of Bridger Jack Mesa. Because raptors can, and do change nesting areas from year to year, seasonal closures would be flexible to protect the most current situation.

4.5 Cumulative Impacts

4.5.1 Alternative A: No Action Alternative

The No Action Alternative would result in an overall gradual decline in the quality and health of natural resources in the Corridor.

The overall impact of the No Action Alternative on recreation is that it provides no vision for the future of Indian Creek as a recreation area. It provides no limits to how much recreational

use is too much. The existing situation cannot continue forever without serious damage to the natural and cultural resources of the Corridor. At some point, increasing use would require changes to management of the area to prevent further loss and damage to natural and cultural resources. By choosing the No Action Alternative those changes are just put off until a later time. The No Action Alternative would result in an overall decline in the quality of natural, cultural and paleontological, and recreational resources, and overall visitor satisfaction in the Corridor.

Specifically, loss of vegetation throughout the entire Corridor would continue and the rate of loss would increase. Soil erosion would continue to occur under this alternative, and the impacts of soil erosion may have significant long-term effects on vegetation and wildlife habitat in the Corridor. Water quality in upper Indian Creek, near Newspaper Rock, would decline over the long-term due to current and continued dispersed camping and increasing sanitary problems resulting from human wastes in this area. This would reduce potential fish habitat. As recreation continues to increase in the Corridor, the impacts to riparian and wetland areas associated with uncontrolled camping would increase. Wildlife habitat within the Newspaper Rock area would continue to decline in quality and quantity under this alternative due to impacts from camping and the presence of visitors in the wildlife corridors. Habitat for threatened, endangered, and candidate species and their prey would continue to decline. Fewer wildlife would use the Indian Creek Corridor for foraging and nesting, and the loss of this potential habitat may have an impact on the success of the species in the region.

The No Action Alternative would result in an overall loss of unique cultural resources and the important information they contain. Impacts to cultural resources from recreation and other uses would likely increase.

Under the No Action Alternative, increasing popularity of the Corridor and all associated impacts could eventually result in a less appealing recreational experience for all visitors. Increasing recreational use without any additional facilities, education, and on-site management controls would result in resource congestion and damage. This would adversely affect the recreation experience of many visitors. If Canyonlands National Park were experiencing increased use it could also increase the demand for overflow camping in the Indian Creek Corridor.

4.5.2 Alternative B: Preferred Alternative

The overall impact of the Preferred Alternative on recreation is that it provides a long-term vision for the future of Indian Creek as a recreation area. It provides for a stepped approach to management of recreational uses in the Corridor allowing for increasing regulation as it becomes needed. A more assertive management plan for natural and cultural resources will help to

ensure their protection. Closing the Newspaper Rock area and Indian Creek Falls to camping will take serious steps towards the protection of cultural and paleontological resources, wetlands and riparian areas, vegetation and wildlife habitat, and visitor safety. Although some users would be adversely affected by the closing of the Newspaper Rock and Indian Creek Falls camping areas, the overall visitor experience would be enhanced by designating camping sites, trails, parking, and moving camping sites which have safety risks.

The Preferred Alternative would maintain and eventually result in an overall improvement of the quality of natural, cultural and paleontological, and recreational resources, and overall visitor satisfaction in the Corridor.

Specifically, the Preferred Alternative would maintain the quality of cultural resources in the Corridor. Strengthened management prescriptions for recreational use, visitor education, and signing would help to minimize impacts to cultural and paleontological resources. Cultural resources would be managed for their protection and preservation.

Vegetative cover within the Corridor would improve overall with designation of campsites, parking areas, and access trails. Any loss of vegetative cover as a result of developing the Shay Mountain Vista Campground would be offset by the substantial improvements to vegetation quality along the stretch of Indian Creek flowing through the closed Newspaper Rock campground.

The proposed action would result in decreased soil compaction, and resultant erosion, by removing camping from riparian areas, designating campsites, and developing access trails. The proposed action would result in displacing some soil impacts to upland or areas less susceptible to soil erosion, while removing impacts from sensitive riparian areas. Designating campsites and developing access trails is expected to decrease overall disturbance within the corridor resulting in improved long-term soil conditions.

The Preferred Alternative may improve water quality by decreasing recreational use in riparian zones, which may also help remove Indian Creek from the State Impaired Waters list, and allow for higher quality fisheries and wildlife habitat. The proposed action would result in improved riparian and wetland conditions by removing camping from Newspaper Rock and designating campgrounds away from streams.

Closing and rehabilitating the Newspaper Rock campgrounds would decrease adverse impacts to visual resources within the corridor. Cumulatively, there would be a limited amount of visual impact created by signs, informational kiosks, and a restroom at Donnelly Canyon.

The preferred alternative would result in improved wildlife and habitat conditions, specifically, in the Newspaper Rock camping area where conflicts exist between campers and raptors, big game, and wild turkey. This alternative could assist in the recovery of threatened, endangered, and candidate species such as Mexican spotted owls, peregrine falcon, and bald eagles. Following recovery plans, habitat for these species and their prey could improve and the Indian Creek Corridor may be used more frequently by these species.

The Preferred Alternative would result in an overall improvement of the quality of recreational resources and visitor satisfaction in the Corridor. Camping use patterns by climbers and other recreational users may change if these users choose not to use the designated campsites. This may increase camping in other areas, or push campers onto areas that are not currently being used. Developing the Shay Mountain Vista Campground may increase use of the Hart's Draw and Hart's Point area.

4.6 Mitigation and Monitoring

4.6.1 Mitigation

Natural Resources

The Preferred Alternative has built in mitigation measures. Impacts to vegetation from the development of the Shay Mountain Vista Campground would be mitigated by the closing and revegetation of the Newspaper Rock Campground. Designating campsites, parking areas, and access trails in the proposed campgrounds would limit impacts to vegetation.

Impacts to wildlife are minimal and do not require mitigation. Riparian and aquatic habitat will be improved, as will habitat throughout the Corridor, by limiting camping to designated areas.

Cultural

Cultural and paleontological inventories would be done for all locations which have not been previously inventoried and are identified for designated uses. Any cultural and paleontological resources located within the inventoried areas would be managed in compliance with Federal laws and regulations.

Recreation

Mitigation measures have been incorporated into the Preferred Alternative to address changes in use in the Corridor. The Preferred Alternative would not have any significant adverse effects on visitors. Therefore, additional mitigation is unnecessary.

Although camping would be removed from the riparian corridor near Newspaper Rock, the preferred alternative mitigates this loss with the development of the Shay Mountain Vista Campground.

Similarly, camping would be removed from Indian Creek Falls, but the preferred alternative provides for alternative camping opportunities for any visitors displaced by this. Additionally, no significant changes would be made to Indian Creek Falls until after completion of revisions to the RMP.

Implementation of the preferred alternative also eliminates the need for the existing closure notice, which would free up BLM resources for monitoring, education and enforcement efforts included in this alternative.

Visual

Site-specific developments would employ design components to mitigate visual impacts, taking into consideration color, texture, height, orientation, and materials. If shade structures are constructed at the Newspaper Rock Day-use Area, they should be designed so that the views of Newspaper Rock from Highway 211 are not obstructed.

The Bridger Jack Mesa campsites closest to Dugout Ranch would be relocated, and all other camping would be limited to designated sites, which are further from the ranch. Designating the campsites would also minimize the proliferation of new dispersed campsites and would provide more control over the camping that does occur here, both of which would minimize visual impact.

4.6.2 Monitoring

Natural Resources

- Conduct raptor nesting inventories as needed. Use this data to implement seasonal closure plans for rock climbing routes.
- Assign specific monitoring for impacts on vegetation, soils, and water quality from camping. Continue monitoring of water quality in Indian Creek and other water sources, as time and funding permits. Use this data to evaluate the impact of camping and recreation use patterns on natural resources. Make adjustments to recreation management as needed to minimize impacts.
- As funding allows, increase monitoring of riparian areas throughout the Corridor by gathering information about current riparian plant communities through baseline transects, establishing potential and desired plant communities for the areas based on ecological conditions, and monitoring changes in the vegetation over time through photo plots and permanent transects in specific sections of Indian Creek. Coordinate riparian monitoring with The Nature Conservancy. Use this

data to evaluate the effectiveness of management directions on improving the health of riparian areas.

- As time and funding allows, BLM staff would continue to patrol the Indian Creek Corridor and talk with users about standards for protection and preservation of cultural and natural resources. Use feedback from users to improve education efforts.

Cultural

- Upgrade monitoring of cultural resources by law enforcement personnel. Schedule ranger visits to the planning area as appropriate for the season. Develop specific resource and visitor monitoring tasks to be conducted on these patrols. Require rangers to summarize monitoring results, incidents, and violations on an annual basis. Use additional staff as needed for visitor contact and resource protection. Use information collected through monitoring to determine whether cultural resources are being impacted by the Corridor users, and whether additional protection measures are necessary.
- As time and funding allows, BLM staff would patrol the Indian Creek Corridor and talk with users about standards for protection and preservation of cultural and natural resources. Use feedback from users to improve education efforts.

Recreation

- Summarize overall visitor trends within the planning area on an annual basis using National Park Service, Utah Department of Transportation, and BLM data.
- Identify ways in which partners can assist with monitoring. Pursue additional partnerships to assist with monitoring.
- Assign specific monitoring tasks for sanitation and aesthetic problems created by improper disposal of human waste, rock climbing locations and associated impacts, locations of seasonal raptor nesting sites and associated route closures, and the impacts of recreation use upon highway safety.
- The BLM would conduct regular site visits to educate the public and enforce the pack-in/pack-out policy for trash and human waste. Information collected during these visits would be used to evaluate the level of compliance with the pack-in/pack-out policy.
- The pack-in/pack-out policy would be determined to be working if regular inspections find that:
 - People have toilets or bags, and seem to be using them;

- Toilet paper and/or evidence of human waste is not found in camping areas; and
- Used toilet bags are not found in the area.
- Monitoring tasks would be established to evaluate the impacts of the proposed action on camping use patterns to determine if camping is being displaced to areas which were not previously used.
- Assign specific monitoring to determine whether the needs of the users are being met. This could occur through satisfaction surveys, informal visits with users, and other forms of user feedback.

The BLM would continue to cooperate with The Nature Conservancy and other land holders to determine if the actions taken by the BLM are effective, and how changes can be made, if or when necessary.

5.0 Consultation & Coordination

5.1 List of Preparers

Bureau of Land Management, Monticello Field Office

Patrick Madigan	Dave Himmerich
Scott Berkenfield	Ted McDougall
Todd Berkenfield	Nick Sandberg
Andrew Boone	Summer Schulz
Jeff Brown	Nancy Shearin
Paul Curtis	Rob Sweeten
Dale Davidson	Garry Torres
Maxine Deeter	Tammy Wallace

Bureau of Land Management, State Office

Robin Fehlau
Greg Thayne

Consultants

Ralph Becker, Bear West
Laura Hanson, Bear West

5.2 Persons, Groups, and Agencies Consulted

Agencies and Local Governments

Canyonlands National Park	U.S. Fish and Wildlife Service
City of Rocks National Reserve	United States Geological Survey
Joshua Tree National Park	Utah Division of Wildlife Resources
Manti-La Sal National Forest	Utah Mitigation Reclamation and Conservation Commission
Red Rocks Canyon Recreation Area	Utah State Historic Preservation Office
San Juan County Commission	Yosemite National Park
San Juan County Public Lands Council	

Tribes

The Hopi Tribe	The Navajo Nation
The Pueblo of Zia	The White Mesa Ute Tribe
The Pueblo of Acoma	The Southern Ute Tribe
The Pueblo of Zuni	The Ute Mountain Ute Tribe

Others

Sue Bellagamba, The Nature Conservancy
Zeb Dalton, Bar MK Ranch
Mark Hesse, Rocky Mountain Field Institute
Jason Keith, Access Fund
Heidi Redd, Dugout Ranch

References

- DeCourten, Frank. Dinosaurs of Utah. University of Utah Press, Salt Lake City, pp 59-60, 1998.
- Shearin, Nancy. Indian Creek Campground Survey U-98-BL-0459b. Report on file with the Utah State Historic Preservation Office, Salt Lake City. 1998.
- Shearin, Nancy. Indian Creek ATV Survey U-98-BL-0670bs. Report of file with the Utah State Historic Preservation Office, Salt Lake City, 1998.
- Thompson, Richard A. A Stratified Random Sample of the Cultural Resources in the Canyonlands Section of the Moab District. Bureau of Land Management, Salt Lake City, 1978
- Tipps, Betsy L., Nancy J. Hewitt. Cultural Resource Inventory and Testing in the Salt Creek Pocket and Devil's Lane Areas, Needles District, Canyonlands National Park, Utah. Division of Cultural Resources Rocky mountain Region national park Service, 1989.

Appendices & Attachments

Appendix A—Specific Area Site Plans

Shay Mountain Vista Campground Site Plan

Shay Mountain Vista Campground would be a designated campground, which would provide a more developed camping experience for visitors to the Indian Creek Corridor. This campground would provide camping facilities for both tent and recreational vehicle (RV) campers. The existing Newspaper Rock campground is located in a floodplain and has numerous conflicts with natural resources. This campground would provide a safer alternative to camping in the Newspaper Rock area. The Shay Mountain Vista Campground would operate under a fee system to cover the costs of development, installation, and maintenance of the facilities and services provided.

This campground have potential for approximately 40 sites.

Facilities provided at this campground may include:

- Restrooms
- Garbage collection
- Picnic tables
- Fire rings
- Gravel roads
- Delineated parking areas
- Campsite marker posts
- RV camping spaces
- Tent camping spaces

Newspaper Rock Day-Use Area Site Plan

The Newspaper Rock Day-Use Area would be a designated area, which provides a scenic resting stop for visitors to the Indian Creek Corridor and Newspaper Rock. This day-use area would include picnic tables, and the existing parking lot and restroom facilities. This day-use area would provide a safer alternative to picnicking on the West side of Highway 211, which is located in a floodplain and would require users to cross the highway to reach their cars, restrooms, or Newspaper Rock. No fees would be charged for use of this day-use area.

Facilities provided at this day-use area may include:

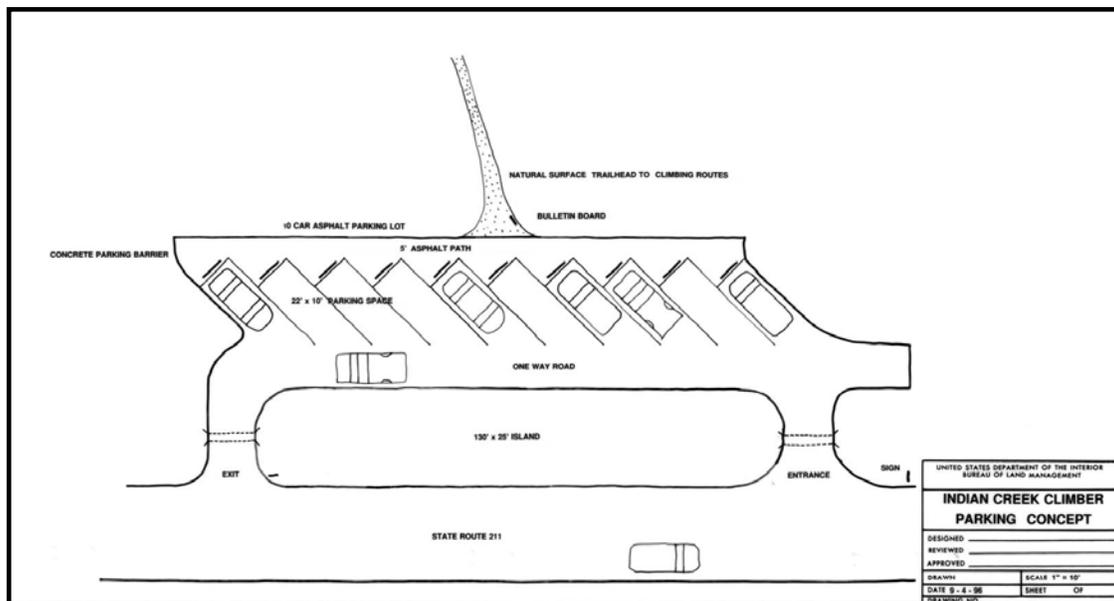
- Existing Restrooms
- Picnic tables
- Existing parking lot

Donnelly Canyon Recreation Area Site Plan

The Donnelly Canyon Recreation Area would be a designated day-use area that would provide safe parking areas and a restroom for rock climbers in Donnelly Canyon. No fees would be charged for use of this area. On busy weekends, up to 100 cars have been counted parked along Highway 211. People often park on both sides of the highway, which means that many people have to cross the road. The following graphic illustrates a possible parking area design, however the actual design and placement of the parking area depends on the findings of a cadastral survey. The present landownership boundaries are unclear. A second parking option would be constructing a flat parking area above grade from Highway 211, and closer to the cliffs.

Facilities provided at this recreation area may include:

- Restrooms
- Delineated parking areas



Bridger Jack Designated Dispersed Camping Area Site Plan

The Bridger Jack Designated Dispersed Camping Area would provide visitors to the Indian Creek Corridor an undeveloped camping area while minimizing impacts to the natural and cultural resources of the area. Facilities at this area would be limited, and a trial pack-in/pack-out policy for human waste and garbage would be enforced for one year. If the BLM determines that the pack-in/pack-out policy is not effective, permanent restrooms would be installed and fees would be charged to cover the associated costs.

This designated dispersed camping area has potential for approximately 30 sites with room for expansion as demands increase.

Facilities provided at this camping area may include:

- Fire rings
- Delineated parking areas
- Campsite marker posts
- Tent camping spaces
- Pack-in/pack-out policy or toilets

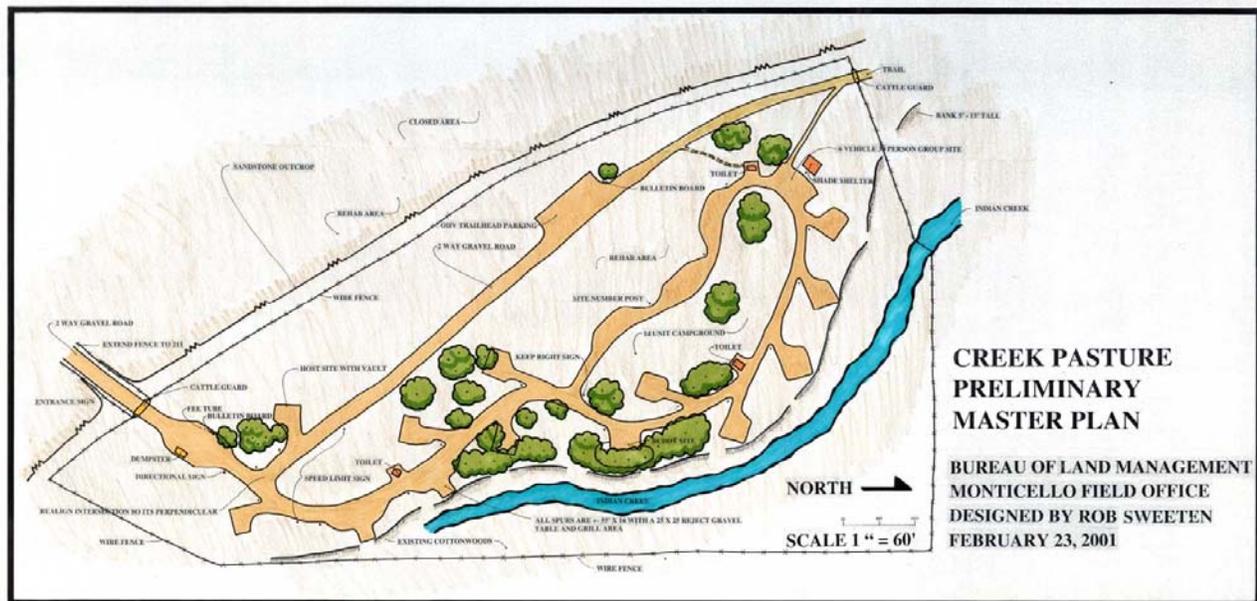
Creek Pasture Dispersed Camping Area Site Plan

The Creek Pasture Designated Dispersed Camping Area would provide visitors to the Indian Creek Corridor an undeveloped camping area while minimizing impacts to the natural and cultural resources of the area. Facilities at this area would be limited, and a trial pack-in/pack-out policy for human waste and garbage would be enforced for one year. If the BLM determines that the pack-in/pack-out policy is not effective, permanent restrooms would be installed and fees would be charged to cover the associated costs.

This designated dispersed camping area has potential for approximately 20 sites.

Facilities provided at this camping area may include:

- Fire rings
- Delineated parking areas
- Campsite marker posts
- Tent camping spaces
- Pack-in/pack-out policy or toilets



Hamburger Rock Campground Site Plan

The Hamburger Rock Campground would be a designated campground providing a more developed camping experience for visitors to the Indian Creek Corridor. This campground would provide camping facilities for both tent and recreational vehicle (RV) campers. This campground operates under a fee system to cover the costs of development, installation, and maintenance of the facilities and services provided.

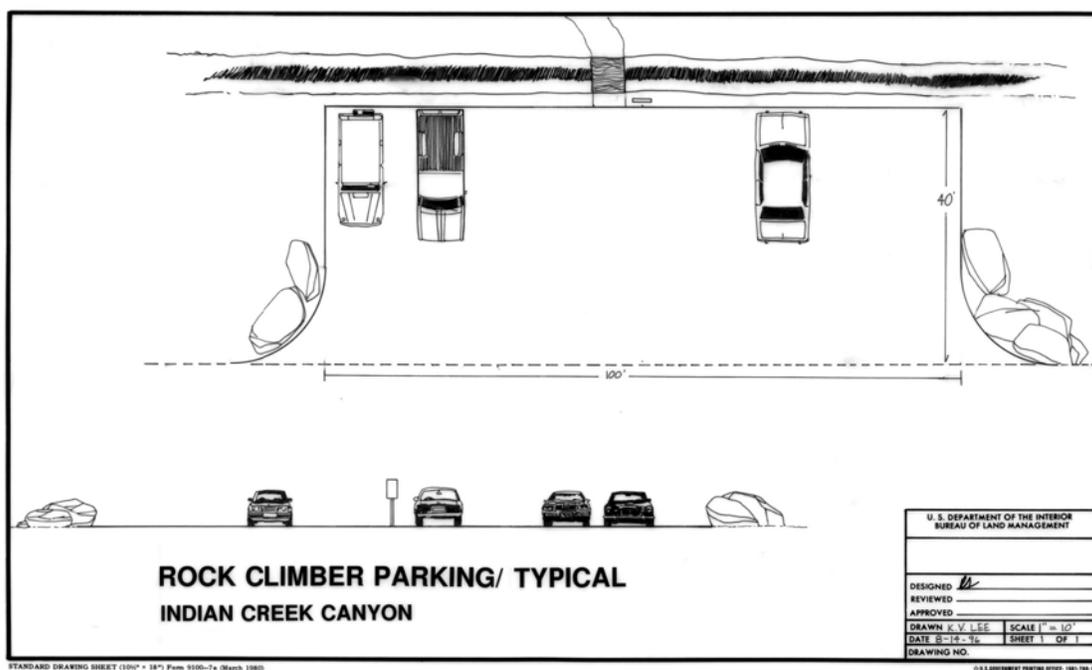
This campground currently has eight sites with room for expansion as demands increase. The BLM has also considered developing an outer ring of campsites at this campground to accommodate more visitors. Preliminary site design drawings have been developed.

Facilities provided at this campground may include:

- Restrooms
- Picnic tables
- Fire rings
- Delineated parking areas
- Campsite marker posts
- Tent camping spaces

Indian Creek Corridor Parking Plan

The Indian Creek Corridor Parking Plan designates 18 parking areas to be maintained or developed to meet current and future parking demands. Parking along Highway 211 within the Corridor would be limited to these 18 areas. In areas where safety concerns arise, parking along the shoulder of Highway 211 would be prohibited; signs would be posted in these areas. The BLM is working closely with the Utah Department of Transportation to design and develop these parking areas as betterment projects.



The Indian Creek Corridor Parking Plan includes designating the following 18 parking areas within the planning area:

- 1) Newspaper Rock
This is the existing paved parking lot at Newspaper Rock. This parking area provides parking for approximately 20 vehicles, and serves those stopping to view Newspaper Rock, use the Newspaper Rock day-use picnic area, or use the restrooms.

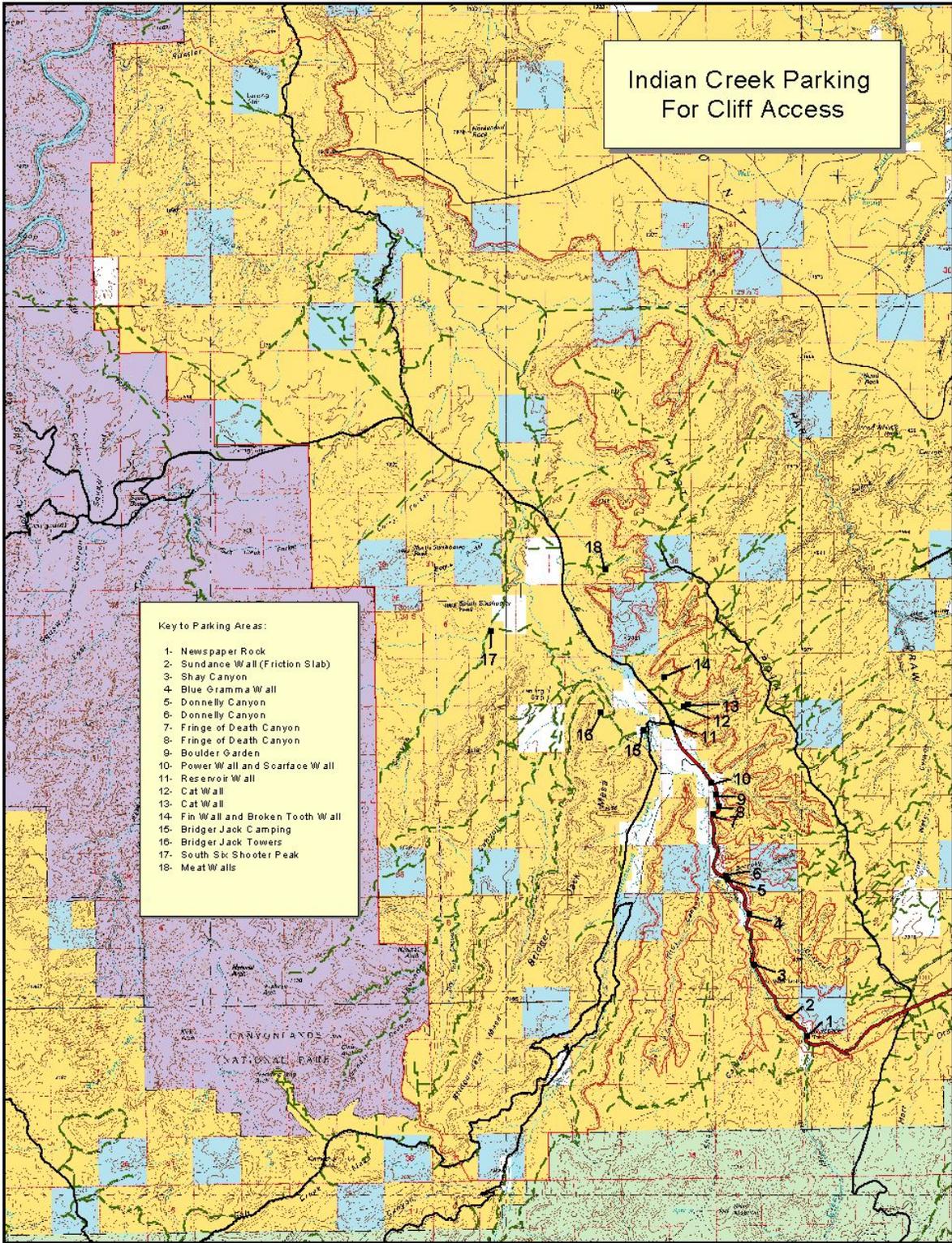
- 2) Sundance Wall (Friction Slab)
This parking area is a user-created turn-off along Highway 211. It accommodates 2-3 vehicles and provides parking for rock climbers on the Sundance Wall and sightseers stopping to view a small petroglyph panel.
- 3) Shay Canyon
This parking area is a user-created turn-off along Highway 211. It accommodates 2-3 vehicles, and provides parking for hikers headed into Shay Canyon to view a petroglyph panel and set of fossilized dinosaur tracks. Indian Creek is undercutting the road in this area, and BLM would coordinate development of this parking area with repair efforts for this section of Highway 211.
- 4) Blue Gramma Wall
This parking area is a user-created turn-off along Highway 211. It accommodates approximately 5 vehicles and provides parking for Blue Gramma Wall and overflow parking for Donnelly Canyon.
- 5) Donnelly Canyon
This is a proposed BLM-created parking area which would accommodate up to 100 vehicles. This parking area would provide parking for rock climbers on the Supercrack Buttress and other routes in Donnelly Canyon. A cadastral survey is needed to determine the actual ownership lines in this area. If this location is found to be on private property, development of this parking area would be subject to an agreement with The Nature Conservancy.
- 6) Donnelly Canyon
This parking area is a user-created turnoff along Highway 211. It accommodates 5-6 vehicles and provides parking for rock climbers on the Supercrack Buttress and other routes in Donnelly Canyon. A cadastral survey is needed to determine the actual ownership lines in this area. If this location is found to be on private property, development of this parking area would be subject to an agreement with The Nature Conservancy.
- 7) Fringe of Death Canyon
This parking area is a user-created turn-off along Highway 211. It accommodates 1-2 vehicles, and provides parking for rock climbers in the Fringe of Death Canyon.
- 8) Fringe of Death Canyon
This parking area is a user-created turn-off along Highway 211. It accommodates 1-2 vehicles, and provides parking for rock climbers in the Fringe of Death Canyon.
- 9) Boulder Garden
This parking area is a user-created turn-off along Highway 211. It accommodates 4-5 vehicles, and provides parking for rock climbers bouldering on the numerous boulders that have fallen from the cliffs above.

- 10) Power Wall and Scarface Wall
This parking area is a large, flat, gravel parking area along Highway 211. It accommodates over 20 vehicles, and provides parking for rock climbers on the Power and Scarface Walls.
- 11) Reservoir Wall
This parking area is a user-created turn-off along Highway 211. It accommodates 8 vehicles, and provides parking for rock climbers on the Reservoir Wall.
- 12) Cat Wall
This parking area is a user-created turn-off along Highway 211. It accommodates 5-6 vehicles, and provides parking for rock climbers on the Cat Wall.
- 13) Cat Wall
This parking area is a user-created turn-off along Highway 211. It accommodates 8 vehicles, and provides parking for rock climbers on the Cat Wall.
- 14) Fin Wall and Broken Tooth Wall
This parking area is a user-created turn-off along Highway 211. It accommodates 6-8 vehicles, and provides parking for rock climbers on the Fin and Broken Tooth walls.
- 15) Bridger Jack Camping
This includes a series of scattered user-created turn-offs. Together they accommodate over 20 vehicles at a time, and provide parking for campers in the Bridger Jack Designated Dispersed Camping Area. Additional parking for campers in this area is included in the Bridger Jack Designated Dispersed Camping Area Site Plan.
- 16) Bridger Jack Towers
This includes several scattered user-created turn-offs. Together they accommodate 10 vehicles, and provide parking for rock climbers on the Bridger Jack Towers.
- 17) South Six Shooter Peak
This parking area is located in a wide natural dry wash, which is subject to occasional flooding. It accommodates dozens of vehicles at a time, and provides parking for rock climbers climbing South Six Shooter Peak .
- 18) Meat Walls
This parking area is a user-created turn-off along Highway 211. It accommodates 5-6 vehicles, and provides parking for rock climbers on the 1st, 2nd, and Original Meat Walls, the Tenderloin Wall and the Sacred Cow Wall.

The location of the 18 parking areas in the Indian Creek Corridor Parking Plan are shown on the following map.

Indian Creek Parking For Cliff Access

- Key to Parking Areas:
- 1- Newspaper Rock
 - 2- Sundance Wall (Friction Slab)
 - 3- Shay Canyon
 - 4- Blue Gramma Wall
 - 5- Donnelly Canyon
 - 6- Donnelly Canyon
 - 7- Fringe of Death Canyon
 - 8- Fringe of Death Canyon
 - 9- Boulder Garden
 - 10- Power Wall and Scarface Wall
 - 11- Reserve Wall
 - 12- Cat Wall
 - 13- Cat Wall
 - 14- Fin Wall and Broken Tooth Wall
 - 15- Bridger Jack Camping
 - 16- Bridger Jack Towers
 - 17- South Six Shooter Peak
 - 18- Meat Walls



SCALE 1:125,000



1 inch equals approximately 2 miles

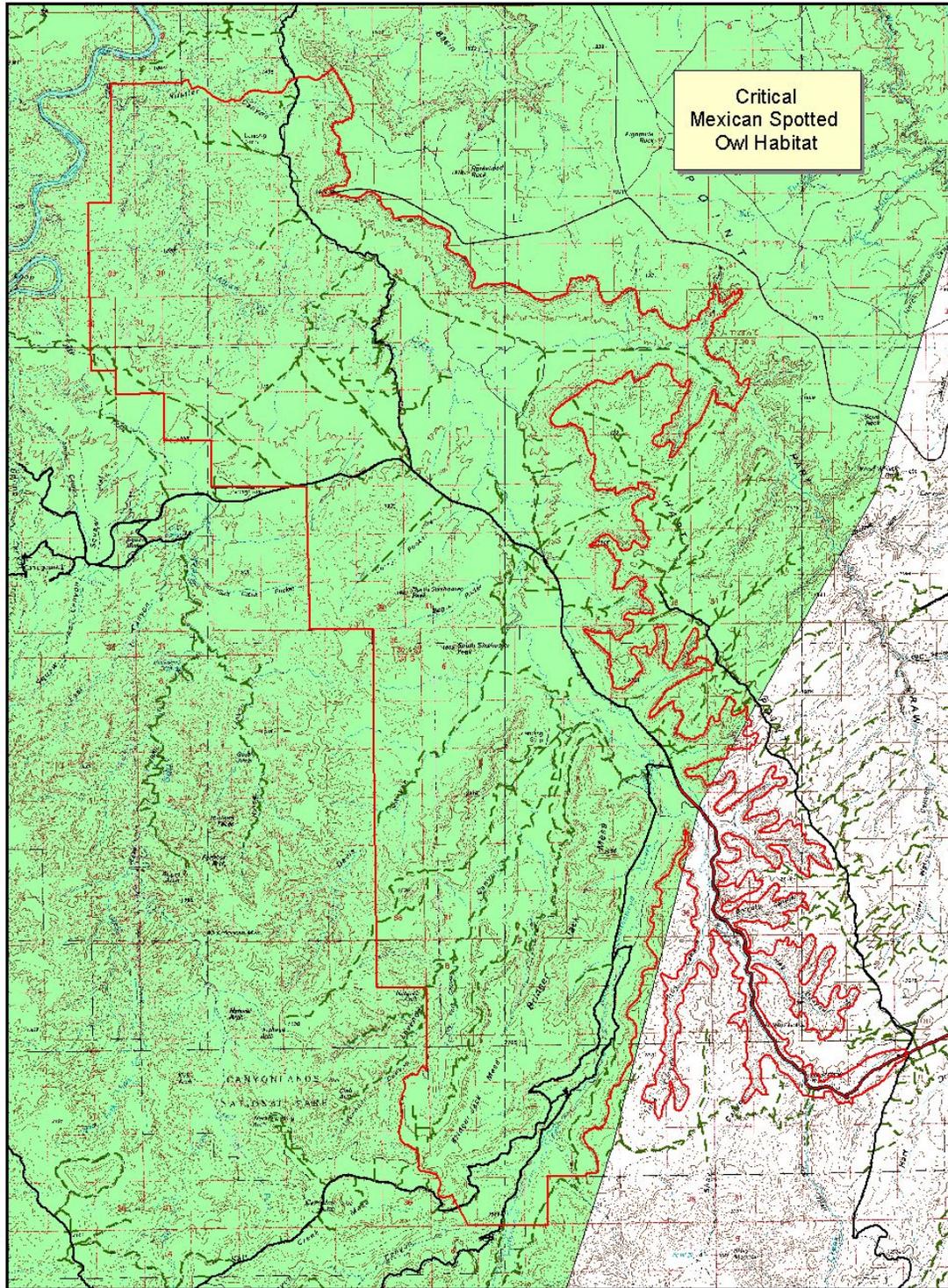


Bureau of Land Management
 Monticello Field Office
 435 N. Main
 Monticello, UT 84535
 January 16, 2004

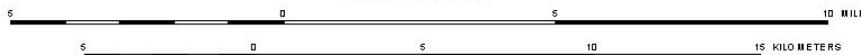
This product may not meet BLM Standards for accuracy and content. Differences in data sources and interpretations may cause some management of data layers.



Appendix B—Critical Mexican Spotted Owl Habitat



SCALE 1:125,000

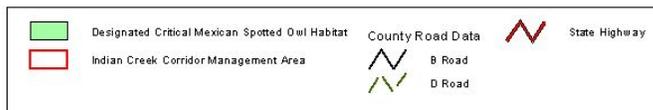


1 inch equals approximately 2 miles



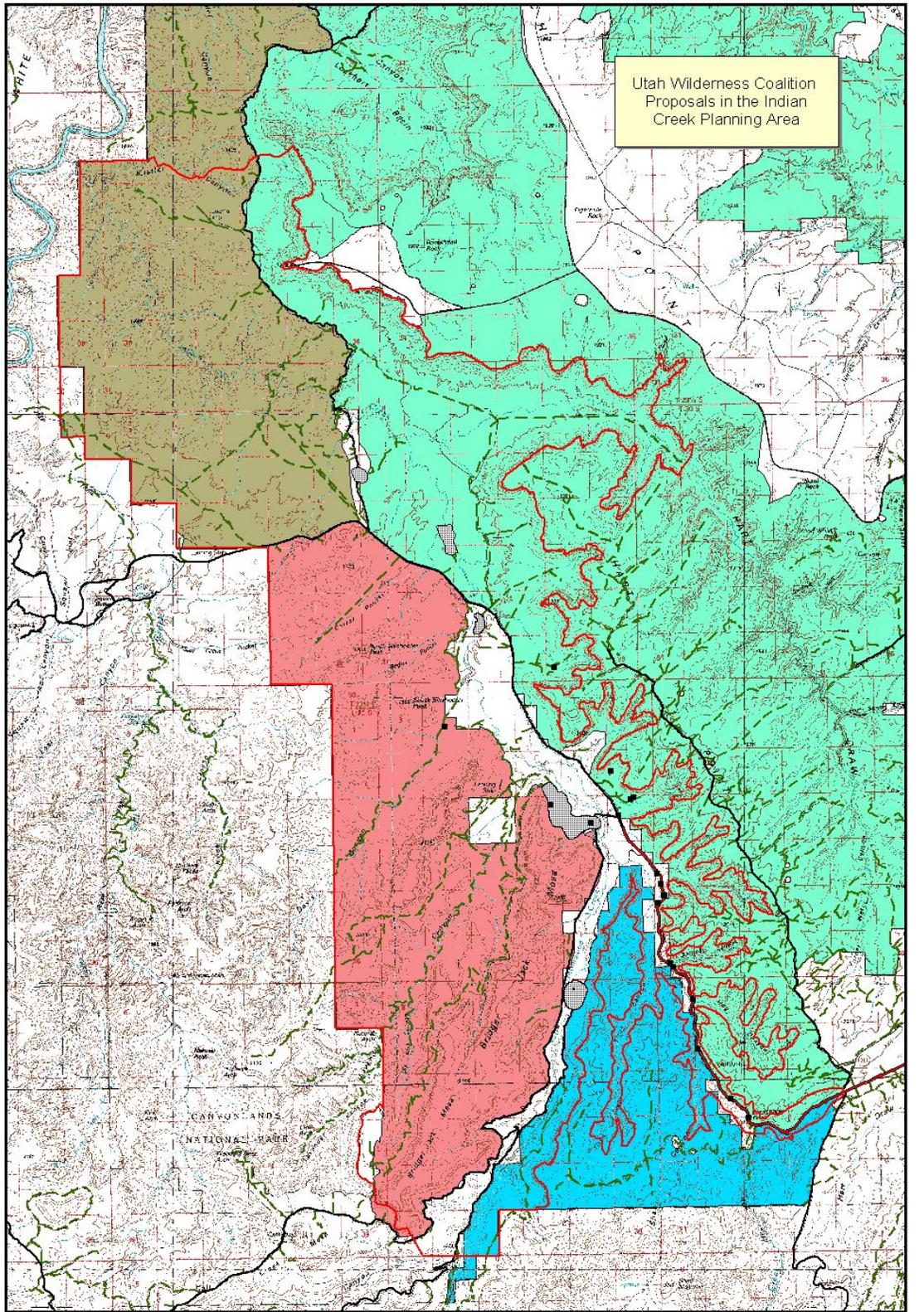
Bureau of Land Management
 Montrose Field Office
 435 N. Main
 Montrose, UT 81435
 January 16, 2004

This product may not meet BLM standards for accuracy and content. Errors in data source or digital scale may cause some misalignment of data layers.



Area of Coverage

Appendix C—Wilderness Proposals in the Indian Creek Corridor



SCALE 1:125,000

0 5 10 MILES

0 5 10 KILOMETERS

1 inch equals approximately 2 miles

Bureau of Land Management
Monticello Field Office
435 N. Main
Monticello, UT 84535
February 11, 2004

This product may not meet BLM Standards for accuracy and content. If there is data source and interpretations may cause some misalignment of data layers.

Utah Wilderness Coalition Proposals in the Indian Creek Corridor

Indian Creek Corridor Management Area	UWC 2004 Planning
Existing Data For CME/CCM	Riparian Habitat
County Road Data	Road Corridor
B-Line	Indian Creek
B-Line	Indian Creek Sub
B-Line	Skunk Hole
B-Line	