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Environmental Assessment UT-060-2005-080

Red Rock 4-Wheelers Jeep Safari and Fall Campout 5-Year Permit Renewal and Other Permitted, Non-Competitive Motorized Use of Jeep Safari Routes

Location: Grand and San Juan Counties, Utah

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Red Rock 4-Wheelers Jeep Safari and Fall Campout 5-Year Permit Renewal and Other Permitted, Non-Competitive Motorized Use of Jeep Safari Routes Environmental Assessment UT-060-2005-080 (Moab and Monticello Field Offices)

1.0 INTRODUCTION, BACKGROUND, AND PURPOSE OF & NEED FOR THE ACTION

1.1 Introduction

This Environmental Assessment (EA) has been prepared to analyze the permitted, non-competitive, motorized use of several established routes in Grand and San Juan counties, hereinafter referred to as "Jeep Safari routes." This EA also includes the Spring Jeep Safari and Fall Campout for the Red Rock 4-Wheelers. The proposed action spans both the Moab Field Office and the Monticello Field Office. The EA provides a site-specific analysis of potential impacts to the human environment that could result with the implementation of the proposed action or alternatives to the proposed action. The EA assists the Bureau of Land Management (BLM) in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the proposed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a "Finding of No Significant Impact" (FONSI), which will be identified in the accompanying Decision Record.

The Decision Record, which includes a FONSI statement, identifies the decision being made, and presents the reasons why implementation of the selected action will not result in significant environmental impacts beyond those already addressed in the Grand Resource Area Resource Management Plan (RMP) of 1985 and the San Juan Resource Area RMP of 1991. If the decision maker determines that this project has "significant" impacts following the analysis in the EA, an EIS will be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the action selected, with all appropriate mitigation measures identified and brought forward into approved permits.

1.2 Background

The annual Moab Jeep Safari was initiated in 1966 by local residents and managed by the Moab Chamber of Commerce. Growth in the early years was slow, but by 1979, the Safari had grown to ten routes with an estimated 400 vehicles participating in the one day event. In 1985, the Red Rock 4-Wheelers, a Moab-based four-wheel drive club, took over the event and submitted an application to the BLM for a 5-year permit. The 5-year permit, an organized group Special Recreation Permit (SRP), was first approved beginning with the 1986 event for the use of 15 routes. The permit was renewed in 1991 and expanded to include a total of 28 existing routes for the spring event. This permit also included the Labor Day Fall Campout, a weekend camping experience. In 1990 and 1991, the Dolores Triangle and Hole in the Rock routes were added to the Fall Campout, bringing the total number of routes involved to 30. All 30 routes were utilized during the spring event, and 8 of the 30 routes were made available for the Fall Campout. The 1995 Jeep Safari, a nine day event, included 1,450 registered vehicles and the Fall Campout, a 3 day event, included 137 registered vehicles.

The permit was renewed again in 1996, including all 30 of the previously approved routes (including 11 campsites for the Fall Campout). The 2000 Jeep Safari and Fall Campout events included 1,718 and 155 registered vehicles, respectively. The permit was renewed in 2001 for five years, with the same 30 routes and 8 of the 11 campsites included. Use statistics for Jeep Safari for the period of 1996-2005 are summarized in Table 1.

Table 1: Jeep Safari Participation, 1996 - 2005

Year	Spring Registered Vehicles	Spring User-Days	Fall Registered Vehicles	Fall User-Days	Total Registered Vehicles	Total User Days	Total Vehicle Days
1996	1,488	9,102	253	1012	1741	10,114	3890
1997	1,649	9,384	150	633	1799	10.017	3852
1998	1,730	9,361	150	635	1880	9,996	3845
1999	1,664	8,979	180	783	1884	9,762	3755
2000	1,718	8.509	155	618	1873	9,127	3510
2001	1,546	7,663	109	543	1655	8,206	3156
2002	1,493	6,836	96	586	1589	7,422	2855
2003	1,484	6,526	87	509	1571	7,035	2706
2004	1,440	6,484	109	588	1549	7,072	2720
2005	1,292	5,413					2082

Note: "user-day" equals one person on public land for a day or a portion of a day. Vehicle days are user days divided by 2.6, the average number of people per vehicle.

Permitted motorized use is of two types: commercial tours and organized group use, which includes events. Commercial tours guide clients in small groups (generally fewer than four vehicles) over authorized routes. Commercial tours are divided into two general types: 1) a guide drives a vehicle and offers interpretation to guests riding in his or her vehicle, or 2) a guide drives a lead vehicle and guests drive or ride along in additional vehicles. Vehicles include full-sized four wheel drive vehicles (including Hummers), All Terrain Vehicles (ATV's) and other smaller four wheeled vehicles, and dirt bikes. Commercial tours charge clients for their services. Organized group tours include club events (e.g., the Jeep Safari) and vehicle-affinity outings (e.g., an outing for Isuzu owners). Organized groups usually charge only for expenses. Currently, BLM regulations require groups of greater than 49 vehicles to obtain an organized group SRP. Number of motorized SRPs and numbers of user days (excluding Jeep Safari) are summarized in Table 2.

Table 2: Non-Jeep Safari Permitted Motorized Use, 2000-2004

Year	Number of Motorized SRPs	Number of User Days (non Jeep Safari)
2000	14 (4 events/10 commercial)	1,794 event, 2,544 commercial; 4,338 total
2001	16 (5 events/11 commercial)	1,502 event, 3,617 commercial; 5,119 total
2002	22 (7 events/15 commercial)	2,433 event, 3,916 commercial; 6,349 total
2003	23 (8 events/15 commercial)	2,316 event, 6,244 commercial; 8,560 total
2004	22 (8 events/14 commercial)	2,076 event, 11,785 commercial;13,861 total

In the 2004 permit year, 40% (5,597 user days) of all non-Jeep Safari permitted motorized use was on the Hell's Revenge route, 17% (2,317 user days) was on the Long Canyon/Gemini Bridges route (considered part of the Gold Bar Rim route), 12% (1,713 user days) was on the Sevenmile Rim route, and 4% (598 user days) was on the Poison Spider route. Some routes received very little use, while others received none. See Appendix B for a complete list of permitted use on Jeep Safari routes in 2004.

Although permittees are not required to report the number of vehicles utilized, the following assumptions were made to convert user days into vehicle days. For commercial outfitters, the number of user days was divided by four to equal the number of vehicles. For organized events, the number of user days was divided by 2.6 to equal the number of vehicles. The total number of permitted vehicle days over the past five years is shown in Table 3.

Table 3: Total Numbers of Permitted Vehicle Days, 2000-2004

Year	Number of Jeep Safari Vehicle Days	Number of vehicle days permitted for other events	Number of commercial outfitter vehicle days	Total number of permitted vehicle days
2000	3510	690	636	4836
2001	3156	578	904	4638
2002	2855	936	979	4770
2003	2706	891	1561	5158
2004	2720	798	2946	6464

1.3 Need for the Proposed Action

The routes used for Jeep Safari and by other permitted users have been in existence for many years. The majority of the routes were chosen by the Safari proponents from existing mineral exploration routes primarily for their highly scenic qualities and technical "jeeping" experiences. The Jeep Safari routes provide opportunities for the enjoyment of public lands by the recreating motorized public, including private, commercial and organized group users. The intent of this document is to analyze impacts to resources resulting from the motorized use of these routes from permitted motorized use. The commercial and organized group use of Jeep Safari routes facilitates public use and enjoyment by providing guided and supported services for individuals who may not otherwise be able to enjoy their public lands in this manner.

1.4 Purpose of the Proposed Action

The Federal Land Policy and Management Act of 1976 (FLPMA) mandates multiple use of public lands, including recreation use. One type of valid recreation use is responsible motorized use. The BLM Special Recreation Permit regulations at 43 CFR 2930 provide for SRPs to be issued on public lands. The purpose of the proposed action is to authorize the motorized use of Jeep Safari routes for Special Recreation Permits, including the Jeep Safari and Fall Campout for the Red Rock 4-Wheelers.

1.5 Conformance with BLM Land Use Plans

The proposed action and alternatives described below are in conformance with the Grand Resource Area RMP, approved in July 1985, and the San Juan Resource Area RMP approved March 1991 as required by the regulations at 43 CFR 1610.5.

Conformance with the Grand Resource Area (Moab Field Office) RMP is shown on page 27, which states:

> "Continue to issue permits (four wheel drive tours, horseback trips, bear hunting camps, survival school, etc.) to enhance outdoor recreational opportunities and provide business opportunities for private enterprise; and continue to permit competitive and noncompetitive OHV (Off-Highway Vehicle) events."

Conformance with the San Juan Resource Area (Monticello Field Office) RMP is shown on page 78 which states:

> "Dispersed recreation use would be allowed throughout the San Juan Resource Area, with permits required for commercial use."

In addition, the proposed action has been determined to be in conformance with OHV designations for both the Grand and San Juan Resource Area RMPs.

1.6 Relationship to Statutes, Regulations, or other Plans

This action will comply with the Federal Land Policy Management Act (FLPMA), and all other applicable statutes and regulations.

The action is consistent with the Master Plans for both Grand and San Juan counties, as outlined below.

Grand County's General Plan Update (April 13, 2004) states:

> "Grand County encourages the expeditious processing of use permits for economic uses of public lands" (p. 48).

The plan further states:

> "Grand County will be involved with public land managers with new and ongoing events and promote cooperation with the permitting process" (p. 50).

The Grand County General Plan recognizes the positive economic impacts of recreation tourism on the Grand County economy.

San Juan County's Master Plan (July, 1996) identifies recreation and tourism as an economic opportunity. The plan calls for working to promote recreation and tourism within the county.

1.7 Identification of Issues

1.7.1 Identification of Issues by BLM Interdisciplinary Team

The following issues (see Appendix A: Interdisciplinary Team Analysis Record) were identified internally on a route by route basis for this action:

1) Potential wildlife disturbance causing undue stress on animals by motorized vehicle use on Jeep Safari routes

2) Riparian issues, including potential degradation of riparian vegetation from direct vehicle impacts, degradation of stream channels and bank stability, which disturbs riparian functioning habitat conditions
3) Water quality issues including potential increased erosion and sedimentation and impairment of water quality from direct vehicle impacts
4) Potential Wilderness Study Area (WSA) boundary impacts
5) Potential impacts to cultural sites from the use of Jeep Safari routes
6) Recreation, including potential conflicts with other recreation users
7) Potential impacts to Wilderness Characteristics, including impacts to solitude
8) Economic considerations to the Grand County economy

The following issue was identified by the BLM Interdisciplinary Team, but not carried forward for analysis:

Wild and Scenic River Eligibility Status: All eligible wild and scenic river segments are evaluated for tentative classification levels in the Wild and Scenic River eligibility determination process. The tentative classification level, wild, scenic or recreational, is based upon the level of development and human use in the area of the eligible segment. Access by roads is one of the four criteria used in determining tentative classification. All river segments were reviewed with road data information in place. The continued use of the proposed routes will not affect the tentative classification of these river segments.

1.7.2 Issues and Concerns Raised during Public Scoping

A public scoping period was held for the proposed action from May 10 to June 10, 2005. The Moab Field Office received 176 comments, raising the issues and concerns discussed below. The distinction between the two is that issues are resource-based comments that could potentially be resolved in the implementation of this action. These issues will be discussed in this analysis. Concerns are defined as opinions or positions that are beyond resolution within the parameters and authority associated with review, analysis and the decision of the proposed action.

Summary of *Issues* Raised During Public Scoping and Brought Forward for Analysis:

1) BLM should consider a permit period of one year to avoid conflict with the ongoing RMP revision
2) BLM must analyze the impacts of the event and provide a reasonable range of alternatives
3) The event has long term impacts on natural resources
4) BLM should consider alternate locations for the event
5) BLM should exclude routes within America's Redrock Wilderness Act Proposal
6) BLM must analyze impacts to wilderness values and exclude Jeep Safari routes from Wilderness Study Areas
7) BLM should analyze the impacts to other recreationists of "unofficial" participants (private use)
8) The event causes conflict with other public land users
9) BLM needs to control the event by reducing number of vehicles and/or number of routes
10) BLM must consider the cumulative effects of the event on natural resources
11) BLM must survey for endemic plant species

12) Routes or portions of routes with sensitive resource values (i.e., cultural, wilderness, riparian, and water quality) should be excluded from the permit
13) BLM should authorize exclusive use of roads for the Jeep Safari event
14) Jeep Safari routes should be one-way during the event
15) BLM should consult with U.S. Fish and Wildlife Service
16) The event's impact upon wildlife resources should be analyzed
17) BLM should analyze the indirect effect of Jeep Safari increasing general motorized use
18) Jeep Safari brings economic revenue to the Moab area.

Response: The issues listed above are addressed in this document.

Issue Raised During Public Scoping and Not Brought Forward for Analysis: The event creates impacts to visual resources.

Response: Vehicle use causes visual impacts primarily when those vehicles stray from the road with resultant damage to vegetation and soils. Off-route use is not authorized for permitted users. In addition, vehicles crossing slickrock often leave black tire marks on the rock. Black tire marks are an artifact of vehicle travel on slickrock. Where the roadbed IS slickrock, black marks will result from its use. To disallow routes crossing slickrock only to permitted users would not eliminate these black marks.

Summary of *Concerns* Raised during Public Scoping:

1) BLM should conduct an Environmental Impact Statement (EIS).
   Response: One of the purposes of the Environmental Assessment is to determine if the impacts are significant. If the impacts are found to be significant, an EIS will be undertaken.
2) BLM's approval of this permit sets a precedent for other similar events throughout the state of Utah.
   Response: Each SRP is analyzed on a case-by-case basis and this analysis is only intended for the activities identified in the proposed action.
3) Jeep Safari has grown rapidly and will continue to grow.
   Response: While the Jeep Safari did grow rapidly in its early years, permitted use has actually declined during the last five years (see Table 1).
4) Golden Spike was illegally created.
   Response: The Golden Spike is not an illegal route. When Golden Spike was first utilized in 1989, the area was open to cross-country travel. In 2001, that area was limited to existing roads and trails. Golden Spike was deemed to be an existing route at this time. Further, Grand County has included the Golden Spike route in its inventory of roads.
5) Authorizing a private event is a misuse of public land.
   Response: 43 CFR 2932 expressly authorizes the use of public lands for private events under "Special Recreation Permits for Commercial Use, Competitive Events, Organized Groups and Recreation Use in Special Areas."
6) BLM should conduct a statewide review of motorized SRPs.
   Response: BLM issues SRPs by field office, as required in the Recreation Permit Administration Handbook (H-2930-1).

7) All users, including private users, should be required to have a permit.

Response: Such action would require a large multi-agency effort, and is beyond the scope of the proposed action. In addition, permits are currently required only when a group exceeds 49 vehicles in size.

8) BLM should analyze the impacts of private ATV users.

Response: although the impacts of private motorized users are discussed under No Action and in the Cumulative Impacts section of this document, private use is not included in the Proposed Action.

1.8 Summary

This chapter has presented the purpose of and need for the proposed action, as well as the relevant issues, i.e., those elements that could be affected by the implementation of the proposed action. This has included a summary of the issues raised by the public during the scoping period. In order to meet the purpose of and need for the proposed action in a way that resolves issues, the BLM has developed the following range of alternatives.

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

2.1 Introduction

Three alternatives were identified and are detailed below.

2.2 Alternative A – Proposed Action

The Proposed Action includes the non-competitive, permitted motorized use of Jeep Safari routes (see Maps 1 and 2). These routes total 630 miles, with 560 miles in the Moab Field Office and 70 miles in the Monticello Field Office. This action includes commercial and organized group use, including the Red Rock4 Wheelers Jeep Safari and Fall Campout events.

The Red Rock 4-Wheelers have submitted an application to renew their SRP for authorization of the annual Jeep Safari and Labor Day Fall Campout events for an additional 5 years (2006-2010). The Jeep Safari offers guided vehicle trips on motorized routes; guides lead guests who drive their own vehicles over the route. During the Fall Campout event, the group camps at a predetermined site adjacent to a Jeep Safari route. No off-route travel would be permitted as part of the proposed action.

The Red Rock 4-Wheelers portion of the proposed action seeks approval of a ten day event in spring and a four day event in fall (on Labor Day). The proposed routes, the maximum number of vehicles per route and the eight campsites for the Labor Day event are shown in Table 4. The proposed action includes exclusive use on seven of the routes (Behind the Rocks, Cliff Hanger, Gold Bar Rim, Golden Spike, Moab Rim, Poison Spider and Pritchett Canyon) on days during which there is a Jeep Safari trip. The proposal also seeks restricting travel to one-way on three routes (Hell's Revenge, Kane Creek Canyon and Steel Bender) for all users on days with a scheduled trip (see Table 4).

Table 4 shows the routes and their length, the proposed maximum number of vehicles per route, exclusive and one way use, and the extent of proposed future use by other permittees.

Table 4: Proposed Permitted, Non-competitive, Motorized Use of Jeep Safari Routes, Including Jeep Safari

Route (see maps) * = available for Fall Campout	Length on BLM Land (miles)	Proposed Maximum Number Vehicles per day for JS and/or Fall Campout/ Max. trips per year by Jeep Safari. No more than one trip/day	Use exclusive to permittees during Spring Jeep Safari	One-way Use during Spring Jeep Safari	Extent of Proposed Commercial/organized group use (non-Jeep Safari) (low = under 100 vehicles/year; medium = 100-600 vehicles/year; high = 600 to 1200 vehicles/year; very high = 1200 to 3000 vehicles/year).
3-D	21.7	60/8 per year	No	No	Low
Arch Canyon	4.5	25/1 per year	No	No	Proposal does not include commercial or organized group use other than Jeep Safari.
Behind the Rocks*	18.5	60/10 per year	Yes	No	Medium
Chicken Corners	9.7	50/6 per year	No	No	Medium
Cliff Hanger (aka Amasa Back)	4.4	55/8 per year	Yes	No	Low
Copper Ridge	16.0	55/5 per year	No	No	Low
Crystal Geyser	41.9	35/4 per year	No	No	Low
Dolores Triangle*	65.0	25/1 per year	No	No	Low
Dome Plateau*	88.7	50/8 per year	No	No	Low
Fins and Things	16.9	60/9 per year	No	No	High
Flat Iron Mesa	12.8	60/6 per year	No	No	Low
Gold Bar Rim (incl. Long Canyon and Gemini Bridges)	9.6	50/8 per year	Yes	No	High (majority of use on Long/Gemini)
Golden Spike*	8.1	45/10 per year	Yes	No	Medium
Hell Roaring Rim	29.7	50/5 per year	No	No	Low
Hell's Revenge	5.3	60/9 per year	No	Yes	Very high
Hey Joe Canyon	19.2	50/4 per year	No	No	Low
Hole in the Rock*	14.6	25/4 per year	No	No	Proposal does not include commercial or organized group use,

					other than Jeep Safari.
Hotel Rock	**4.0**	**25/1 per year**	**No**	**No**	**Proposal does not include commercial or organized group use, other than Jeep Safari.**
Kane Creek Canyon	**19.3**	**60/6 per year**	**No**	**Yes (south from Hurrah Pass intersection)**	**Medium**
Lockhart Basin*	**47.3**	**25/1 per year (Fall only)**	**No**	**No**	**Low (Permits analyzed for Moab-based SRPs only)**
Metal Masher	**18.7**	**50/9 per year**	**No**	**No**	**Low**
Moab Rim	**5.0**	**50/9 per year**	**Yes**	**No**	**Medium**
Poison Spider	**8.5**	**60/9 per year**	**Yes**	**No**	**High**
Porcupine Rim	**5.5**	**45/4 per year**	**No**	**No**	**Low**
Pritchett Canyon	**4.7**	**35/4 per year**	**Yes**	**No**	**Low**
Rose Garden Hill	**36.0**	**40/5 per year**	**No**	**No**	**Low**
Secret Spire	**14.0**	**45/5 per year**	**No**	**No**	**Low**
Sevenmile Rim	**18.3**	**50/5 per year**	**No**	**No**	**High**
Steel Bender	**12.9**	**60/5 per year**	**No**	**Yes**	**Low**
Strike Ravine	**10.8**	**55/4 per year**	**No**	**No**	**Low**
Top of the World*	**49.2**	**50/8 trips per year**	**No**	**No**	**Medium (largely Onion Creek)**
Wipeout Hill	**11.9**	**70/4 per year**	**No**	**No**	**Low**

Adding three new routes to the permit was originally part of the applicant's proposal. The three routes are: "The Pickle," "The Rusty Nail," and "Where Eagles Dare." These routes, which were not on the Grand County road inventory of existing routes, were eliminated from further analysis because the BLM declined to include them as additions to permitted motorized SRPs during the formulation of the Travel Management Plan which will accompany the revised RMP for the Moab Field Office. No new route considerations for permitted motorized use will be considered until the Travel Management Plan is completed.

The stipulations applied to the 2001 permit renewal are incorporated as part of the proposed action (see Appendix C). The proposed routes, maximum number of vehicles per route, number of Jeep Safari trips per year, number of campsites, length of routes (miles) on BLM land, and an estimate of other organized group and commercial use are shown in Table 3. Three of these routes are entirely in the Monticello Field Office (Arch Canyon, Hole in the Rock, and Hotel Rock); analysis of these routes will be undertaken by the Monticello Field Office staff and incorporated into this document. Two of the routes cross from the Moab Field Office into the Monticello Field Office (Chicken Corners and Lockhart Basin). Analysis of these routes will be undertaken by the Moab Field Office.

In addition, the permitted use of 29 of these routes on a year-round basis for guided motorized commercial tours and activities and guided organized group tours will be analyzed. The Arch Canyon, Hole in the Rock, and Hotel Rock routes are not being analyzed in this document for commercial or non-Jeep Safari organized group use. Lockhart Basin and Chicken Corners are being analyzed for non-Jeep Safari permitted use only for permits issued by the Moab Field Office.

Commercial outfitters and organized groups currently report their use in terms of user days. For purposes of analysis, commercial use will be estimated at 4 user days per vehicle day. That is, commercial user days will be divided by 4 to get the number of commercial vehicles. Organized groups will be estimated at an average of 2.6 user days per vehicles (this estimate is based on past use patterns). That is, organized group user days will be divided by 2.6 to get the number of organized group vehicle days.

The proposed action for commercial tours includes 15 existing outfitters with 11,785 user days (2946 vehicle days) that are currently using Jeep Safari routes (see Appendix B for use by route in 2004). For the purpose of analysis, no more than 15 new outfitters would be permitted over the next five years, with an additional 12,000 user days. A total of 30 outfitters with 24,000 user days and 6,000 permitted vehicle days are analyzed in this EA. Group size for commercial tours would be established on a case-by-case basis at the time the permit is issued, but would generally not exceed five vehicles per trip. All commercial permittees would operate under the stipulations developed under this analysis.

There are currently (2004) eight motorized organized group permits other than Jeep Safari, with a total of 2,076 user days per year, and 798 vehicle days (see Appendix B for use by route in 2004). For the purpose of analysis, no more than 8 new organized groups would be permitted over the next five years. This EA makes the analysis assumption that additional motorized organized group permits do not represent additional vehicles driving Jeep Safari routes. For instance, many groups currently visit the Moab area with the express purpose of driving the Jeep Safari routes. Should these groups obtain a permit, the number of vehicles on the routes is not likely to increase. That is, private vehicle users will become permitted vehicle users.

Although expected use for organized groups is hard to predict, it is likely to continue to be less than commercial use. The group size for organized permitted motorized use would be limited to the same number of vehicles per route as for the Jeep Safari (see Table 4 for maximum number of vehicles per route). All stipulations developed for the Jeep Safari event would be in effect for other motorized organized groups as well.

Thus, there were 20,933 total permitted motorized user days in 2004 (11,785 commercial, 2,076 organized group and 7,072 Jeep Safari user days). User day is the unit of use currently reported to the BLM by permittees. While the exact number of permitted vehicles is not available, an estimate has been made for purposes of analysis. This estimate resulted in a total of 6,464 permitted vehicles in 2004. Permittees will be required to report number of vehicles in the future.

The proposed action and subsequent analysis does not include competitive events of any kind, nor does it include private vehicle use of Jeep Safari routes. Motorized private use, especially on

a route by route basis, is difficult to estimate. Appendix B shows the percentage of permitted vs. private users on selected routes for which complete, year-round traffic counter data are available. In no instance does permitted use on even the most popular permitted route, Hell's Revenge, exceed 5% of private use.

2.3 Alternative B – Reduced Route Alternative

Under the Reduced Route Alternative, the BLM would renew the Red Rock 4-Wheelers five-year permit, but with a reduced number of routes or portions of routes. The basis for the identification of the reduced routes is resource conflicts identified for further consideration during scoping. These routes were chosen to reduce potential impacts to wildlife, riparian, water quality, cultural resources and recreation resources. In addition, the reduced routes would not be authorized for other permitted motorized use; however, they remain open to private motorized use. The following routes or portions of routes would not be authorized for permitted use:

1) Arch Canyon (entire route). Conflict: the density of cultural sites along this route
2) The portion of Hey Joe Canyon along the Green River (8.8 miles).
   Conflict: the presence of the route within the Green River floodplain, and the potential impacts to threatened and endangered fish in that river.
3) Hotel Rock (entire route).
   Conflict: the density of cultural sites along this route.
4) Kane Creek Canyon from the Hurrah Pass Road to U.S. Highway 191 (17.9 miles).
   Conflict: potential erosion, sedimentation and degradation of riparian resources, as well as potential hydrocarbon emission from vehicle use in Kane Creek.
5) Pritchett Canyon (entire route).
   Conflict: potential degradation to riparian vegetation and increased erosion.
6) The easternmost portion of Tusher/Bartlett Wash near Highway 191 (3.6 miles of 3-D Route).
   Conflict: potential destabilization of floodplains and damage to riparian vegetation.
7) The riparian portion of Tusher Canyon (a 2.4 mile section of Sevenmile Rim).
   Conflict: potential degradation of riparian vegetation and loss of wetland functioning.

The exclusion of these routes would reduce the total miles of routes authorized for permitted motorized use by 39 miles in the Moab Field Office and 8.5 miles in the Monticello Field Office. This would result in 521 miles of permitted routes in the Moab Field Office and 61.5 miles of permitted routes in the Monticello Field Office.

2.4 Alternative C – No Action

Under the No Action Alternative, the BLM would not renew the Red Rock 4-Wheelers five-year permit. The annual Jeep Safari and the Labor Day Fall Campout as organized events would not be authorized on public lands. Applications for permitted motorized use would not be authorized using the present analysis. No permitted users would operate with stipulations in place to protect sensitive resource values. Private use of these routes would continue to occur.

2.5 Alternatives Considered but Eliminated from Further Analysis

2.5.1 Ten-Year Permit/One-Year Permit Alternatives

BLM has the authority for adjusting the length of a SRP on a case by case basis (CFR 43 2932.42). The Red Rock 4-Wheelers applied for a permit for a ten-year period. While BLM has the authority to issue SRPs for up to ten years, the five-year permit period was chosen as it allows for reconsideration of the terms of the permit on a more frequent basis as the recreational uses within the Moab Field Office continue to evolve. The five-year permit period has been shown to be effective, as it allows for a more timely analysis relative to the changing needs of the recreating public.

In addition, an alternative of issuing a one-year permit (rather than the five-year permit chosen for analysis) was considered. The Moab Field Office is in the process of a RMP revision. A one-year permit was considered so that the terms of the Jeep Safari SRP, or of any other commercial or organized group permit, would not conflict with the revised RMP. Should the RMP, or its accompanying Travel Management Plan, fail to designate particular routes or impose additional restrictions on motorized use, the Jeep Safari SRP and all other commercial and organized group permits will be revised to conform to the new RMP and its accompanying Travel Management Plan. This conformance commitment was considered sufficient to eliminate the alternative for a one-year permit from further analysis.

2.5.2 Eliminating Routes within America's Redrock Wilderness Act

This alternative was suggested by members of the public in comments received during initial scoping. The alternative would reduce the number of authorized routes by excluding those routes within the areas covered by America's Redrock Wilderness Act (HR 1596/S 639). Golden Spike and Hole in the Rock routes would be eliminated in their entirety by this alternative. Integral portions of the following routes would have been eliminated: Arch Canyon, Behind the Rocks, Copper Ridge, Crystal Geyser, Dolores Triangle, Dome Plateau, Hell Roaring Rim, Hey Joe, Hotel Rock, Lockhart Basin, Moab Rim, Secret Spire, and Top of the World. Eliminating these portions of the routes would result in disconnected segments that would render the entire route unusable.

BLM is required to manage Wilderness Areas and Wilderness Study Areas to maintain wilderness values. BLM Washington Office Instruction Memorandum 275 Change 1, issued on October, 23, 2003, gives BLM the discretion to manage for wilderness resources areas with or likely to possess wilderness characteristics as part of the land use planning process. This IM defines wilderness characteristics as features of the land associated with the concept of wilderness, including naturalness and the presence of solitude or primitive and unconfined recreation. Since existing RMPs and BLM policy do not require the Moab and Monticello field offices to manage lands other than Wilderness Areas and Wilderness Study Areas as wilderness resources, this alternative was eliminated from further analysis.

2.5.3 Southern Utah Wilderness Alliance (SUWA) Alternative based on Resource Concerns

SUWA proposed an alternative based on their identified resource concerns. Although the routes mentioned are all within the proposed Red Rock Wilderness Act, SUWA raised concerns primarily with non-wilderness related resources. This alternative would eliminate the following

routes in their entirety: Arch Canyon (cultural and wildlife concerns, user conflict), Golden Spike (user conflict), Hotel Rock (cultural concerns), and Pritchett Canyon (riparian, soil and visual concerns, damage to vegetation from off route use). Portions of the following routes would be eliminated: Behind the Rocks (wilderness concerns), Copper Ridge (redundant route bordering Arches National Park), Crystal Geyser (redundant route), Dolores Triangle (redundant route with vegetation, wildlife, visual and soil concerns), Dome Plateau (redundant route in blackbrush habitat), Hell Roaring Rim (redundant routes with vegetation, wildlife, visual and soil concerns), Hey Joe (user conflict, riparian and soil concerns), Hole in the Rock (cultural and wildlife concerns), Lockhart Basin (concerns with route entering Canyonlands National Park), Moab Rim (damage to vegetation from off-route use), Secret Spire (redundant routes with vegetation, wildlife, visual and soil concerns), Steel Bender (water quality and wilderness concerns), and Top of the World (redundant route with vegetation, wildlife, visual and soil concerns). Eliminating these portions of the routes would result in a route system that fails to meet the purpose and need for the proposed action.

Each of these routes or portions of routes were considered by BLM resource specialists. All resource issues, concerns and conflicts, including those identified in the above paragraph, were considered on a route-by-route basis through BLM's interdisciplinary team process. Where resource issues could be substantiated, routes or portions of routes were identified for inclusion in the Reduced Route Alternative. In many cases, conflicts raised by SUWA could not be adequately supported with data or information to warrant further consideration for inclusion in this alternative. For example, BLM wilderness monitoring data shows no impacts to the Behind the Rocks WSA as a result of the proposed action, and for this reason, the Behind the Rocks route was not placed in the Reduced Route alternative.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

Jeep Safari and other permitted motorized events take place in Grand and San Juan Counties, Utah. These counties are located in the Colorado Plateau physiographic province, which is characterized by extraordinarily diverse and internationally renowned scenic qualities as well as recreational opportunities. The area ranges in elevation from 4,000 to 8,000 feet above sea level. Precipitation in this high desert environment is limited, with an average of 8 - 12 inches per year.

3.2 General Setting

Jeep Safari routes traverse 560 miles of BLM lands in the Moab Field Office and 70 miles of BLM land in the Monticello Field Office. They are comprised of various types of non-paved roads, including County B (regularly maintained to two wheel drive standards) and County D (not regularly maintained – generally four wheel drive) roads. All travel on Jeep Safari routes for any permitted purpose is on-route only. Each of the Jeep Safari routes has been inventoried by either Grand or San Juan counties and is in each county's proposed travel management plan.

3.3 Resources/Issues Brought Forward for Analysis

The following resource issues were brought forward for analysis: wildlife habitat, riparian resources, water quality, wilderness, cultural resources, recreation, wilderness characteristics, and economics. See Appendix A, Interdisciplinary Team Analysis Record. Monitoring

information of these resources (not specific to the Jeep Safari event itself) is included to establish baseline measures describing these resources.

3.3.1 Critical Elements of the Human Environment

Wildlife including Threatened and Endangered Species
Many Jeep Safari routes traverse various wildlife habitats.

Threatened and Endangered Species that could be found near selected Jeep Safari routes include the Mexican Spotted Owl, the Southwestern willow flycatcher, the bald eagle, and the endangered fish species of the Colorado River Basin (razorback sucker, humpback chub, Colorado pikeminnow and bonytail chub). Habitat for one candidate species, the Gunnison sage-grouse, is also found.

Utah BLM State Sensitive Species that could be found in the vicinity of Jeep Safari routes include the white tailed prairie dog, ferruginous hawk, burrowing owl, and flannelmouth sucker. Other wildlife species present near some Jeep Safari routes include golden eagle, desert bighorn sheep, American pronghorn, elk and mule deer.

Wildlife species, their habitats, and the Jeep Safari routes near which they are found are described below:

Mexican Spotted Owl: In the Moab Field Office, an ongoing Mexican Spotted Owl (MSO) survey of areas adjacent to all Jeep Safari routes will be completed by 2007. Partial results are available at this time. MSO habitat assessments and occupancy surveys have been conducted during nesting seasons from 2001 to 2005. As of July, 2005, there have been no owls detected within 0.5 mile of any Jeep Safari routes. There is one Protected Activity Center (PAC) for Mexican spotted owls in the Moab Field Office. A PAC provides a buffer around a nesting pair of owls. The identified PAC is approximately one mile away from the Long Canyon Jeep Safari route; in addition, a 1,000 foot cliff separates the PAC from the road.

In the Monticello Field Office, surveys have been conducted for MSO since 1991. All Protected Activity Centers (PAC) that have been identified in San Juan County are over four miles from any Jeep Safari route, including the PAC that is on U.S. Forest Service land near Arch Canyon. Surveys were conducted for MSO in 1998 in Lockhart Basin (traversed by the Lockhart Basin route). No owls were detected within 0.5 mile of the route and habitat in Lockhart Basin was not found suitable for spotted owls. The high rim forming the eastern boundary of the basin, and the middle and upper portions of Lockhart Canyon did not possess habitat features typically associated with areas in which owls have been found. MSO surveys were conducted in Arch Canyon and no owls were found to be nesting within 0.5 mile of the route, although one PAC is on nearby U.S. Forest Service land.

Southwestern Willow Flycatcher: The Southwestern willow flycatcher (SWFL) is typically found in mixed native and exotic riparian vegetation, generally dominated by cottonwood, coyote willow, tamarisk, and Russian olive. Protocol surveys were done in 2002, 2003, and 2005 in suitable habitat in proximity to Jeep Safari routes. Although several migrant birds were detected,

no nesting birds were found within 0.25 mile of the following eight routes: Arch Canyon, Dolores Triangle (Granite Creek and Cowskin Canyon), Dome Plateau (Colorado River near Dewey), Fins and Things (Negro Bill Canyon), Hells Revenge (Negro Bill Canyon), Sevenmile Rim, Steel Bender (Mill Creek), and Top of the World (Dolores River).

Habitat assessments and occupancy surveys were conducted during the 2005 breeding season in the Moab and Monticello field offices along additional Jeep Safari routes. The riparian habitat found along the following routes has been determined to contain the vegetative density and water regime necessary to support SWFL's breeding and nesting needs: Behind the Rocks (Upper Hunter Canyon), Dolores Triangle (Cowskin Canyon), Hey Joe (Spring Canyon), Hole in the Rock (Lake Canyon), Kane Creek Canyon, and Top of the World (Onion Creek). Surveys for SWFL will continue as required.

Endangered Fish: Four species of endangered fishes are present in the Green, Colorado and Dolores River. Critical habitat for these fish includes the rivers and their 100-year floodplains. Routes adjacent to these rivers, or to important tributary drainages of these rivers, include Crystal Geyser, Dolores Triangle, Dome Plateau, Hey Joe, Kane Creek Canyon, Moab Rim, Pritchett Canyon, and Top of the World.

Flannelmouth sucker: The flannelmouth sucker is found in the Colorado, Green and Dolores Rivers. It is also found in Arch Canyon. Routes adjacent to these rivers or to important tributary drainages of these rivers include Crystal Geyser, Dolores Triangle, Dome Plateau, Hey Joe, Kane Creek Canyon, Moab Rim, Pritchett Canyon, and Top of the World.

Gunnison sage-grouse: Habitat for the candidate Gunnison sage-grouse is located adjacent to the Behind the Rocks, Flat Iron Mesa, Strike Ravine, and Top of the World routes. No Gunnison sage-grouse have been sighted in ten years within the Moab Field Office. There are no Jeep Safari routes which traverse Gunnison sage-grouse habitat within the Monticello Field Office.

White Tailed Prairie Dog: Approximately 3.5 miles of a segment of the Dome Plateau route passes within 0.5 mile of white tailed prairie dog habitat, and 1.75 miles of the same route are located 0.5 mile from a prairie dog town active in 2002. The presence of active prairie dog towns means that prairie dogs themselves may be on the Dome Plateau road.

Bald Eagle: During the summer months, bald eagles forage up and down the Colorado and Green Rivers. Three known nesting territories have been established within the Moab Field Office; two are currently active. The nests are 4 – 10 miles from the Dolores Triangle route. There have been no documented nesting bald eagle sites within the Monticello Field Office area. Winter roost sites, areas protected from harsh weather and human disturbance, provide food sources for wintering eagles and are important for their winter survival. Winter roost sites occur in the vicinity of the following Jeep Safari routes: Dolores Triangle, Dome Plateau, Flat Iron Mesa, Gold Bar Rim, Steel Bender, and Top of the World.

Ferruginous Hawk: Ferruginous hawk habitat is located throughout the Cisco desert. A small portion of the Dome Plateau route passes through this habitat. No known nest sites have been documented within one mile of the Dome Plateau route.

Burrowing Owl: Jeep Safari routes in their entirety are in burrowing owl habitat, but there are only two known nest sites, one within 0.5 mile of the Behind the Rocks route and one within 0.5 mile of the Dome Plateau route. Burrowing owls tend to occupy abandoned ground dwelling animals' burrows (such as prairie dog and ground squirrel holes).

Golden Eagle: Short segments of the following four routes pass within less than one mile of golden eagle nesting territories: Dolores Triangle, Metal Masher, Secret Spire, and Sevenmile Rim.

Desert Bighorn Sheep: Eighteen route segments are within bighorn sheep habitat, including those on 3D, Behind the Rocks, Chicken Corners, Cliff Hanger, Crystal Geyser, Flat Iron Mesa, Gold Bar Rim (including Long Canyon), Golden Spike, Hell Roaring Rim, Hey Joe Canyon, Kane Creek Canyon, Lockhart Basin, Metal Masher, Poison Spider, Pritchett Canyon, Secret Spire, Sevenmile Rim, and Wipeout Hill. A water catchment was installed in 1984 for the bighorn sheep inhabiting Long Canyon. This group of bighorn moves frequently, which is uncharacteristic behavior.

Approximately 36 miles of segments on seven routes pass through crucial lambing grounds for bighorn. Lambing season is April 1 to June 15. These routes include Crystal Geyser, Gold Bar Rim (which includes Long Canyon), Hell Roaring Rim, Hey Joe Canyon, Metal Masher, Secret Spire, and Sevenmile Rim.

Deer and Elk: Five routes pass through crucial winter range for deer and elk, including the Dolores Triangle, Flat Iron Mesa, Strike Ravine, and Top of the World routes, and the far southeast portion of the Behind the Rocks route. This winter habitat is generally used from November until April. This important habitat provides winter forage, thermal cover, and protection during the stressful winter months when food sources can become limited and climatic effects make survival difficult.

American pronghorn: Segments on twelve routes pass through yearlong American pronghorn habitat. No routes are found in crucial pronghorn kidding grounds. The routes in yearlong habitat include 3-D, Behind the Rocks, Copper Ridge, Crystal Geyser, Dome Plateau, Gold Bar Rim (which includes Long Canyon), Hell Roaring Rim, Hey Joe Canyon, Metal Masher, Secret Spire, Seven Mile Rim, and Wipeout Hill. This habitat provides year-round forage, in addition to water and escape terrain for the Cisco pronghorn herd. These routes are located near the edge of their habitat. The crucial kidding grounds are generally located north of the routes.

Consultation: A preliminary Biological Assessment has been prepared and sent to the U.S. Fish and Wildlife Service in July, 2005. Formal consultation is in process and results of that consultation will be included in the final decision document.

Plants

There are several state sensitive and one threatened species of plants found within walking distance of some of the routes and near the proposed campsites. The state sensitive plants include Carex specuicola, stragalus sabulosus, Habenaria zothecina, and Lomatium latilobum. The Cycladenia humilis var. jonesii is a federally listed threatened plant. Twenty-six surveys,

covering the Moab and Monticello field office areas for endemic and sensitive plant species, were conducted from 1978 to 2004. These surveys are listed in the References section of this document. These extensive surveys found no endemic or sensitive plants present within the vicinity of Jeep Safari routes.

Riparian and Floodplain Resources

Several proposed Jeep Safari routes are located within riparian and floodplain resources along perennial, intermittent, ephemeral streams, springs, and washes. Perennial streams have permanent year-long surface water. Intermittent streams have seasonal surface or subsurface water in response to precipitation, snow-melt, or groundwater. Ephemeral streams are those with periodic or short-duration run-off in direct response to precipitation events (Meinzer 1923, Pritchard, et al. 1998).

Within the Moab Field Office, portions of the proposed routes are located within or cross approximately 31 miles of perennial to intermittent streams in seven locations: Bartlett Wash, Dolores River, Kane Creek, Mill Creek, Onion Creek, Ten Mile Wash tributaries, and Tusher Canyon. Portions of proposed routes also are located within or cross 11 miles of intermittent streams or ephemeral washes in 29 locations.

Riparian communities along perennial or intermittent streams include native trees such as cottonwoods and willows of various heights located along the stream channel and on adjacent floodplains and terraces. Many exotic invasive species such as tamarisk and Russian olive are also found and can dominate these sites. Wetland species such as rushes, sedges, cattails, and herbaceous grasses are also associated with perennial and intermittent streams limited to wet areas along streambanks or in close proximity to the channel. Within ephemeral washes, exotic species such as tamarisk are more prevalent due to their greater root depths to tap soil moisture, but cottonwoods, willows, and some herbaceous grasses commonly appear as scattered or sparse components within the wash.

The health and functioning condition of riparian zones floodplains associated with the proposed routes vary from Properly Functioning (PFC), Functioning-At-Risk (FAR), and Non-Functioning (NF) condition. These ratings are based on current hydrologic, vegetative, and erosion conditions. Diverse riparian vegetation stabilizes the floodplain and provides quality wildlife habitats. Health and functioning conditions of riparian zones and floodplains can be influenced or altered by different activities or combinations of activities, including motorized routes, grazing, water regulation, upstream disturbances, or periodic, extreme precipitation events resulting in floods.

Riparian/wetland and floodplain resources were monitored on selected routes between 2001 and 2005 to determine the effects of motorized recreation, including permitted use. Vehicle use on established routes within these areas can result in increases in stream channel width and floodplain erosion, loss of stabilizing riparian vegetation, fragmentation of wetlands, and reduced on-site water storage. This in turn can increase sedimentation, reduce water quality, reduce quality of wildlife and fisheries habitats, and contribute to reduced health and functioning condition of streams and springs. The areas where monitoring occurred are summarized by stream location below.

Kane Creek: The upstream portion of the Kane Creek Canyon route parallels 13 miles of perennial and intermittent streams with multiple stream crossings. The road is within the stream channel for 1.25 miles. Except for the Green and Dolores Rivers, Kane Creek is the largest tributary watershed to the Colorado River within the Moab Field Office.

Long-term vehicle use appears to have contributed to reductions in functioning condition of the stream through altered channel configuration, increased channel widths and shallower channel depths, loss of stabilizing riparian vegetation, increased erosion and sedimentation, and fragmentation of wetland swamps and loss of on-site water storage. Riparian and stream health and condition ratings along Kane Creek vary between Properly Functioning Condition (PFC 12.8 mi; 57%), Functioning-At-Risk (FAR 8.8 mi; 43%), and Non-Functioning (NF 1 mi; 4.6 %).

Mill Creek (Steel Bender): The Steel Bender route crosses Mill Creek four times in 13 miles. Since 2002, the perennial stream crossing near Flat Pass has widened, with increased bank erosion, degradation of stabilizing riparian vegetation, and increased sediment contributions to the stream. Mill Creek near Flat Pass (above the Sheley diversion) is rated as Properly Functioning Condition (PFC); lower segments of Mill Creek are rated as Functioning-At-Risk (FAR) due to several factors, including dewatering of the stream and recreation use.

Onion Creek (Top of the World): The Top of the World route crosses Onion Creek 29 times along 5.6 miles of perennial stream. This portion of the route is a class B road. There is damage to floodplains and channel stability, especially from travel within the stream. Travel within the stream increases sedimentation, reduces stream stability, and prevents the establishment of riparian vegetation. The functioning condition of lower Onion Creek is Functioning-At-Risk (FAR). Recent signing, fencing, restoration and elimination of vehicle travel in the stream channel has reduced ongoing degradation to riparian and floodplain resources from motorized vehicles.

Tusher Canyon (*Sevenmile Rim):* Tusher Canyon contains riparian/wetlands with rushes, willows, and cottonwoods along 0.25 mile of perennial to intermittent stream (2 acres), and 0.5 mile of ephemeral wash with scattered cottonwoods, willows and some rushes (12 acres). There have been both degradation and loss of functioning of wetland areas because the vehicle route travels within the stream and wash. Over-sized vehicles have carved into streambank edges and stabilizing vegetation on both sides of the channel. Streambanks show degradation from vehicle disturbance as well as increased erosion. Vehicle use in the channel banks has resulted in bank failure with more than 6 feet of lateral erosion of floodplains, deepening/entrenchment of the stream channel of up to 3 feet, loss of wetland vegetation diversity and quantity, short-term disruption of surface flows within the channel, and reduced on-site water storage within the wetlands. The presence of the road within the channel has resulted in loss and functioning of the wetland ecosystem. Lower segments of Tusher Canyon show similar disturbance from vehicles on the route as well as erosion and loss of streambanks and riparian vegetation.

Pritchett Canyon: This route travels within or adjacent to 3 miles of intermittent to ephemeral riparian canyon with numerous channel crossings. Saturated soils and subsurface groundwater support scattered cottonwoods and willows within floodplains despite ephemeral to intermittent surface flows. Yearlong vehicle use and off-road disturbance have increased erosion and

sedimentation of floodplains, with resultant damage to riparian vegetation. Recent efforts to reduce degradation from vehicles include route maintenance and delineation.

Lower Tusher/Bartlett Wash (3-D Trail): The route travels 3.6 miles in an ephemeral wash (near Highway 191). Saturated soils and subsurface groundwater support scattered cottonwoods, willows and some bulrush. Damage from vehicle use includes disturbance to active floodplains and channel stability within a deep sandy channel. The route is neither maintained nor delineated, thus increasing erosion within the channel, and the loss of stabilizing riparian vegetation.

Bartlett Wash near Bartlett Slickrock Trail (3-D Trail): The route within Upper Bartlett Wash contains three segments located within or adjacent to riparian/wetland floodplains, totaling a little over a mile in length (approx 47 acres).

Bartlett Wash Tributary (*Hidden Canyon) (3-D Trail)*: The vehicle route is adjacent to a riparian/wetland spring totaling approximately 10 acres. The wetland spring shows degradation due to upstream off-route vehicle use within the canyon. Off-route travel has increased erosion and gullying, resulting in the sedimentation of the spring. This, in turn, results in reduced water availability. Recent signing, fencing, and restoration have been implemented to attempt to reduce motorized vehicle impacts to riparian and floodplain resources.

Water Quality

Jeep Safari routes cross or travel within several perennial streams, including Mill Creek (Steel Bender route), Kane Creek, Arch Creek, Lake Canyon (Hole in the Rock route), and Onion Creek (Top of the World route). Long-term water quality data are available for Mill Creek, Kane Creek and Onion Creek. There is no conclusive data on Kane Creek. Mill Creek and Onion Creek are listed as impaired waters by the State of Utah, based on exceedances of State standards for temperature and total dissolved solids. In addition, total suspended sediments in Mill Creek and Onion Creek are frequently elevated. Potential beneficial uses include domestic purposes with prior treatment, recreation, cold water and warm water species of fish, and agricultural uses.

Monitoring in Mill Creek was conducted in 2001 and 2005, consisting of repeat photos of stream crossings. (This trend study includes all vehicular use of Steel Bender, not just permitted use.) Steel Bender crosses Mill Creek four times. At the crossing near Flat Pass, the route has widened because negotiating it has become increasingly difficult. The size of the crossing has doubled, thus increasing sediment contributions to Mill Creek

In-stream vehicle use in Onion Creek was deemed an important factor contributing to its impairment (State of Utah Department of Water Quality, “Onion Creek TMDL”, 2002.) As a result, the implementation strategy recommended by the Utah Department of Environmental Quality includes restricting access to the stream channel by off road vehicles, and riparian restoration to facilitate canopy cover. This instream use has since been eliminated in consultation with Grand County.

The potholes on the Hell’s Revenge route were sampled for water quality and soil chemistry 2004 and 2005 to assess the impacts of general motorized recreation use of this route. Specific

parameters measured were diesel range organic compounds and gasoline range organic compounds. Hydrocarbons were detected in potholes that had been driven through extensively.

Wilderness

BLM manages Wilderness Study Areas (WSAs) to maintain wilderness values. The following Jeep Safari routes form the boundaries of Wilderness Study Areas: Behind the Rocks, Moab Rim, and Pritchett Canyon (Behind the Rocks WSA), Fins and Things and Porcupine Rim (Negro Bill WSA), and Steel Bender (Mill Creek WSA). No Jeep Safari routes are within the Wilderness Study Areas.

Cultural Resources

Humans have occupied southeastern Utah for at least 12,000 years. Cultural resources on public lands in the Moab area consist mainly of rock art, open campsites, lithic scatters, rock shelters and caves. The majority of the existing roads and vehicle routes were historically constructed or established for mining, livestock management, wood gathering, or seismic activity. Because most of the routes predate the National Historic Preservation Act of 1966 and FLPMA, there were no cultural clearances done on them.

Documentation of cultural resources located along Jeep Safari routes in the Moab Field Office resulted from other types of project-specific inventories. A total of 175 cultural properties have been identified within the Area of Potential Effect (APE) for the 560 miles of Jeep Safari routes analyzed in this EA. The cultural resources within the APE for Jeep Safari routes have been directly affected by the development and use of these routes, as they have cut through the sites. Other effects to cultural sites include off-route parking and visitors “collecting and piling” surface artifacts from sites. Degradation to surface artifact sites has occurred along various routes; however, it cannot be specifically attributed to permitted motorized uses of the identified route.

In the Monticello Field Office area, cultural resources within the APE for the Lockhart Basin, Hotel Rock, and Arch Canyon routes and Hole-In-The-Rock Historic Trail include about 12 known historic properties. About a six mile section of the historic Hole in the Rock route that is on public land is part of the Jeep Safari route. The Hole in the Rock route is the only site listed on the National Register of Historic Places. Several prehistoric and historic properties have been identified within the APE for the proposed action.

All campsite locations in both offices have been inventoried for cultural resources and clearances have been completed. Most of the campsites have been used for camping in the past; many have been used extensively over the years. There are no important cultural resources in any of the campsites.

Consultation with Native American tribes has been initiated as a result of the proposed action (see Section 5.0). To date, the Zuni tribe has commented on the proposed action and requested that they be informed regarding the process. There are no other known Native American concerns at this time. Any concerns identified through this consultation will be identified and addressed in the final EA.

3.3.2 Other Resources

Recreation

Most Jeep Safari routes are routes that have been used for many years for mining, oil and gas development, filming, livestock grazing, wood gathering, and recreation. Indeed, the majority of Jeep Safari routes were developed for minerals exploration and development. No Wilderness Study Areas are crossed by any Jeep Safari route. The routes now constitute a recreation resource for motorized travel. The roads exist; the largest current use is for recreational activities. Due to the rugged topography of the area, Jeep Safari routes provide the access for many recreational opportunities, including motorized vehicle use, sightseeing, mountain biking, hiking and camping.

Historically, recreation use is heavy during spring with another period of moderate use during the fall. Spring use starts in February, peaking with Easter weekend, whenever that may occur in a given calendar year. Use levels remain high until Memorial Day weekend when another peak is experienced. Use then tapers down throughout the summer. The Labor Day weekend begins the fall season, when recreation use again increases to moderate levels. This use continues through Thanksgiving weekend. Recreation use in December and January is relatively light.

In addition to the Jeep Safari event (which had 5,413 user days and 2,082 vehicle days in 2005), there are 21 commercial and organized group permittees who provide motorized tours along the Jeep Safari routes (7 events and 14 commercial outfitters). The use of these routes amounted to 14,220 user days (3,744 vehicle days) in 2004; 2,076 user days (798 vehicle days) for non-Jeep Safari events, and 12,144 user days (2,946 vehicle days) for commercial tour operators.

While permitted use is a known quantity, estimating private use, especially on a route by route basis, is difficult. Visitation to the Moab Field Office has been studied in a systematic fashion since 2002, using Utah Department of Transportation data, field office installed traffic counters on key access roads, trailhead registers, campground data and other sources of information. A key element of this data is an estimate of number of persons per vehicle. Based on a multiplier of 2.52 passengers per vehicle (the average for Canyonlands National Park visitation), the Moab Field Office hosted 1,735,736 visitors in 2004. If a multiplier of 3.12 passengers per vehicle is used (the average for Dead Horse Point State Park), the Moab Field Office hosted 2,071,014 visitors in 2004. It is important to note that this visitation study was done to gather aggregate data on visitation to the entire field office. The study gives no accounting of visitor numbers to specific Jeep Safari routes, nor does it separate visitors by chosen recreation activity. That is, this number includes those visitors whose focus is nonmotorized activity, as well as those whose focus is motorized activity.

The percentage of permitted motorized users compared to private motorized users gives an indication of the extent of private motorized use. Appendix E shows the percentage of permitted vs. private users on selected routes for which complete, year-round traffic counter data are available. In no instance does permitted use on even the most popular permitted route, Hell's Revenge, exceed 5% of total use (private and permitted).

Scoping comments suggested that Jeep Safari is responsible for the "explosion" of motorized use of public lands, especially in the Moab area. Over the years, Jeep Safari grew rapidly, with participation peaking in 1999 at 1,884 vehicles. Since that time, participation in Jeep Safari has fallen (see page 2 of this document for the last five year trend). Although it can be argued that early Jeep Safari events helped pique the interest in Moab as a destination for motorized recreation, that causal link occurred in decades past and is now weak if not nonexistent. For example, during Easter week now, Jeep Safari participants are but a small percentage of the motorized users that are in Moab. It would appear that "Easter in Moab" has become the main attraction (and source of resource and user conflict).

Today, the publicity concerning Moab as a "Mecca" for motorized recreation comes from magazine articles, Utah Travel Council publicity, advertising copy, commercial books, videos and maps, and website promotion. For example, a simple Google search for "Moab + jeep" results in 86,500 "hits." Moab is heavily advertised as "The Adventure Capital of the World," with an emphasis on "extreme" activities. These sources of information are now the primary factors driving any increases in motorized visitation, rather than the Jeep Safari, commercial tours, or other organized permitted events. All of the routes are open to general use by the public and are displayed on commercial maps; Jeep Safari routes are listed in various guidebooks.

Since Jeep Safari routes have become "named" features, with such alluring monikers as "Hell's Revenge," "Metal Masher," and "Steel Bender," they are the routes likely to be highlighted in commercially available books, maps, and videos. This means that private users tend to seek out these routes, leaving the rest of the dirt roads in Grand and San Juan counties less utilized. For example, on the Utah Travel Council website, clicking on "Moab Area Off-road Trails" brings up only a list of the Jeep Safari routes, with detailed descriptions of each one.

In some locations, travel off the existing routes has caused adverse effects to wildlife, visual, cultural, soil, vegetation, and riparian resources in some locations. Short-cutting, making parallel routes, detouring around challenging segments, and widening routes threatens their integrity, and makes them less attractive for recreation use, thus reducing their value for commercial recreation and special events. The proliferation of multiple routes off long established roads also contributes to confusion among users as to their location on the ground. The degradation caused by off-route (often illegal) users can be extensive. That is, a small percentage of irresponsible motorized users, when aggregated, can have noticeable effects. This is particularly true in popular locations such as Kane Creek Canyon and Poison Spider. To minimize these concerns and prevent future degradation, the BLM implemented OHV restrictions in 2001, requiring vehicles to stay on existing routes. The proposed Jeep Safari routes fall within several of these newly designated areas. It should be noted that there is no documented evidence of willful off-route travel by permitted motorized users.

User conflict is another component of the recreation issue. Many types of recreationists, including non-motorized users such as mountain bikers and hikers, use Jeep Safari routes. On some of the routes, such as Cliffhanger, Moab Rim, and Steel Bender, the predominant use on a year-round basis is non-motorized. There is anecdotal evidence of user conflict between motorized and non-motorized users, especially during Easter, on some of the Jeep Safari routes. Conflict is greatest on those routes that are closest to town, and are therefore the most popular

with both motorized and non-motorized users. These routes include Cliffhanger, Golden Spike, Moab Rim, Poison Spider, and Pritchett Canyon. User conflict is most apparent during the spring season, when visitation peaks. During less crowded times of the year, user conflict wanes or is non-existent. In general, user conflicts occur on a less frequent basis in the Monticello Field Office area than in the Moab Field Office area; however, they do still occur.

The disturbance of non-motorized recreation visitors has also been reported as a result of motorized traffic on Hey Joe Canyon. This route parallels the Green River, which is popular with canoeists and other boaters.

Wilderness Characteristics

Within the Moab Field Office, portions of the following routes form the boundary of non-WSA lands determined by the BLM to have wilderness characteristics (BLM, *Utah Wilderness Inventory*, 1999.): Behind the Rocks, Dolores Triangle, Dome Plateau, Fins and Things, Golden Spike, Gold Bar Rim, Hey Joe, Flat Iron Mesa, Hell Roaring Rim, Moab Rim, Porcupine Rim, Pritchett Canyon, Rose Garden Hill, Steel Bender, and Top of the World. The following routes are inventoried ways within these areas: a 0.2 mile spur into the area possessing wilderness characteristics off the Dolores Overlook route (part of Top of the World), a 0.61 mile route around Hammerhead Rock on the Flat Iron Mesa route, a 0.3 mile spur on the Gold Bar Rim Route, and a 0.4 mile spur on Steel Bender.

Within the Monticello Field Office, Hole-in-the-Rock and Lockhart Basin form boundaries of areas determined to have wilderness characteristics by the BLM. The Arch Canyon and Hotel Rock routes are in areas found to not possess wilderness characteristics.

Economics

The Moab community has depended largely on recreation and tourism since the 1980's.
As of 2003, 58.5% of the economy was directly related to recreation and tourism (e.g., to businesses such as hotels, restaurants and outfitters; this category does not include business such as gas stations, food stores, and auto parts suppliers). Businesses directly related to recreation and tourism generated 67% of the local taxes and employed 46% of the workforce (Social and Economic Baseline Study of Grand County, Utah, 2004). In 2004, there were fourteen commercial outfitters supplying motorized tours to clients, with gross receipts on BLM of $503,600 in 2004 (SRP post-use reports). Organized motorized events also generate money for the local economy; in addition, by holding events in the "off season," money is generated at times when business is otherwise slow.

Jeep Safari was a creation of the Moab Chamber of Commerce; the founders hoped to host an event that would contribute to the local economy. Money generated in early spring is very important for area merchants as it comes at a time when cash flow is low. Although the popularity of Easter in Moab has now dwarfed the event itself, Jeep Safari is still an economic contributor to early-season cash flows. In addition, Monticello businesses report increased revenues during Jeep Safari as motel rooms fill there as well.

4.0 ENVIRONMENTAL IMPACTS

4.1 Introduction

This section details the environmental impacts to resources expected to occur as a result of the Proposed Action, No Action, or Reduced Route alternatives. The Proposed Action includes the mitigating measures to be applied as the result of this analysis. Specific Jeep Safari event monitoring results from the 2001 to 2005 permit period are included in this section as a basis for determining potential impacts.

4.2 Direct and Indirect Impacts

Direct and indirect impacts to wildlife, riparian, water quality, wilderness, cultural, and wilderness characteristics from permitted motorized users are limited in scope because all the permitted motorized activities take place on long established routes. Permit stipulations specify that all participants are required to stay on authorized routes. As a result, surface disturbance attributable to the use of roads during permitted activities is negligible. The direct and indirect impacts to various resources from the issuance of SRPs for motorized use, including organized group and commercial use, are detailed below.

4.2.1 Alternative A – Proposed Action and Mitigating Measures

4.2.1.1 Wildlife, including Threatened and Endangered Species

Disturbance is the term used throughout this section to indicate potential impacts to wildlife from human activities, including motor vehicle travel. Disturbance can cause stress, forcing animals to temporarily move from their normal habitat or abandon current habitat. If animals abandon their current habitat and are forced to utilize suboptimal habitat, that habitat may not provide needed forage and cover. Stress may result in loss of young and increased mortality of females and can reduce vitality, causing poor health or even death. Winter and early spring habitat is especially important to pregnant animals requiring food, cover and safety to ensure adequate production of young in the spring. Disturbance to migrating animals limits the ability of animals to seek food and water or to find a mate. This may cause genetic isolation and reduced viability. Disturbance to wildlife should be minimized to avoid impacts to their populations.

Potential impacts to each affected species are detailed below, followed by the mitigating measures developed to minimize potential impacts from the Proposed Action. For a complete list of mitigating measures by wildlife species and route, see Appendix D.

<u>Mexican spotted owls</u> are particularly vulnerable to disturbance during nesting (March 1 to August 31). The MSO pair found in the Moab Field Office uses a protected canyon behind a locked gate. The pair located in the vicinity of Arch Canyon nests over four miles from that route. There are currently no nesting owls within 0.5 mile of any Jeep Safari route. As a result, there are no impacts expected to currently nesting owls as a result of the Proposed Action. Foraging owls can be impacted by pursuit or excessive noise.
<u>Mitigating Measures for MSO</u>: If nesting pairs are located within 0.5 mile of a Jeep Safari route, consultation with U.S. Fish and Wildlife Service will be reinitiated. In addition, the route **may** be closed to permitted use from March 1 through August 31. There will be no pursuit of Mexican spotted owl, and no excessive noise will be allowed in their presence.

Southwestern willow flycatchers are particularly vulnerable to disturbance during nesting (May 15 to July 20). No known nesting Southwestern willow flycatchers have been detected within 0.25 mile of any Jeep Safari routes, nor within the Moab Field Office. As a result, no impacts are expected to nesting Southwestern willow flycatchers. Migrating Southwestern willow flycatchers can be impacted by dispersed camping within their habitat.
Mitigating Measures for Southwestern willow flycatcher: If nesting pairs are located within 0.25 mile of a permitted route, consultation with U.S. Fish and Wildlife Service will be reinitiated, and the route **may** be closed to permitted use from May 1 to August 15. If Southwestern willow flycatchers are detected, dispersed camping **may** be suspended from May 1 to August 15.

The endangered fish of the Colorado and Green Rivers, as well as the flannelmouth sucker, are vulnerable to the contaminants in motor vehicles that might find their way into the water. Permitted motorized use on the following routes could affect the water quality of associated backwaters where important fish nurseries are located if spills are not contained: Arch Canyon, Crystal Geyser, Dolores Triangle, Dome Plateau, Hey Joe, Kane Creek Canyon, Moab Rim, Pritchett Canyon, and Top of the World. In the unlikely event that motor fluids should escape into the river systems, impacts to the piscine environment could result.
Mitigating Measures for endangered fish: All trips on the above routes will have proper clean up supplies to contain and remove spilled vehicle fluids. Spills in dry drainages must also be contained and removed.

Gunnison sage grouse are subject to disturbance and could be impacted by dispersed camping activities, especially in occupied habitat. However, there are currently no known populations near Jeep Safari routes.
Mitigating Measures for Gunnison sage grouse: Should future inventory or monitoring for sage grouse identify areas occupied by the grouse, there will be no dispersed camping authorized within these occupied areas.

White tailed prairie dogs are subject to impacts by being hit by vehicles along the Dome Plateau route.
Mitigating Measures for white tailed prairie dog: All vehicles will be required to observe low speeds on the Dome Plateau route to avoid direct fatality of prairie dogs.

Bald and golden eagles and ferruginous hawks and burrowing owls are subject to disturbance and stress when pursued or from excessive noise. These birds are found throughout the Jeep Safari route system. Impacts could result from motorized vehicle use where these species may be present, especially near roosting sites.
Mitigating measures for bald and golden eagles, ferruginous hawks and burrowing owls: No vehicle or foot pursuit of these birds allowed. No excessive noise in the presence of these birds.

Desert bighorn sheep, deer, elk, and pronghorn are vulnerable to disturbance during sensitive periods such as when giving birth, rearing young, or during the stress of winter. For desert bighorn, lambing occurs from April 1 to June 15; pronghorn kidding occurs from May 1 to June 15. Deer and elk are on winter range from December 1 to April 15. Desert bighorn movement in Long Canyon (part of the Gold Bar Rim route) is thought to be caused by disturbance from the large volume of traffic there. Desert bighorn sheep, deer, elk, and pronghorn can tolerate single,

short-term displacement. They are more tolerant of vehicles on established roads, where vehicles can be seen or heard at a distance, than of sudden disturbances that come with less warning, such as off-route travel, horses, dogs, mountain bikes, dirt bikes, or people on foot.

Impacts to desert bighorn sheep from motorized use are considered negligible (UDWR, Bates, 2005). The number of participants in the events and on the permits constitutes only a small portion of the overall recreational use. The mitigating measures identified in the proposed action will require that if bighorn sheep are encountered, they will not be approached either on foot or by vehicle and no undue noise would be permitted.

Concentrating use on a subset of routes, such as the Jeep Safari routes, would aid desert bighorn sheep, as they require relatively undisturbed, isolated tracts of land for maximum population viability and health. Stress, which increases susceptibility to disease, is lessened with decreased human disturbance. Studies have indicated that bighorn sheep in high human use areas utilize suboptimal habitat and have lower reproductive rates. Thus, concentrating use on the Jeep Safari routes may be helpful to desert bighorns as it leaves large tracts of land available to them.

Seven campsites have been identified for use during the Fall Campout. None of these sites are in crucial habitat for desert bighorn sheep, deer, and elk. The Golden Spike campsite, which is in Bride Canyon, is in a desert bighorn sheep habitat area. However, Bride Canyon is somewhat narrow and does not provide sufficient escape terrain and is therefore not used extensively by desert bighorn sheep. The Lockhart Basin campsite is in desert bighorn sheep habitat, but is at least a half mile from escape terrain. The Dolores Triangle site is in deer and elk winter range; however, minimal permitted motorized use is expected during winter months as access to this area is difficult during that time.

Potential impacts to desert bighorn sheep, deer, elk, and pronghorn populations can result from pursuit and excessive noise. Potential impacts to desert bighorn sheep during lambing season can result from foot travel and camping in lambing habitat.

<u>Mitigating Measures for Desert Bighorn, Deer, Elk and Pronghorn</u>: No vehicle or foot pursuit of these animals will be allowed. No excessive noise will be allowed in the presence of these animals. In desert bighorn lambing areas (on portions of the Crystal Geyser, Gold Bar Rim, Hell Roaring Rim, Hey Joe, Metal Masher, Secret Spire and Sevenmile Rim routes), vehicles may not stop from April 1 to June 15 (see Map 5: Desert Bighorn Lambing and Jeep Safari Routes for desert bighorn lambing areas). No foot travel or dispersed camping will be allowed in lambing areas.

In addition to the mitigating measures developed above, protocol surveys for Mexican spotted owl and southwestern willow flycatcher will continue along Jeep Safari routes. If nesting sites are identified, proper consultation with the U.S. Fish and Wildlife Service will be reinitiated and appropriate measures will be taken.

<u>Threatened, Endangered and Sensitive Plants</u>: Since no sensitive plants are present within Jeep Safari routes, no impacts to sensitive plants are anticipated.

4.2.1.2 Riparian and Floodplain Resources

Riparian and floodplain resources were monitored on selected routes between 2001 and 2005 to determine potential impacts in response to recreation uses including Jeep Safari, all recreation uses during Easter week, and to determine changes over the five-year period. Monitoring data on these routes indicate that vehicle use, including Jeep Safari and other permitted activities, on proposed routes can result in impacts. Impacts include accelerated erosion, streamflow and channel configuration changes, reduced on-site water storage, degradation of riparian/wetland vegetation and diversity, reduced quality of wildlife and fisheries habitats, and increased sedimentation within riparian areas and floodplains.

Potential impacts and mitigating measures are summarized by stream location below.

Kane Creek: Degradation to riparian/wetland, floodplain, and related resources in Kane Creek increases with vehicle use due to the route's location within the riparian canyon and stream corridor. Measurements in upper Kane Creek from 2001 to 2005 indicate that road widening has occurred, resulting in increased erosion and sedimentation in the creek. In addition, loss of riparian vegetation has been recorded in Kane Creek as vehicles degrade bank vegetation while attempting to avoid wet areas.
Mitigating Measures for Kane Creek: To minimize route widening, one-way use of this route will be required for the entire week of Easter; all permittees will be required to avoid vegetation, streambank damage, and road widening; there will be a required review of stipulations with all drivers authorized under the permit; and stream crossings will be kept to the minimum width possible, with crossing occurring perpendicular to the stream channel.

Mill Creek (Steel Bender): Impacts to the Mill Creek crossing near Flat Pass include streambank erosion, degradation of riparian vegetation, and sedimentation.
Mitigating Measures for Mill Creek: To minimize route widening, one-way use of this route will be required for the entire week of Easter; all permittees will be required to avoid vegetation, streambank damage, and road widening; there will be a required review of stipulations with all drivers authorized under the permit; and stream crossings will be kept to the minimum width possible, with crossing occurring perpendicular to the stream channel.

Onion Creek (Top of the World): Impacts include direct damage to riparian vegetation, especially from driving within the perennial stream channel in the Narrows.
Mitigating Measures for Onion Creek: Driving within the stream channel in Onion Creek (in the "Narrows") will not be allowed; all permittees will be required to avoid vegetation, streambank damage, and road widening; there will be a required review of stipulations with all drivers authorized under the permit; and stream crossings will be kept to the minimum width possible, with crossing occurring perpendicular to the stream channel.

Tusher Canyon (Sevenmile Rim): Impacts include direct degradation and loss of functioning of the wetland area, as the route goes through the Tusher channel. Impacts include changes in streamflow and channel configuration, loss of wetland vegetation and diversity, reduced on-site water storage, and accelerated erosion and sedimentation.
Mitigating Measures for Tusher Canyon: Vehicles wider than 76 inches will be prohibited in Tusher Canyon; all permittees will be required to avoid vegetation, streambank damage, and

road widening, necessitating driving within the center of Tusher Canyon; there will be a required review of stipulations with all drivers authorized under the permit; and stream crossings will be kept to the minimum width possible, with crossing occurring perpendicular to the stream channel.

Pritchett Canyon: Impacts include erosion from vehicle use and direct loss of riparian vegetation. Mitigating Measures for Pritchett Canyon: All permittees will be required to avoid vegetation, streambank damage, and road widening; there will be a required review of stipulations with all drivers authorized under the permit; and stream crossings will be kept to the minimum width possible, with crossing occurring perpendicular to the stream channel.

Lower Tusher/Bartlett Wash (3-D): This portion of the route near Highway 191 consists of 3.6 miles in an ephemeral channel. Saturated soils and subsurface groundwater support riparian floodplains within Lower Bartlett Wash, despite ephemeral flows. Impacts from vehicle use to this active floodplain include disturbance of stabilized floodplains and direct damage to the ability of the riparian vegetation to replace itself.
Mitigating Measures for Lower Tusher/Bartlett Wash (3-D): All permittees will be required to avoid vegetation, streambank damage, and road widening, and there will be a required review of stipulations with all drivers authorized under the permit.

4.2.1.3 Water Quality
Water quality was monitored on selected routes between 2001 and 2005 to determine impacts in response to motorized recreation use, including Jeep Safari. The following streams were monitored: Bartlett Wash (3-D), Kane Creek (Kane Creek Canyon), Mill Creek (Steel Bender), Onion Creek (Top of the World), and Tusher Canyon (Sevenmile Rim). Analysis from this monitoring indicates that Jeep Safari and other similar activities have the potential to temporarily degrade water, soil, and floodplain conditions at these locations.

Indicators of water quality condition include increased Total Petroleum Hydrocarbons (TPH) Total Suspended Sediments (TSS), and turbidity. Other indicators include accelerated erosion and increased water temperature. Environmental consequences to water quality are detailed by area below.

Onion Creek (Top of the World): Monitoring during Easter Week from 2001 to 2003 was conducted at a site just downstream from the "Narrows." During the six-hour period, measurements were taken hourly; after the Jeep Safari group drove through the Narrows, measurements were taken every fifteen minutes. Measurements found that TSS, TPH, and turbidity increase with vehicle use, including permitted vehicle use. As vehicle use increases in the Narrows, water quality conditions degrade. Driving in the stream channel (as in the Narrows section) is more degrading to water quality than crossing the stream. TSS increased over the day of monitoring from 230 mg/l to 1400 mg/l. TPH were detected in 4 out of 6 samples; turbidity levels increase immediately after vehicles enter the stream channel. As more vehicles enter the Narrows, turbidity levels increase. Turbidity levels drop from peak levels within hours.
Mitigating Measures for Water Quality in Onion Creek: To reduce impacts to water quality in Onion Creek, there will be no permitted motorized use in the Narrows section of Onion Creek. All motorized travel in Onion Creek canyon will be restricted to the county-maintained road.

Since the Jeep Safari event is the only currently permitted motorized use in the Narrows, excluding this use would eliminate all motorized travel in this portion of Onion Creek. This action would be consistent with the recommendations provided in the State of Utah 2002 TMDL report for Onion Creek.

Kane Creek: Monitoring was conducted during the Easter period from 2001 to 2005 at the first stream crossing after the Hurrah Pass turnoff. Additional monitoring sites were located at the main Kane Creek crossing (on the B Road), and an upper site near Hole in the Rock. Monitoring focused on measurements of TSS, TDS, TPH, turbidity, and specific conductivity. Measurements of TPH and turbidity increase with vehicle use. For example, turbidity increased from 14 to 540 NTU's (Nephelometric Turbidity Units) on April 14, 2001 as 41 Jeep Safari vehicles passed the monitoring station. Due to the temporary nature of the turbidity measurements, there is no long term impact. TPH levels were most elevated at times of heaviest vehicle use. TDS did not change; there was insufficient data collected on TSS for analysis. Water quality exceedances within Kane Creek are of short duration, diminishing overnight or in less than an hour following the passage of vehicles. Repeat photos showed no overall changes in the Kane Creek crossing at the monitoring site.
Mitigating Measures for Water Quality in Kane Creek: Permittees will be required to cross streams in a single file, keep crossings to a minimum width, and cross perpendicular to the stream.

Mill Creek: Water quality sampling conducted in 2002 at the Flat Pass crossing indicated little change in turbidity or conductivity levels following passage of 65 Jeep Safari vehicles. There are no long term impacts to water quality from Jeep Safari in Mill Creek.

Bartlett Wash: Monitoring was undertaken in 2001, consisting of measurements of turbidity, conductivity, water temperature, salinity, pH and Dissolved Oxygen (DO), as well as the establishment of permanent photo points. The photos were repeated in 2004 and 2005. Of the water quality measures, only turbidity and water temperature showed increases; turbidity increased 900% for 10 to15 minutes and water temperature increased slightly after the Jeep Safari trip. Due to the temporary nature of the elevated measurements, there are no long term impacts to water quality in Bartlett Wash.

Hell's Revenge: Vehicle use through the two potholes on this route impacts soil chemistry. Hydrocarbons were detected in potholes that had been driven through extensively. Based on preliminary sampling and the overall low detection level, there is no impact to the underlying water table.

4.2.1.4 Wilderness

Extensive monitoring was undertaken during the course of the 2001-2005 permit to study the effects of motorized use, including Jeep Safari, on the WSAs. Ten additional WSA visits were scheduled to determine the impacts from Jeep Safari. Monitoring focused on instances of off-route motorized use into the WSAs as well as measurements of route widening. Monitoring included pre-Easter week and post-Easter week photo monitoring as well as route width measurements at selected locations.

Route widening has occurred along the following WSA boundary routes: Behind the Rocks, Moab Rim, Pritchett Canyon, and Steel Bender. Widening is caused by a variety of factors, including two-way traffic, parking, turning around, and obstacle avoidance. The ultimate problem is one of non-maintained, single-purpose (usually minerals exploration) routes becoming adopted for recreational use by a large number of users. The route widening occurring on the WSA boundary is on the very periphery and does not affect the overall integrity of the unit.

The route widening observed on roads bordering the WSA does not necessarily mean that the WSA itself is being impacted. It is not generally obvious where the original road center line was, nor is the original road width obvious. The observed road widening, for example, could be impacting the non-WSA side of the road. Without precise information on original road alignment and width, it is impossible to determine the precise impact, if any, of road widening on the WSA boundary. In addition, route widening cannot be attributed to permitted users alone but it most often occurs during Easter Week, the most crowded time of year. Appendix F summarizes route widening measurements taken during previous Easter weeks in WSAs.

The proponent's request for exclusive use on Behind the Rocks, Moab Rim, Pritchett Canyon and Steel Bender is expected to help alleviate route widening into the WSAs during Easter week. Since this is when these routes are most crowded, vehicle numbers would be lessened and impacts to the WSAs would be reduced. The proponent's request for one-way travel on Jeep Safari days on Steel Bender is also expected to alleviate vehicle crowding, and the resultant route widening.

Mitigation Measures for Wilderness: Although the proponent requested one-way travel on the Steel Bender route only on days when a Jeep Safari trip is scheduled, a mitigating measure is that Steel Bender be one-way for the entire week of Jeep Safari. This will make one-way travel easier for the public to understand. One-way travel on that route would therefore decrease the chances of route widening near the Mill Creek WSA during the entire week.

4.2.1.5 Cultural Resources

On August 1, 2005, the Utah State Historic Preservation Officer concurred that continued use of the routes in the Moab Field Office, including use by permitted users, has "No Potential to Adversely Affect" cultural resources, including those eligible for listing on the National Register of Historic Places. On November 25, 2005, the State Historic Preservation Officer concurred with the finding of "No Potential to Adversely Affect" cultural resources for the routes in the Monticello Field Office.

Cultural sites located within the Area of Potential Effect (APE) would not be further impacted by the proposed action as the impacts to the sites occurred when the road was constructed. Sites adjacent to the routes could, however, be impacted by inappropriate passing, parking off the roadbed, or illegal artifact collecting. The proposed action does not include any upgrades to routes, nor does it include any new surface disturbance. There is no indication of direct or indirect impacts to cultural resources from permitted motorized use.

If cultural sites are noticed and visited by permitted users, site disturbance could occur. Improper site visitation behavior could cause damage to structures or rock art. There could be some indirect impact from clients returning to a site later as private visitors to engage in illegal activity.

Given the low density of cultural sites within the APE of Lockhart Basin and Hole in the Rock routes, it is unlikely that cultural sites will be impacted by the proposed action. The Arch Canyon and Hotel Rock routes, on the other hand, have a higher density of sites; therefore, the potential for impacts is greater on these two routes.

Mitigating Measures for Cultural Resources: To avoid damaging cultural sites that may be near Jeep Safari routes, the roadbed should not be widened by inappropriate passing or parking. The turn-around point for the Arch Canyon route would be established in order to eliminate cultural impacts. An additional mitigating measure requires that guides be specifically instructed in proper cultural site visitation behavior.

4.2.1.6 Recreation

Monitoring of recreation use occurred from 2001 to 2005 on sixteen of the Jeep Safari routes (3D, Behind the Rocks, Cliffhanger, Fins and Things, Gold Bar Rim, Golden Spike, Hell's Revenge, Hey Joe, Kane Creek Canyon, Moab Rim, Poison Spider, Pritchett Canyon, Rose Garden Hill, Sevenmile Rim, Steel Bender and Top of the World). Routes were monitored before, during and after Easter week. Jeep Safari monitoring reported no off-route motorized use associated with any registered Jeep Safari participant from 2001 to 2005. In addition, impacts to non-motorized recreationists can be discerned from the conclusions of this monitoring regime.

Motorized use of the routes and the correspondent user conflict with nonmotorized users increase greatly during Easter week. Motorized use on the routes sampled during Easter week was almost eight times as high compared to pre-Easter week use, and almost nine times as great as the week after Easter. Motorized use dominates non-motorized use during Easter (60% of use is motorized), but not during pre- (32% motorized) or post-Easter week (24% motorized). For example, 2003 monitoring data from the Cliffhanger route are as follows: pre-Easter week: 1 motorized user and 53 nonmotorized users; during Easter week: 91 motorized (of which 25 were permitted users) and 49 nonmotorized users; post-Easter week: 12 motorized and 74 nonmotorized users.

The date on which Easter falls varies from year to year. Easter can occur as early as March 21 and as late as April 25. The exact date on which Easter occurs makes no difference in motorized usage. For example, motorized use during Easter week, 2002 (held in late March) was almost five times greater than motorized use during the same week in 2003, when Easter occurred in mid-April. Clearly, the impacts to nonmotorized users increase during Easter week, whenever that week happens to fall.

Monitoring indicates that most route users during Easter week are not registered Jeep Safari participants. During the nine-day 2004 Easter period, less than 8% of all full-sized vehicles on the routes monitored intended to participate in any Jeep Safari trip. In 2005, the corresponding figure was just over 2%. This drop can be attributed to poor weather in 2005, which caused the

cancellation of several scheduled trips on pre-planned monitoring dates. (It should be noted that only Jeep Safari routes were chosen for monitoring; venues such as Potato Salad Hill were not monitored.) Some motorized users were unaware that there was a permitted event (Jeep Safari), even though some of these visitors had been coming to Moab for Easter for a decade or more. Other motorized users expressed resentment against Jeep Safari trips causing congestion on "their" routes. In conclusion, Easter in Moab has become a motorized "scene" in which many enthusiasts wish to participate. The permitted event, whose user days have declined yearly over the life of the last five year permit, is only a small contributor to user conflicts between nonmotorized and motorized users.

Although permitted use of motorized routes represents a very small percentage of total visitation, it is possible that permitted events and tours may attract some new motorized users to the area. These participants could return to engage in motorized recreation use at other times during the year and/or tell friends about motorized recreation opportunities in the Moab Field Office area. Jeep Safari routes will see some small incremental increased motorized use as a result of permitted use. Education and responsible use stipulations in place will help lessen this potential impact as those users will be told the importance of staying on existing routes and causing no new surface disturbance. That is, by being introduced to motorized use in Moab as a permitted user, it is hoped that this person will become a responsible private user.

By directing motorized use to the 560 miles of Jeep Safari routes in the Moab Field Office, user conflict should be lessened, as motorized users will tend to be concentrated on these routes. This means that non-permitted routes are more likely to be uncongested by motorized use, and thus more attractive to nonmotorized users. For instance, non-Jeep Safari backcountry routes (legally open to motorized travel) would be desirable for equestrian use if the volume of motor vehicle traffic is kept at lower levels.

One hundred sixty-seven miles of the 560 miles of Jeep Safari routes in the Moab Field Office and 53 miles of the 70 miles of routes in the Monticello Field Office are in areas currently legally open to cross-country travel. The majority of the Dome Plateau, for example, is currently designated as open. In other words, private motorized users face no restrictions on their travel in this area. Permitted users, however, are required to stay on authorized routes regardless of the particular area's OHV category. Permitted use is less impacting than private use in lands open to cross country travel.

The proponent's request for exclusive use and one-way travel is expected to help alleviate user conflict on those routes during Easter week, when user conflict peaks. Exclusive use (motorized use limited to permittees only) is requested for Behind the Rocks, Cliffhanger, Gold Bar Rim, Golden Spike, Moab Rim, Poison Spider, and Pritchett Canyon on the days on which there is a Jeep Safari trip on that route. Exclusive use would limit the number of motorized vehicles on these popular routes, minimizing user conflict on these routes during that week.

One-way use is requested for Hell's Revenge (from the "Dump Bump" to the cellular phone tower), Kane Creek (from Hurrah Pass road to U.S. Highway 191), and Steel Bender (from the golf course to Ken's Lake). One-way travel reduces encounters among users; thus, one-way travel reduces the likelihood of user conflict.

Impacts to nonmotorized boaters in Labyrinth Canyon were monitored. In 2001, the Hey Joe Canyon route was monitored pre-, during and post-Easter week. A total of four canoes floated by the route on the three days chosen for monitoring, 2 pre-Easter week, 1 during, and 1 post-Easter week. Vehicle counts during those three days are: 0 vehicles pre-Easter week, 40 (all Jeep Safari vehicles) during and 1 vehicle post-Easter week. Thus, the occupants of one canoe were subject to potential conflict during the 2001 Jeep Safari. In 2002, the Hey Joe Canyon route was monitored during Jeep Safari only. There were zero canoes on the river that day. Impacts to boaters from permitted use on Hey Joe are expected to be minimal due to the very low use of this Jeep Safari route.

Impacts from an overall increase in permitted motorized use, as outlined in the proposed action, could potentially increase user conflict as more vehicles could be encountered on Jeep Safari routes. However, an increase in the number of permitted organized events is not expected to result in increased vehicle counts, since the great majority of these visitors already come to Moab to engage in motorized recreation. An increase in commercial permits could, however, result in additional vehicles encountered on Jeep Safari routes, as many of the clients would not be driving these routes on their own.

The four routes located within the Monticello Field Office receive regular motorized use. In fact, the majority of use on these routes is motorized. Hole in the Rock and Hotel Rock receive less visitation than Lockhart Basin and Arch Canyon. During spring and fall, Lockhart Basin and Arch Canyon receive frequent motorized use. Jeep Safari and Fall Campout participants are expected to add little to this use.

Along the Arch Canyon route the overall recreation use is mixed, including non-motorized uses such as hiking, biking, and equestrian use, and thus user conflicts may arise. However, because the Jeep Safari only occurs once each year, the overall impacts to non-motorized recreationists would be minimal.

Mitigating Measures for Recreation Use: The proponent would be required to sign Hell's Revenge, Kane Creek Canyon, and Steel Bender as "one-way" for the entire nine days of Jeep Safari to mitigate user conflict and make it easier for the public to understand the situation.

4.2.1.7 Wilderness Characteristics

Within the Moab Field Office area, there is the potential for impacts due to the fact that four spur routes are within areas found to have wilderness characteristics by the BLM. All permitted use would be on the inventoried route only; consequently, there would be no physical impacts to the surrounding area. Impacts to wilderness characteristics such as outstanding opportunities for solitude would only be temporarily impacted on these 1.5 miles of route, as these portions are infrequently used by permitted motorized users. Temporary impacts to nonmotorized users could occur for up to 15 minutes at a time. However, the low frequency of motorized use on these routes means that such interactions have a small likelihood of occurrence. For example, the 0.2 mile spur off the Top of the World route is located on the Dolores River Overlook portion of that road; very few permitted motorized users utilize this segment.

Within the Monticello Field Office area, there is the potential for impacts due to the presence of routes in areas found to have wilderness characteristics by the BLM. Impacts to wilderness characteristics such as outstanding opportunities for solitude would only be briefly impacted by the Jeep Safari and Fall Campout due to the fact that these events only occur twice a year. Trained guides would reduce the negative impacts to wilderness characteristics by adhering to the stipulations attached to the permit concerning cross country travel.

4.2.1.8 Economics

Permitted motorized use would continue to provide a substantial contribution to the Moab economy. An increase in commercial use of Jeep Safari routes would result in increased revenues. If use doubled, as outlined in the proposed action, gross receipts would double to approximately $1,000,000. Permitted use would continue to provide revenue throughout most of the year, including times when other visitation is low.

4.2.1.9 Residual Impacts

None identified.

4.2.1.10 Monitoring and Compliance

BLM would monitor motorized permittees for compliance with stipulations. This would include accompanying or encountering permitted trips. Compliance monitoring may include unannounced accompaniments.

Water quality measurements would be monitored throughout the year and would be scheduled to coincide with permitted motorized events when possible.

Wilderness Study Areas would be monitored before and after large organized events to assess if impacts to the Wilderness Study Areas are occurring as a result of the permitted events.

For the Moab Field Office, a sample of eligible cultural sites would be monitored for degradation on heavily used routes over the length of this permit. For the Monticello Field Office, route monitoring both before and after Jeep Safari and Fall Campout would identify impact areas or sensitive units for cultural resources where further mitigation is necessary.

Recreation use would be monitored during Easter Jeep Safari for two years on a sample of the routes with exclusive and one-way use in order to ascertain if these actions are effective in reducing user conflict and route widening. In addition, selected Jeep Safari routes would be targeted to determine the ratio of private to permitted use, using statistical sampling techniques and traffic counters.

4.2.2 Alternative B – Reduced Route Alternative

The basis for the identification of the reduced routes is resource conflicts identified for further consideration during scoping. The Reduced Route Alternative removes the following routes or portions of routes (which will remain available for use by the general public) from the Proposed Action: Arch Canyon, Hey Joe Canyon along the Green River (8.8 miles of the route), Hotel Rock, Kane Creek Canyon (17.9 miles), Pritchett Canyon (4.6 miles), Tusher Canyon (2.4 miles

of the Sevenmile Rim route), and Tusher/Bartlett Wash near Highway 191 (3.6 miles of 3D). Descriptions of the resources of concern for these routes are listed below.

4.2.2.1 Wildlife

Hey Joe Canyon: The Green River is habitat for the following endangered fish: razorback sucker, bonytail chub, Colorado pikeminnow and humpback chub. Excluding this portion of the Hey Joe route from permitted use would mean an estimated 56 vehicles/year[1] would not travel next to the Green River, with less chance of fluid leakage.

Arch Canyon: This area contains a Protected Activity Center for Mexican spotted owl. Complete avoidance by Jeep Safari participants would reduce disturbance to the Mexican spotted owl. Excluding Jeep Safari use in Arch Canyon would reduce the number of vehicles under permit in that canyon by 25.

4.2.2.2 Riparian and Floodplain Resources

Kane Creek: Erosion, sedimentation, and degradation to riparian resources in Kane Creek increase with vehicle use. Excluding permitted use from Kane Creek Canyon would mean an estimated 396 vehicles/year might not travel in that canyon (although they could go as private users), with a correspondent reduction of potential impacts to riparian and floodplain resources.
Pritchett Canyon: Degradation to riparian vegetation and erosion increases with vehicle use. Excluding permitted use from Pritchett Canyon would mean an estimated 112 vehicles/year might not travel in that canyon (although they could go as private users), with a correspondent reduction of potential impacts to riparian resources.
Tusher Canyon: Riparian degradation, including impacts such as loss of functioning of the wetland area, alteration of streamflow and channel configuration, loss of wetland vegetation and diversity, reduced on-site water storage, and accelerated erosion and sedimentation, increases with vehicle use. Excluding permitted use within Tusher Canyon would mean an estimated 731 vehicles/year[2] might not travel in that canyon (although they could go as private users), with a correspondent reduction of potential impacts to riparian resources.
Tusher/Bartlett Wash near Highway 191: Destabilization of floodplains and direct damage to riparian vegetation is a result of motorized vehicle use of this wash. Excluding permitted vehicle use from the Tusher/Bartlett Wash would mean an estimated 122 vehicles might not travel in that wash (although they could go as private users), with a correspondent reduction of potential impacts to riparian resources.

4.2.2.3 Water Quality

Kane Creek: Total Petroleum Hydrocarbons increase with vehicle use on this route. Excluding permitted vehicle use from Kane Creek would mean that 396 vehicles might not travel in that canyon (although they could go as private users). The possibility of hydrocarbons being released into Kane Creek would be reduced correspondently.

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[1] Estimate of use based on 3 year average post-use Jeep Safari reports (2003, 2004 and 2005) and other permitted use (see Appendix G) for the route in question. Other permitted use based on doubling 2004 user days, and dividing by 2.6, the Jeep Safari average of number of passengers per vehicle. Note that it is possible that these permitted users may choose to utilize the route as private vehicle drivers.
[2] Other permitted use was not doubled for Tusher Canyon, as oversized permittees are not allowed to exit Sevenmile Rim through the canyon. In addition, some permittees access and exit Sevenmile Rim from the east side only.

4.2.2.4 Cultural Resources

Arch Canyon: If this route was removed from the Area of Potential Effect (APE), fewer cultural resources would be impacted from the Jeep Safari event due to complete avoidance by 25 vehicles. This reduction in impacts would assist the Monticello Field Office in providing protection and preservation to several cultural properties.

Hotel Rock: If this route was removed from the Area of Potential Effect (APE), fewer cultural resources would be impacted from the Jeep Safari event due to complete avoidance by 39 vehicles. This reduction in impacts would assist the Monticello Field Office in providing protection and preservation to several cultural properties.

4.2.2.5 Recreation

If the above seven routes were removed from the Proposed Action, opportunities for permitted motorized recreation would be diminished. Some of the routes included in this alternative offer unique experiences to the motorized user. For example, Pritchett Canyon traverses stunning Entrada fins which are found nowhere else in the world while providing a challenging driving experience. This alternative would negatively impact permitted motorized users by not allowing them access to this set of routes.

4.2.3 Alternative C – No Action

The exact proportion of private to permitted users is not known for all of the 32 Jeep Safari routes. On the six routes where specific information is available (see Appendix E), the percentage of total use represented by permitted use ranged from 0.07% to 4.4%. There is no reason to believe that the ratio of permitted to private use varies from these ranges on the remaining 25 routes. On Hell's Revenge, the route most heavily utilized by permitted motorized users (40% of all permitted user days are on Hell's Revenge), permitted use constitutes just 4.4% of total use. That is, private motorized use of these routes will continue under the No Action Alternative; private use may indeed increase as the opportunity to go on permitted motorized trips would be lost. Appendix G displays the numbers of vehicles that would not be permitted on each of these routes under the No Action Alternative, although it is possible that these permitted users may choose to utilize the route as private vehicle drivers.

Permitted motorized use operates under stipulations prohibiting off-route travel; permittees risk the loss of their permit and/or business for violating this stipulation. Organized events and commercial permittees provide direction and a self-policing atmosphere which helps minimize potential environmental impacts, as guides are trained and comply with permit stipulations, including those that prohibit off-route travel. If permits were not authorized, it is probable that an increase in private motorized travel would occur; this would mean that no person or organization would take responsibility for adverse damages. Without regulated, permitted use, the potential for detrimental impacts to the environment from No Action is greater than under the proposed action. Impacts from the No Action Alternative specific to each resource are detailed below.

Wildlife: Impacts to wildlife habitat from motor vehicle travel can result from drivers deviating from the established road (off-route motorized use). Off-route motorized use destroys the vegetation which provides forage for wildlife, damages burrows, and impacts habitat. Off route travel also causes wildlife disturbance, resulting in increased stress and susceptibility to disease.

Removing permitted motorized use would not reduce the impacts to wildlife from off route travel.

If all motorized use on Jeep Safari routes was private use, there would not be the opportunity to establish stipulations for proper behavior when encountering wildlife.

Plants: All impacts to sensitive plants are a result of off-route travel. Removing permitted motorized use would not reduce off-route travel.

Riparian/Floodplains: Impacts from on-route travel in riparian areas include accelerated erosion and increased sedimentation when crossing or traveling in streambeds, or in widening of routes. Under the No Action Alternative, total motorized use of routes is not likely to decrease, given that a very small portion of motorized use is permitted now. Indeed, private use may actually increase as the opportunity to tour as part of an organized event or commercial tour will no longer be available. Thus, it is not likely that the No Action alternative would reduce the total number of vehicles on routes within riparian areas.

Under the No Action Alternative, there would not be the opportunity to establish stipulations to protect riparian resources. Vehicle width limits in Tusher Canyon would not be established for any users.

Impacts to riparian and floodplain areas are most pronounced from off-route travel, which is not part of the proposed action. The No Action alternative of removing permitted motorized use would not reduce impacts in the streams as private unregulated use would continue.

Water Quality: The total number of vehicles on routes with water quality issues would not be reduced because private use would likely increase. Thus, the impacts to water quality from general road use in Mill Creek, Kane Creek, Bartlett Wash, and Tusher Wash would not be resolved.

Wilderness Study Areas:
There would not be exclusive use on Behind the Rocks, Moab Rim, and Pritchett Canyon, or one-way use on Steel Bender during Easter. Since route widening is due to overcrowding and inappropriate passing techniques, removing permitted use would not diminish route widening. Off-route use would continue at the current levels under No Action. (No willful off-route travel by Jeep Safari participants or by other permitted users has been reported in over 700 hours of BLM staff time spent monitoring the 2001-2005 Jeep Safari permit.)

Cultural Resources: Under No Action, impacts could occur to cultural resources located within the area of the proposed action due to a likely increase in private use. Since no stipulations would be applied to private use, the potential for adverse damage to cultural resources could be greater than that of the Proposed Action.

Recreation: Private use of Jeep Safari routes would likely increase as the opportunity to tour as part of an organized event or commercial tour would no longer be available. This increase in motorized use could accelerate user conflict. Further, user conflict could worsen under No

Action because this alternative would remove those motorized users who risk losing permits and livelihoods.

Wilderness Characteristics**:** Under the No Action alternative, motorized use of these routes is not likely to decrease; potential impacts to solitude would thus not decrease. Physical impacts to wilderness characteristics could occur as private users are more likely to travel off-route.

Economics: Not authorizing motorized permits and events would result in a loss of revenue to Grand and San Juan counties. Under current usage, $503,000 would not be earned by commercial permittees. All revenues generated by permitted events would be lost.

4.3. Cumulative Impacts

This section attempts to analyze the impacts to the environment which result from the incremental impact of the Proposed Action and alternatives when added to other past, present, and reasonably foreseeable future actions. These impacts can result from individually minor but collectively important actions taking place over a period of time. The geographic area of potential impacts is hereby defined as Jeep Safari routes in Grand and San Juan counties, with a total of 560 miles of routes in the Moab Field Office and 70 miles of routes in the Monticello Field Office. Past and present conditions along the Jeep Safari routes that are relevant to the Proposed Action have been detailed throughout this document, especially in the Affected Environment section. The discussion to follow will address reasonably foreseeable future actions and the cumulative effects thereof.

In addition to the Proposed Action, several activities are expected to occur on the Jeep Safari routes within the Moab and Monticello Field Offices. These include both recreation and non-recreation activities.

Recreation activities include all use of the routes by private users. As referenced above (see Affected Environment, Recreation, Section 3.3.2, as well as Appendix E: Permitted vs. Private Use on Routes for Which Traffic Counter Data are Available), permitted motorized use is a very small part of total recreation use. Private motorized recreation use will remain at high levels, whether or not the Proposed Action is selected. Permitted motorized use, which is stipulated, mitigated, and controlled, does not appreciably add to the impacts occurring along Jeep Safari routes. Impacts from motorized recreation are greatest when off route travel occurs; off route impacts result from unstipulated, uncontrolled (and often illegal), private motorized use. Cumulative impacts from permitted motorized use to nonmotorized users (user conflict) are also negligible, given the high proportion of private to permitted motorized users.

Non-recreation activities include future oil and gas development, and future mineral activity, both of which are predicted to increase over the next 5 years due to increased prices. This activity could result in an increased use of the routes for minerals access. Use of the routes for filming activity is also likely to increase over the next 5 years.

The proposed and cumulative activities are not of sufficient scope and size to do more than add minimally to the past, present and reasonably foreseeable impacts of the actions outlined above.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

During the preparation of this EA, many persons, groups and agencies were consulted. They are listed below.

5.2 Persons, Groups, and Agencies Consulted

Persons, Agencies and Organizations Consulted for Purposes of this EA

National Park Service (Arches National Park, Canyonlands National Park, Glen Canyon National Recreation Area)

Utah Division of Wildlife Resources (including Bill Bates)

United States Fish and Wildlife Service. Consultation was initiated by the BLM on November 1, 2005. A Biological Opinion for this Environmental Assessment was issued on January 19, 2006. This Biological Opinion resulted in Reasonable and Prudent Measures and Terms and Conditions that are delineated in the Decision Record accompanying this EA.

State of Utah, School and Institutional Trust Lands Administration

Utah State Historic Preservation Office: The Bureau of Land Management, both Moab and Monticello field offices have initiated consultation for this Environmental Assessment with the Utah State Historic Preservation Office (USHPO) in accordance with the *2002 Agreement Between The Utah State Director of the Bureau of Land Management And The Utah State Preservation Officer*. This agreement outlines the procedures by which Utah Bureau of Land Management offices will meet their responsibilities under the National Historic Preservation Act, as amended. The Moab and Monticello Field Offices have recommended to the USHPO that the proposed action will have no adverse effect on cultural resources based on the mitigating measures described above. USHPO concurred with the Moab Field Office's assessment on August 1, 2005 and with the Monticello Field Office's assessment on November 25, 2005 (see Appendix H for copies of these letters.)

Native American consultation was initiated by the Moab Field Office on July 21, 2004. Twelve tribes were consulted by the Moab Field Office: Pueblo of Zia, Pueblo of Laguna, Zuni Pueblo, Hopi Tribe, Pueblo of Acoma, Paiute Tribe, Ute Tribe, Pueblo of Santa Clara, Southern Ute Tribe, Navajo Utah Commission, Navajo Nation, Ute Mountain Ute Tribe. To date, the Zuni Tribe has asked for a copy of this EA. The Native American consultation with 16 tribes was initiated by the Monticello Field Office on September 29, 2005. These tribes are: Hopi Tribe, Navajo Nation, Dennehotso Navajo Chapter, Navajo Mountain Navajo Chapter, Mexican Water Navajo Chapter, Oljato Navajo Chapter, Red Mesa Navajo Chapter, Aneth Navajo Chapter, Teec Nos Pos Navajo Chapter, Pueblo of Zuni, White Mesa Ute Tribe, Ute Mountain Ute Tribe, Pueblo of Zia, Pueblo of Acoma, Pueblo of Laguna, and Pueblo of Santa Clara.

5.3 Summary of Public Participation

<u>Scoping Period</u>

A Scoping period was held on the proposed action from May 10, 2005 to June 10, 2005. 176 comments were received. This scoping period helped to define the issues addressed in this Environmental Assessment. Scoping comments are summarized in Section 1.7.1: Identification of Issues

Public Comment Period on the Environmental Assessment
A public comment period was held from September 29 to October 31, 2005. The EA was posted on the Moab BLM website the day it was released; all scoping participants were informed of its release. Newspaper articles were published in both the Moab and Monticello newspapers. BLM personnel attended a meeting of the Grand County Council during which the EA was discussed. Over 2000 comments were received during the Public Comment period.

5.3.1 Response to Public Comment

The Red Rock Four Wheelers Jeep Safari and Fall Campout Five Year Permit Renewal and Other Permitted Non-Competitive Motorized Use of Jeep Safari Routes Environmental Assessment (UT-060-2005-080) received substantial public comment during the 30 day public comment period (October 1 – October 31, 2005). These comments are summarized in this section. BLM responses are given where appropriate.

Summary of Correspondence

A total of 1,823 letters were received from private individuals supporting the Proposed Action. Of these letters, 250 mentioned that permitted use guaranteed responsible Off Highway Vehicle (OHV) use and 110 mentioned the positive economic impact to the local economy. Several suggested moving the event to a different date and 2 suggested that if canoes on Labyrinth Canyon were a user conflict problem, canoes should not be permitted during the Jeep Safari event. Two people suggested that Kane Creek and Pritchett Canyon needed to be marked more intensively in order to help users find the route. One person proposed a fee for private use so that all users could be under permit.

In addition, 12 OHV clubs representing over 2000 members supported the Proposed Action and noted the positive economic impact and the leadership role that permitted OHV activity provides. Twenty-two Grand County business owners commented on the positive economic impact associated with permitted motorized use. In addition, the Grand County Travel Council strongly supported the Proposed Action.

A total of 181 letters were received from people not in support of the Proposed Action. Of these, 161 supported the Reduced Route Alternative. 65 wanted the Southern Utah Wilderness Alliance's (SUWA) alternative fully analyzed, and 132 wanted a one year permit issued (rather than a five year permit) so that the Travel Plan accompanying the Resource Management Plan (RMP) could be instituted. In addition, 14 letter writers said that non-motorized users are displaced by motorized users to the detriment of the local economy. Seventeen individuals wanted no new routes and 65 asked that the route in Arch Canyon not be approved for permitted use. Thirteen people stated that all routes in wilderness should be excluded from the permit; 27 disapproved of the issuance of a permit for Hotel Rock, 17 disapproved of Mill Creek (Steelbender), 16 disapproved of Nokai Dome (Hole in the Rock), 14 disapproved of Labyrinth (Hey Joe), 7 disapproved of Duma Point (Crystal Geyser), 6 disapproved of Goldbar (Golden Spike) and three disapproved of the issuance of a permit for Behind the Rocks route.

In addition, one Grand County business owner supported the Reduced Route alternative. Seven environmental organizations (Southern Utah Wilderness Alliance, Sierra Club (Glen Canyon Group), Sierra Club (Utah Chapter), Red Rock Forests, the Grand Canyon Trust, the Great Old Broads for Wilderness, and the Wilderness Society) submitted comments.

BLM received a letter regarding the Environmental Assessment from the Region 8 (Denver) office of the United States Environmental Protection Agency.

Comment and Response

Comments received are summarized below. Following each comment is the BLM response.

Comment #1. BLM should issue a one year permit, especially in light of the fact that Travel Planning in conjunction with the Moab RMP Revision is currently underway. Issuance of a one year permit would ensure that the Travel Plan process is not compromised.

Response to Comment #1: Issuing a five year permit is standard practice for permit renewals. The Moab BLM issues one year permits for new applicants, so that their performance can be evaluated. The Red Rock Four Wheelers have had a long history of full compliance with their permits. There is no reason to issue a one year permit to a long standing permittee.

The relationship of the SRP to the upcoming Travel Plan has been discussed in Section 2.5.1 of this EA: "Should the RMP or its accompanying Travel Management Plan fail to designate particular routes or impose additional restrictions on motorized use, the Jeep Safari SRP and all other commercial and organized group permits will be revised to conform to the new RMP and its accompanying Travel Management Plan." (p. 15)

Comment #2. The EA fails to include an analysis of a reasonable range of alternatives, as required by NEPA and Federal regulations (40 CFS 1502.14, 1501.2(c), and 1500.2(e)); specifically, the BLM failed to analyze the SUWA proposal in depth.

Response to Comment #2: A Reduced Route Alternative was analyzed in Alternative B. Through the Interdisciplinary Team process, BLM analyzed each of the mapped route segments for resource concerns (including those included in the SUWA alternative) to determine if further analysis of these concerns was warranted. This process and the resultant conclusion are summarized in Section 2.5.3 of this EA. Data is needed to substantiate that a particular concern exists; a list of resources for a route without supporting data is insufficient to include particular route segments in the Reduced Route Alternative. Where route-specific resource issues mentioned by SUWA could be substantiated by the BLM Interdisciplinary Team, these routes were placed in Alternative B, the Reduced Route Alternative (see page 16). (It should be noted that all segments excluded from the "SUWA Alternative" lie within America's Red Rock Wilderness unit boundaries.)

The SUWA alternative in its entirety does not meet the Purpose and Need for the Proposed Action. Furthermore, it does not resolve specific issues, and has no firm data to support it. There is no obligation to analyze all alternatives presented, only those that are reasonable and feasible and resolve specific concerns (40 CFR 1508).

Comment #3: Arch Canyon and Hotel Rock are new routes and should be evaluated first in the Monticello RMP Travel Plan. Furthermore, BLM has stated that no new routes would be considered.

Response to Comment #3: Arch Canyon is currently undergoing evaluation in the Monticello RMP Travel Plan decisions. For the present, Arch Canyon and Hotel Rock have been inventoried by San Juan County, have been known travel routes for many years and are currently open to unrestricted private vehicle use. All 8.5 miles of the Arch Canyon route is currently authorized for a five year commercial All Terrain Vehicles (ATV) use permit during the annual San Juan ATV Safari. Commercial ATV tour companies are also allowed to conduct tours 8 miles up Arch Canyon with seasonal restrictions. Two and one half miles of the beginning of Arch Canyon was permitted to Jeep Safari in 2003 (under the route name "Hotel Rock"). Although the total length of the Arch Canyon route is 8.5 miles, the Red Rock Four Wheelers have asked for the first 2.5 miles. The Monticello BLM prefers that vehicles turnaround 4.5 miles into Arch Canyon, in order to avoid a culturally sensitive area. The actual number of stream crossings in this first 4.5 miles is 29, of which 12 are dry crossings over rock, and 17 are crossings within the riparian zone. In Alternative B, the Reduced Route Alternative, the entire Arch Canyon and Hotel Rock route would not be authorized.

For the purpose of this document, a "new route" is one that has not been county-inventoried and has not been authorized for use in the past. In this context, Arch Canyon and Hotel Rock, the routes specifically mentioned in this comment, are not "new." Routes such as the "The Pickle," "The Rusty Nail," and "Where Eagles Dare" are new routes, as is explained in Section 2.2 of this EA.

Comment #4: Arch Canyon was closed in the 1973 San Juan Management Framework Plan (former term for RMP) and not designated in the 1991 San Juan Resource Area RMP, thus permitting the route is not in conformance with current RMPs.
Furthermore, Hotel Rock and Arch Canyon routes are within the Cedar Mesa Area of Critical Environmental Concern (ACEC), which is limited to designated routes. These routes were not designated.

Response to Comment #4: Authorizing this event would not require a plan amendment. The San Juan Resource Area RMP states on page 78 that ORV use (which would include this event) may be allowed in an area designated as closed or limited under an authorized permit.

Comment #5: The EA fails to follow Interior Board of Land Appeals (IBLA) findings regarding Arch Canyon.

Response to Comment #5: Although portions of this comment are unreadable, the BLM believes that this comment refers to Case #89-402, where IBLA on October 12, 1989 remanded the BLM's decision to issue a Special Recreation Permit (SRP) to Jeep Jamboree, Inc., to conduct an event in Arch Canyon.

In the 1989 remand, IBLA states (p. 111, IBLA 212) that they based their findings on the previous Management Framework Plan which would be relevant "until superseded by resource management plans." The current 1991 San Juan Resource Area RMP superseded the MFP. As pointed out in the response to comment #4, the current RMP allows for ORV use in Arch Canyon under an authorized permit.

The 1989 IBLA remand also discusses the confusion over the R.S. 2477 status of Arch Canyon. The BLM recognizes that the R.S. 2477 status of Arch Canyon is still unresolved. On March 15, 2004, the IBLA issued an order setting aside the April 30, 1990 Administrative Determination acknowledging the road in Arch Canyon as a San Juan County R.S. 2477 road (see IBLA Case 90-357R). The IBLA order states, "the purpose of our remand was to allow BLM to review available facts and present applicable guidance to determine whether the Arch Canyon Road qualifies as a public road under R.S. 2477." It is neither the purpose nor need of this EA to make a decision regarding the R.S. 2477 status of the route in Arch Canyon.

Comment #6: BLM assumes that Arch Canyon receives daily motorized use. This assumption is used to justify permitting Jeep Safari as well as other motorized events.

Response to Comment #6: The EA will be corrected to read that Arch Canyon receives "frequent" use in spring and fall. It should be noted that Arch Canyon is addressed in the EA for the Red Rock Four Wheelers (Jeep Safari) permit only. Arch Canyon was not analyzed for additional permitted use beyond the Jeep Safari trip.

Comment #7. BLM's EA fails to take a hard look at the wilderness character of the areas that several of the proposed routes traverse. In addition, all routes within America's Redrock Wilderness Act should be deleted from the permit.

Response to Comment #7: The wilderness character of WSAs is addressed specifically in Section 4.2.1.4. There are no Jeep Safari routes that enter any WSA, although there are several that are boundary routes. Extensive monitoring and measuring of WSA boundary roads undertaken for the 2000-2005 Jeep Safari show no impacts from Jeep Safari.

Wilderness characteristics are addressed in Section 4.2.1.7. Existing RMPs and BLM policy do not require the Moab and Monticello field offices to manage lands other than Wilderness Areas and Wilderness Study Areas as wilderness resources (p. 15). However, new land use planning efforts may consider areas to be managed for wilderness characteristics. Should this occur, the Jeep Safari permit would be modified to conform to the management direction of the RMP revision. The selection of an RMP alternative is not precluded by the issuance of this permit.

The 1985 Grand RMP and the 1991 San Juan RMP do not direct the BLM to manage the lands within America's Red Rock Wilderness Act for wilderness characteristics. (See Section 2.5.2).

Comment #8: BLM mischaracterizes the SUWA Alternative route reductions as "integral" to the Jeep Safari route system.

Response to Comment #8: There is an underlying assumption that the proposed Jeep Safari route system is a transportation system. Of the 6,199 miles of non-paved route currently available for motorized travel in the Moab Field Office, and of the 3,172 miles of non-paved route available for motorized travel in the Monticello Field Office, the Jeep Safari has selected 630 miles (6%). This mileage has been selected to meet the Purpose and Need for the event, which offers a combination of four-wheel driving challenge of varying difficulty, scenery, and camping opportunities. Thus, while segments suggested by SUWA for reduction may not be essential to get from Point A to Point B, these segments are important to the integrity of the overall route and the entire Jeep Safari system. See below for specific route information.

Comment #9: BLM failed to adequately address concerns with particular route/route segments (see below for issues identified by commenters on a route by route basis). BLM failed to exclude suggested segments from the permit.

Response to Comment #9:

Hole in the Rock: Concern: BLM mischaracterizes the SUWA alternative for Hole in the Rock as being the entire route. Response: The portion of the route suggested in the SUWA alternative would eliminate the majority of the route (60%). It should be noted that this is a two night camping trip; to meet purpose and need, the route must be of sufficient length to make a camping trip feasible.

Concern: Hole in the Rock is not identified for travel in the Glen Canyon National Recreation Area. Response: Glen Canyon National Recreation Area (NRA) was contacted by BLM regarding Jeep Safari use of the route within the NRA. Glen Canyon has permitted this portion of the route in the past and plans to continue doing so. Stipulations attached to all permits require that the permittee "shall ensure that persons operating under the authorization have obtained all required Federal, State and local licenses and registrations."

Concern: No surveys were undertaken on the Hole in the Rock route, including that for cultural resources. Response: Because of the historic nature of the Hole in the Rock route, a cultural survey was conducted in 2005 for this route and its accompanying campsite (see Section 4.2.1.5).

Hellroaring Rim: Concern: two segments should be eliminated due to conflicts with wildlife, soils, vegetation and visual resources. Response: these concerns could not be substantiated. The BLM saw no reason to eliminate these scenic loops. Views into Mineral and Hellroaring Canyons meet the purpose and need for the proposed action. These are existing roads and provide a scenic return route on the trip.

Secret Spire: Concern: two portions of the route should be eliminated due to conflicts with wildlife, soils, vegetation and visual resources. Response: these concerns could not be substantiated. BLM saw no reason to eliminate these two portions of the route. The northern portion provides the access to the namesake of the route, the Secret Spire. The southern portion of the route eliminates the most scenic section, including outstanding views into Spring Canyon and the view across the canyon to the Secret Spire.

Steelbender: Concern: Mill Creek water quality does not meet state standards. Response: Water quality in Mill Creek does not meet state of Utah standards for temperature and dissolved solids. However, many factors contribute to this condition. As stated in Section 2.4.1.3, there are no long-term impacts to water quality from permitted motorized use.

Concern: Motorized use of Steelbender creates user conflict on the WSA boundary road. This portion should be eliminated. Response: Motorized use of a WSA boundary road is legal; BLM sees no reason to forbid permitted motorized use of this route. The amount of user conflict created by permitted use is negligible; Jeep Safari uses this route no more than five

days per year. This section of Steelbender provides outstanding views of the LaSals and of the Mill Creek canyon drainages and is considered an essential part of the purpose and need for this route.

Moab Rim: Concern: Impacts to vegetation and soils are occurring from off-road travel in the vicinity of the Moab Rim route, especially at the sand dune area. Response: Off-road travel is not permitted and is not being analyzed as part of the Proposed Action. Off road travel on the sand dune is not legal. Concern: conflict occurs on the Moab Rim route with the private property owner. The route should be eliminated past the private property. Response: BLM has contacted the private property owner, who allows passage, including permitted use, through the private property. To truncate the Moab Rim route at the private property line would leave a route of less than one mile in length. Furthermore, the scenic highlights of the trip, including views into Kane Creek and the views from the Kings Chair would no longer be available to permitted motorized users.

Crystal Geyser: Concern: this is a redundant route and should be re-routed onto a County B road. Response: This segment was constructed for mining exploration, including several pronounced dugways, and has been a long-standing part of this route. This part of the Crystal Geyser route offers the most challenging driving opportunities along the route. The scenery viewed from this portion of the route, including the historic mining area of Dee Pass, is a highlight of the Crystal Geyser trip, fulfilling the purpose and need for the permit. BLM was made aware of no resource conflict which would place this portion of the route in the Reduced Route Alternative.

Hey Joe: Concern: this route has problems with user conflict, riparian impacts and soil erosion. Response: The Green River portion of the Hey Joe route was monitored to determine the extent of user conflict; monitoring did not support the notion that user conflict exists (see page 36). The road was constructed over 50 years ago, and does not constitute an impact to riparian functioning and to soil erosion. It should be noted that traveling on the Green River portion of the route to the bulldozer by the Hey Joe mine is the destination of the entire outing, fulfilling the purpose and need for the action.

Dome Plateau: Concern: Jeep Safari uses a “user created trail (or old seismic line)” through blackbrush habitat. Response: The route in question was constructed, and the impacts to the blackbrush occurred at the time of construction. This route segment provides access to the Dome Plateau campsite. Since Dome Plateau is an overnight trip, this fulfills the purpose and need for the action.

Pritchett Canyon: Concern: Pritchett should be removed from the permit due to the presence of off road travel, and the resultant damage to riparian resources. Response: Off road travel is not part of the Proposed Action. All off road travel on the north side of Pritchett Canyon has been illegal since the time of the Grand RMP, which closed Behind the Rocks to OHV use. All off road travel on the south side of Pritchett Canyon has been illegal since the 2001 Federal Register order which limited the area to existing roads and trails.

Concern: The EA incorrectly states that the America's Red Rock Wilderness Act would exclude Pritchett Canyon. Response: Pritchett Canyon has been removed from the list of routes that would be closed in their entirety if all routes within America's Red Rock Wilderness Act were excluded from the permit.

Copper Ridge: Concern: the permit should exclude redundant routes near Arches National Park. Response: The BLM is unaware of specific resource concerns on the "redundant" segments near Arches National Park. BLM feels that the Jeep Safari segments are primary; routes to the west would be the more redundant. Arches National Park has been contacted by BLM concerning the proximity of the Copper Ridge route to its border. Indeed, the Copper Ridge route enters the Park on its southern end. The Park has approved this use in the past, and plans to continue doing so. The route along the western boundary of the Park is the most scenic part of the Copper Ridge trip.

Lockhart Basin: Concern: a little-used segment of this route enters Canyonlands National Park. Response: Canyonlands National Park has been contacted by BLM regarding this segment of the route. BLM sees no resource conflict with this segment of the route. Furthermore, BLM sees no reason to disallow access to one of the most stunning overlooks of the Colorado River, and of the only view of the Newberry Rincon.

Dolores Triangle: Concern: BLM should eliminate the route to the top of Steamboat Mesa because it conflicts with wildlife, soils, vegetation and visual resources. Response: the view from Steamboat Mesa is a highlight of this trip, with its commanding views of the Dolores River drainage. In addition, the drive up to the top of the Mesa is one of the challenges of the trip. The top of Steamboat Mesa has been chained; it also has an existing road and an airstrip. Travel on this road constitutes no further impacts to wildlife, soils, vegetation or visual resources.

Top of the World: Concern: BLM should eliminate two short segments of route. Response: the campsite for the Top of the World trip is located on one of these segments; this campsite is essential for meeting the purpose and need for the action. The other segment in question is a seismic line across Seven Mile Canyon. This seismic line is in existence and has been used as a travel route. Travel on this road constitutes no further impacts to wildlife, soils, vegetation or visual resources.

Comment #10: Golden Spike/Goldbar Rim is a designated hiking trail in the Grand RMP, and issuing motorized permits on this route is not in conformance with this RMP. Furthermore, the Golden Spike was an illegally created route and constitutes cross country travel.

Response to Comment #10: Although the maps in the Grand RMP (1985) are insufficient in scale to discern great detail, the hiking trail referred to above is the Portal Trail. BLM staffers who worked on the Grand RMP confirm this; it is further substantiated by the fact that the trail begins at a proposed toilet**.** This toilet is located at Jaycee Park on Highway 279. The Golden Spike route was not constructed, but rather was marked for motorized use, and then for Jeep Safari use. It was considered an existing route in 2001 when the Federal Register order changed the OHV designation to "Limited to Existing Roads and Trails" (see p. 9).

Comment # 11: BLM must include a cap on the number of group permits.

Response to Comment #11: BLM accepts that an analysis assumption is required for organized group use. The number of current organized group permits for groups with over 50 vehicles (2004) is eight. For purpose of analysis, the EA assumed that this use would double (see Appendix G, page 58). This would result in a cap of up to eight new organized group permits with 50 or more vehicles.

Comment #12: Additional motorized organized group permits represent additional vehicles driving Jeep Safari Routes.

Response to Comment #12: The current threshold for requiring an organized group permit is 50 vehicles. BLM personnel have observed many organized groups both in the field and staging in town that have not reached the 50 vehicle threshold. Furthermore, BLM personnel have been contacted by numerous motorized group leaders asking if a permit is required for groups of fewer than 50 vehicles. No permit is currently required for these under-50 vehicle groups; these groups visit Moab now as private users. Should a new threshold be set for organized group size, many of these groups would then be required to obtain a permit. Thus, private users would become permitted users, but the overall number of vehicles using Jeep Safari routes would remain stable.

Comment #13: Jeep Safari results in additional OHV use; OHVers are here because Safari is taking place, or because they were introduced to Moab by the Safari.

Response to Comment #13: Regardless of the origins of additional OHV visitors, OHV use is an acceptable use of public lands, as stated in the *National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands* (BLM, 2001).

BLM stands by its conclusion (see Section 3.3.2) that motorized use in the Moab area is no longer driven by Jeep Safari, but by intense promotion of the area's attractions, including four wheel drive routes. It is a known fact that Jeep Safari participation has declined during the same period that private motorized use has increased. If Jeep Safari no longer occurred, there would be no effect on motorized use by private drivers in the Moab area.

Comment #14: Increase in commercial motorized use could decrease revenues from displaced non-motorized visitors.

Response to Comment #14: The contention that non-motorized users would outspend motorized users if OHV activities were curtailed is not substantiated by hard data. Response from local businesses indicates that these entities believe that motorized use is an important contributor to their bottom line and to the local economy. The outfitter revenue figure provided in the EA on page 37 resulted from doubling the actual 2004 commercial gross receipts for motorized permittees to reflect the total amount of use included in the Proposed Action.

No evidence has been presented to substantiate the claim that non-motorized recreationists are being displaced by permitted motorized use. BLM acknowledges that mountain bikers have been displaced from certain routes by motorized use, such as Gemini Bridges. However, mountain bikers appear to be using routes such as Klondike Bluffs and Kokopelli's Trail with greater regularity. Regarding the Moab area as a whole, it should be noted that visitation to

Arches and Canyonlands National Parks (which focuses on non-motorized activity) has remained steady. On three BLM hiking only trails (Fisher Towers, Corona Arch and Negro Bill), BLM visitation numbers show that hiking use has increased on all three from 2003 to 2005.

Comment #15: OHV users are prone to cross country, off road travel; abuse does not represent "only a small percentage of irresponsible users". Furthermore, the EA fails to analyze the inherent off-route nature of motorized recreation: (e.g. 55% of motorized users "primarily" travel off established trail; therefore, 55% of permitted use will be off road)

Response to Comment #15: Permitted motorized users are required to stay on the route, even when traveling in areas open to cross country travel. BLM monitoring data from the last 5 year permit indicates that in over 700 hours of monitoring, not one instance of cross country travel by Jeep Safari participants was observed. The Proposed Action is for on-route use only; motorized permittees have a close to zero percentage of irresponsible use, as substantiated by monitoring data.

No firm data exist that quantify the percentage of motorized users who engage in illegal cross country travel. BLM has attempted to locate the study that stated that 55% of ATV users "trespass illegally" on a regular basis. BLM called the author of the book in which this study was cited; he did not have the original study. The web source cited does not produce the study in question.

The Utah State University study referred to in supporting the comments above, "Off Highway Vehicle Uses and Owner Preferences in Utah" (Andrea Fisher, Rosalind Bahr and Dale Blahna, Utah State University, 2001), was located. The sample in this study drew from the population of individual registered Utah OHV owners. That is, owners of vehicles that require an OHV sticker (ATVs and dirt bikes) were selected for surveying. This did not include the full sized vehicles that are allowed to participate in Jeep Safari. While the commenter stated that this survey "revealed that respondents had primarily traveled off established trails on their last riding trip and preferred riding off established trails," it is important to note that the most popular site for riding was Little Sahara Sand Dunes, a managed open area. The commenter makes the erroneous assumption that ATVs and dirt bikes traveling "off established trails" constituted illegal activity.

Comment #16: Determinations for level of use are flawed.

Response to Comment #16: BLM determined the level of use for purposes of analysis by doubling the post-use information from the 2004 SRP post-use reports (see Table 4, page 11). The EA analyzes future use as a doubling of current use, which is a reasonable projection of future demand. Should these levels be exceeded, new proposals would be analyzed in a separate document. These stated use levels provide guidance for future permitting. That is, those routes in the "low" category would be managed to stay as low use routes.

Comment #17. The EA fails to adequately analyze the cumulative and indirect impacts of the Proposed Action. The Cumulative Effects section also fails to analyze non-registered vehicles and grazing.

Response to Comment #17: Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present and the reasonably foreseeable future actions (40 CFR 1508.7). Past impacts are detailed under the Affected Environment (Section 3.3.2, p. 25). Present impacts of registered vehicles are discussed under the Proposed Action (Section 4.2.1, p.27), and the present impacts of non-registered vehicles are discussed under No Action (Section 4.2.3, p.39). The Cumulative Impacts section (Section 4.3, p. 41) specifically addresses the reasonably foreseeable impacts of the Proposed Action. The Council on Environmental Quality, in a memorandum of June 24, 2005, states: "Based on scoping, agencies have discretion to determine whether, and to what extent, information about the specific nature, design, or present effects of a past action is useful for the agency's analysis of the effects of a proposal for agency action." The impacts from the Proposed Action are fully mitigated. Thus, there are no appreciable cumulative impacts on the environment as a result of the Proposed Action.

Comment #18. BLM failed to take a hard look at the environmental effects of the proposed action on natural resources.

Response to Comment #18: Interdisciplinary teams from each field office completed the Critical Elements checklists for the resources mentioned. Impacts to resources from the Proposed Action were identified and analyzed in detail in this EA. Detailed responses by resource issue follow.

Comment #19: The EA fails to take a hard look at riparian areas, especially in Arch Canyon, and violates BLM's Utah Riparian Management Policy.

Response to Comment #19: Information contained in the EA is consistent with BLM's Utah Riparian Management Policy. BLM is charged with, to the extent possible, maintaining and/or improving riparian areas to Proper Functioning Condition (PFC). However, riparian condition is dependent on a variety of factors, only one of which is motorized use on existing and/or designated roads within riparian areas. Although surface disturbing activities within 100 meters of riparian areas are to be avoided (according to the Riparian Management Policy), travel on existing and/or designated routes does not constitute new surface-disturbing activity.

The Policy requires that alternatives to actions in riparian areas be analyzed. The portion of the Proposed Action adjacent to riparian areas where potential impacts were identified was analyzed; four route segments were placed in the Reduced Route alternative for further analysis. This represents a reasonable alternative for the portion of the Proposed Action that is within a riparian area. It should be restated that the Proposed Action is for on road travel only; specific mitigating stipulations concerning driving near or in a riparian area are part of the Proposed Action. BLM feels that the mitigating measures proposed are sufficient to minimize impacts to riparian areas (Section 4.2.1.2, pages 30-31). The stipulations placed on the event are very specific concerning driving on existing and designated routes that are in or near riparian zones.

As required by policy, vehicle use restrictions have been imposed as stipulations as part of the Proposed Action. Negative impacts to the riparian areas have been avoided to the extent practicable, as required. Mitigating measures that will improve riparian areas have been developed as required by the Riparian Policy. They are stated below:

Riparian/Water Quality Conservation Stipulations

1. Vehicles must avoid damage to riparian vegetation and streambanks. No route widening is permitted.
2. When the designated route crosses a stream, vehicles must cross in a narrow single file. The single file of vehicles must all cross in the same location to avoid widening the route.
3. On designated routes located within streams and floodplains, e.g., Tusher Canyon (Sevenmile Rim), Kane Creek Canyon, Pritchett Canyon, vehicles must drive in the center of the stream channel, avoiding bank and vegetation disturbance.
4. No vehicles wider than 76 inches are permitted in the 2.4 mile section of Tusher Canyon on the Sevenmile Rim route.
5. If an oncoming vehicle is encountered in a narrow section of a route, vehicles will not pass each other at this point. One vehicle will reverse to a suitable, passable location.

Arch Canyon: Riparian issues in Arch Canyon were addressed in the EA Checklist (page 48). Because the proposed action utilized the existing road (for 4.5 miles of Arch Canyon), impacts to riparian were expected to be minimal. This 4.5 miles has 29 stream crossings, of which 17 cross riparian zones (12 crossing are on dry stream beds of sand or rocks). These crossings comprise 0.02 acres of riparian habitat out of a total of 223 Arch Canyon riparian acres (0.00009%). Vehicle travel on the existing route creates no new disturbance to riparian vegetation. Arch Canyon is not on the list of impaired waters compiled by the State of Utah Department of Water Quality ("303d list").

Comment #20: The EA fails to take a hard look at the impacts to wildlife, specifically the impact to individual animals.

Response to Comment #20: BLM acknowledges that there could be a minimal loss of individual small animals as a result of the Proposed Action. This loss is considered negligible; impacts to populations have been analyzed in the EA (see Section 4.2.1.1, page 27). Some loss is to be expected with any vehicular use.

Comment #21: The EA fails to protect special status and endangered fish from motor fluid spills.

Response to Comment #21: The mitigating measures required of all permitted users to minimize impacts to special status and endangered fish from motor vehicle fluid spills and leaks have been submitted to U.S. Fish and Wildlife Service. Permitted users are required to properly contain spilled vehicle fluids. These mitigating measures were found to be adequate in the Biological Opinion.

Comment #22: The impacts to Mexican Spotted Owl from chronic exposure to motorized recreation are not fully analyzed.

Response to Comment #22: Extensive surveys for Mexican Spotted Owl have been undertaken or are underway in the Monticello and Moab Field Offices. Surveys have concentrated on areas near popular recreation routes, including those used by Jeep Safari. Formal consultation with the U.S. Fish and Wildlife Service ensures that proper measures are taken within important habitat for the Mexican Spotted Owl.

Comment #23: The final Biological Assessment should be available for public comment prior to BLM reaching a decision on this EA.

Response to Comment #23: Final consultation, in the form of a Biological Opinion, was given to the BLM prior to signature of the Decision Record. The BLM made the necessary changes required in the Biological Opinion prior to signing the Decision Record. The Biological Opinion, while available for the public to see, is not subject to public comment and review.

Comment #24: The BLM fails to look at impacts to soils and vegetation.

Response to Comment #24: Soils and vegetation were not identified as an issue by resource specialists because the permit is for on route travel only. Impacts to soils and vegetation occurred when the route was constructed; continuing impacts from the use of the route are negligible.

Comment #25: BLM fails to take a hard look at the visual resource values that will be impacted by the proposed permit.

Response to Comment #25: Visual resource impacts were not identified as an issue by resource specialists. Impacts to visual resources due to the presence of the route occurred when the route was constructed. Impacts to visual resources from the continued use of the route are temporary in nature. Where impacts to visual resources were mentioned in the EA, it was in reference to off-route travel, which is not part of the proposed action, but rather, was included in No Action.

Comment #26: BLM's EA fails to take a hard look at cultural resources.

Response to Comment #26: The State Historic Preservation Officer concurred on August 1, 2005 that continued use of Jeep Safari routes within the Moab Field Office has "No Potential to Adversely Affect" cultural resources; the State Historic Preservation Officer concurred on November 25, 2005 that continued of Jeep Safari routes within the Monticello Field Office has "No Potential to Adversely Affect" cultural resources. Regarding potential impacts to cultural sites adjacent to the Arch Canyon and Hotel Rock routes, mode of arrival is immaterial to whatever impacts could occur to a cultural site. Native American tribes consulted regarding this EA are listed on page 42. To date, only the Zuni Tribe has responded.

Comment # 27. Water quality impacts have not been fully addressed. Turbidity in Bartlett Wash and Kane Creek increased (on a short term basis). Vehicles should not be allowed to drive through potholes on Hell's Revenge.

Response to Comment #27: BLM data shows that while turbidity increases on a short term basis after the passage of vehicles across a stream, this increase is less severe than during natural flood events. Short term increases in turbidity levels occur naturally in arid desert ecosystems. There are no long-term impacts documented due to short-term increases in turbidity from Jeep Safari. Water temperature elevations as measured during monitoring from 2001 to 2005 were not associated with Jeep Safari activity. Although water temperatures did rise during monitoring at Bartlett Wash, the rise correlates with normal daily variations. BLM acknowledges that the one pothole that is on the Hell's Revenge route is devoid of life due to regular vehicle use. Since there are many potholes in the Sand Flats area, the sacrifice of this one pothole does not warrant rerouting Hell's Revenge.

Comment #28: Discussion of the affected environment is inadequate; specifically, BLM has failed to apply the minimization criteria required for route designation, according to 43 CFR 8340.

Response to Comment #28: The scope of this document is to analyze permitted use of the proposed routes. It is beyond the scope of this EA to analyze the construction or continued use of these routes in general. The minimization criteria referred to are applicable to route designation decisions in land use planning.

Comment #29: The EA does not assess the costs associated with Jeep Safari and other permitted use.

Response to Comment #29: This question is not relevant to the application of the NEPA process.

Comment #30: BLM has not shown that there are no significant impacts; thus an EIS is required.

Response to Comment #30: The Finding of No Significant Impact for EA# 060-2005-080 finds that there are no significant impacts for permitted use of these existing routes. See the Decision Record for further details.

Comment #31: Mitigation measures for wildlife and cultural are not adequate.

Response to Comment #31: Mitigation measures for T&E species were approved by the U.S. Fish and Wildlife Service. Mitigation measures for non-sensitive species (such as bighorn sheep, deer, elk and pronghorn) have been reviewed by the Utah Division of Wildlife Resources. The State Historic Preservation Officer concurred on August 1, 2005 that continued use of Jeep Safari within the Moab Field Office has "No Potential to Adversely Affect" cultural resources (page 33).

Comment #32; Exclusive use and one way travel will not mitigate user conflict nor minimize impacts to water quality.

Response to Comment 32: Exclusive use and one way travel will assist in relieving user conflict. One way use not only minimizes road widening, but also creates a situation in which the route appears to be less crowded. Exclusive use will relieve crowding on particular routes, thus aiding resource protection. In fact, non-motorized recreationists might wish to choose an "exclusive use" day to recreate on a given Jeep Safari route, as total motorized use will certainly be lessened for that day. Information on exclusive and one way use will be published in the Jeep Safari newspaper, as well as in local tourist publications.

Exclusive motorized use and one way motorized travel will also mitigate water quality and riparian concerns on Pritchett Canyon, Steelbender, Kane Creek Canyon, Hell's Revenge and Cliffhanger. Bank disturbance most often occurs in overcrowded conditions. Exclusive use will mitigate crowding; one way use will mean that vehicle passing will not occur, especially at stream crossings.

Comment #33): the project has "significance factors" (sic) of being highly controversial, involving ecologically critical areas, and involving eligible cultural sites; thus, an EIS is required.

Response to Comment #33: Section 1508.27 of 40 CFR defines "significantly" in terms of context and intensity. The degree of the Proposed Action's effects on the quality of the human environment have not been construed to be scientifically "highly controversial" by the BLM. The State Historic Preservation Officer has found that the action does not have the potential to adversely affect cultural properties. There are no unknown or unique risks from the Proposed Action.

Comment #34: Utah BLM must conduct a statewide review of SRPs and complete a cumulative impacts analysis before approving any new SRPs.

Response to Comment #34: A statewide review of SRPs is beyond the scope of this document.

5.4 List of Preparers

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APPENDICES

APPENDIX A:	**Interdisciplinary Team Analysis Record**
APPENDIX B:	**Permitted Motorized Use by Route (2004)**
APPENDIX C:	**List of Stipulations for Jeep Safari and Fall Campout**
APPENDIX D:	**Mitigating Measures for Wildlife Species Applied Route by Route**
APPENDIX E:	**Permitted vs. Private Use on Routes for which Traffic Counter Data are Available**
APPENDIX F:	**Route Widening Measurements on WSA Boundary Routes Pre- and Post-Easter, 2002 – 2005**
APPENDIX G:	**Projected Permitted Motorized Use by Route**
APPENDIX H:	**State Historic Preservation Officer Concurrence Letter**

Map 1	**Jeep Safari Routes, Moab Field Office**
Map 2	**Arch Canyon/Hotel Rock Jeep Safari Routes, Monticello Field Office**
Map 3	**Hole in the Rock Jeep Safari Route, Monticello Field Office**
Map 4	**Lockhart Basin Jeep Safari Route, Monticello Field Office**
Map 5	**Desert Bighorn Lambing Areas**

ID Team Checklist-Moab
(Available Upon Request)

ID Team Checklist-Moab

ID Team Checklist-Monticello
(Available upon Request)

ID Team Checklist –Monticello

Appendix B
Permitted Motorized Use by Route (2004)

Route	# Outfitters permitted per route	# User Days	# Vehicle Days	Portion of Total Permitted Use[3]	Jeep Safari Use (#Vehicles)	Total # Vehicle Days
3-D	6	43	10	0.31%	60	70
Behind the Rocks	13	470	127	3.35%	154	281
Chicken Corners	14	424	108	3.02%	31	139
Cliff Hanger	9	164	141	1.17%	98	239
Copper Ridge	9	47	10	0.33%	32	42
Crystal Geyser	4	36	9	0.26%	8	17
Dolores Triangle	4	0	0	0.00%	0	0
Dome Plateau	6	58	14	0.41%	73	87
Fins and Things	10	440	110	3.13%	215	325
Flat Iron Mesa	6	54	11	0.38%	76	87
Gold Bar Rim (Majority of use on Gemini & Long)	19	2317	670	16.50%	101	771
Golden Spike	9	201	50	1.43%	138	188
Hell Roaring Rim	4	16	4	0.11%	45	49
Hell's Revenge	12	5597	1598	39.86%	143	1741
Hey Joe Canyon	5	22	5	0.16%	11	16
Kane Creek Canyon	9	367	110	2.61%	117	227
Lockhart Basin	8	109	51	0.78%	44	95
Metal Masher	9	165	40	1.18%	173	213
Moab Rim	9	219	50	1.56%	97	147
Poison Spider	14	598	250	4.26%	139	389
Porcupine Rim	5	34	9	0.24%	0	9
Pritchett Canyon	9	77	29	0.55%	51	80
Rose Garden Hill	8	92	23	0.66%	38	61
Secret Spire	4	21	5	0.15%	35	40
Sevenmile Rim	13	1713	456	12.20%	82	538
Steel Bender	9	147	42	1.05%	161	203
Strike Ravine	7	29	7	0.21%	27	34
Top of the World	15	373	193	2.66%	104	297
Wipeout Hill	4	28	7	0.20%	75	82
Total		**13,861**	**3488**	**100.00%**	**2328**	**6464**

Note: 13,861 user days include 11,785 user days for commercial use and 2,076 user days for organized group permits.

[3] This number is what percentage of total outfitter use is on the listed route. That is, for example, 39.68% of the 2004 outfitted use was on the Hell's Revenge route, while only 0.21% of the permitted use was on the Strike Ravine route.

Appendix C
2001 Stipulations for Jeep Safari and Fall Campout

1. This permit does not give any privileges on private, or State lands, and Indian Reservations.

2. The authorized officer reserves the right to limit activity and group size should it become apparent that, during the term of this permit, the use is adversely impacting on the environment.

3. The permittee will take precautions to protect natural values, cultural or historic objects, aesthetic values, and any improvement on public land involved. Any government owned structures, property, land or resources harmed or damaged by the permittee or his clients shall be reconstructed, repaired, rehabilitated, and restored as may be required by the BLM to at least equal condition immediately prior to such damage or destruction. Permittee further shall abate any condition existing which may cause harm or damage to any person, structure, property, stream, or wildlife.

4. The permittee will take all reasonable measures to prevent and discourage vandalism or disorderly conduct, and when necessary, will call in the appropriate law enforcement agency.

5. All vehicle use will be in accordance with State law and BLM off-road vehicle designations. Vehicle use is not authorized in Wilderness Study Areas. Vehicles must stay on identified roads and trails.

6. Permittee will be responsible for any wildfires caused by the permittee's party and will report all wildfires to the nearest BLM Office.

7. Acts of God present risk which the permittee assumes. The permittee has the responsibility of inspecting the camp site and immediate adjoining area for dangerous trees, hanging limbs, and other evidence of hazardous conditions and locating the campsites to avoid such hazards.

8. The permittee agrees to assume responsibility for public safety and health during any phase of his operation, including first aid, retrieval and evacuation activities including costs.

9. All refuse will be packed out and deposited in an authorized dump site.

10. Soaps, detergents, or other non-degradable foreign substance shall not be used in or adjacent to streams, springs or rivers.

11. Only dead and down wood will be used for firewood. The number of fires and size of fire circles will be kept to a minimum. Firewood gathering is not allowed at the Hole in the Rock campsite.

12. All animals will be kept under control. When outside of vehicles, all domestic animals must be kept on a leash. Harassing of wildlife will not be allowed.

13. Each camp site will be restored to its original condition. All extraneous material will be removed.

14. Any paleontological and/or cultural resources (historic or prehistoric site or object) discovered by the permittee, shall be immediately reported to the Moab District Office. All personnel and other people involves with the permit will be informed by the permittee that they are subject to prosecution if caught vandalizing archaeological and/or paleontological sites or collecting any historic or prehistoric artifacts or paleontological remains.

15. All trail guides will be informed of permit stipulations. BLM can require guides to attend a pre-event meeting.

16. There will be one trail guide for each 25 vehicles.

17. Each trail guide will have portable toilets available for use during the trips. Portable toilets will be set up at the Fall campsites. All human solid waste general during the event will be packed out and deposited in an approved manner.

18. Any raptor nests that may be discovered must not be disturbed.

19. Top-of-the-World Trail participants will not park or drive off the Onion Creek Trail between Fisher Valley and Highway 128 to protect a federally listed threatened plant (Cycladenia humilus var. jonesii).

20. If bighorn sheep are encountered, they are not to be approached either on foot or by vehicle. Vehicles may not stop when bighorn sheep are seen, a safe constant speed should be maintained to avoid alarming the sheep. No horn honking or other undue noise will be permitted in bighorn sheep areas.

21. No camping will be allowed within one-half mile of wildlife water sources.

22. Gates will be left as found.

23. Any additional trails and campsites will require prior approval from BLM.

24. The date and location of each Jeep Safari trip will be made available to non-motorized users prior to the event enabling them to consider other areas to recreate.

25. The Canyon Country Partnership minimum impact guidelines will be promoted in the permittee publications and through their trail guides.

26. That portion of the Hell's Revenge Trail which includes the Mill Creek crossing at the Power Dam and along the North side of Mill Creek from the powerdam to the base of "Potato Salad Hill" is not authorized for use under this permit.

27. The entrance and exit to designated camp areas will be via a single one lane road located as much as possible on slickrock and more resilient soils.

28. Any vehicle with obvious fluid leaks will be precluded from traveling across or within any stream. Fluids leaked from vehicles onto the ground will be cleaned up as much as practicable with a fluid absorbent. Contaminated soils will be shoveled into a container by the trip leader and removed.

Appendix D
Mitigating Measures for Wildlife Applied Route by Route

Wildlife Species	Habitat by Jeep Safari Route	Mitigating Measures
Mexican spotted owl (MSO)	Arch Canyon, Behind the Rocks, Chicken Corners, Flat Iron Mesa, Kane Creek Canyon, and Lockhart Basin.	If MSO occupancy is determined within ½ mile of a Jeep Safari route, no camping will be allowed and travel **shall** be suspended from March 1 to August 31. No pursuit of MSO and no excessive noise in their presence.
Southwestern willow flycatcher (SWFL)	Behind the Rocks, Hey Joe, Kane Creek Canyon, Lockhart Basin, Metal Masher, Steel Bender, and Top of the World.	If SWFL occupancy is determined within ¼ mile of a Jeep Safari route, travel **shall** be suspended within 0.25 miles of breeding areas from May 1 to August 15. No camping (except in developed campgrounds) in SWFL habitat from May 1 to August 15.
Bald Eagle	Behind the Rocks, Dolores Triangle, Dome Plateau, Flat Iron Mesa, Gold Bar Rim, Steel Bender, Strike Ravine, and Top of the World.	No vehicle or foot pursuit of eagles. No excessive noise in the presence of birds.
Bonytail chub, Colorado pikeminnow, humpback chub and razorback sucker; flannelmouth sucker	Arch Canyon, Crystal Geyser, Dolores Triangle, Dome Plateau, Hey Joe, Kane Creek Canyon, Moab Rim, Pritchett Canyon, and Top of the World.	All trips will have proper clean up supplies to safely clean up and prevent further contamination of the rivers from vehicle fluids. Spills in dry drainages must also be contained and removed.
Gunnison sage-grouse	Behind the Rocks, Flat Iron Mesa, Strike Ravine, Top of the World	No dispersed camping within habitat should occupation by sage-grouse occur.
White tailed prairie dog	Dome Plateau	Observe low speed to avoid direct fatality of prairie dogs.
Ferruginous hawk	Dome Plateau	No vehicle or foot pursuit. No excessive noise in presence of birds.
Burrowing Owl	All routes	No vehicle or foot pursuit. No excessive noise in birds' presence.
Golden Eagle	Dolores Triangle, Metal Masher, Secret Spire, Sevenmile Rim,	No vehicle or foot pursuit of eagles. No excessive noise in the presence of birds.
Desert bighorn	3-D, Behind the Rocks, Chicken	Observe only from the vehicle if

sheep	Corners, Cliffhanger, Copper Ridge, Crystal Geyser, Dome Plateau, Flat Iron Mesa, Gold Bar Rim, Golden Spike, Hell Roaring Rim, Hey Joe, Kane Creek Canyon, Lockhart Basin, Metal Masher, Poison Spider, Pritchett Canyon, Secret Spire, Sevenmile Rim, Top of the World	animals are present. No excessive noise in the presence of animals.
Desert bighorn lambing	Crystal Geyser, Gold Bar Rim, Hell Roaring Rim, Hey Joe, Metal Masher, Secret Spire, Sevenmile Rim	From April 1 to June 15, vehicles may not stop in lambing areas (see map).No foot travel or dispersed camping in lambing areas.
Deer and Elk	Behind the Rocks, Dolores Triangle, Flat Iron Mesa, Strike Ravine, Top of the World	Observe only from the vehicle if animals are present. No excessive noise in the presence of animals.
American pronghorn	3-D, Crystal Geyser, Dome Plateau, Gold Bar Rim, Hell Roaring Rim, Hey Joe, Metal Masher, Secret Spire, Sevenmile Rim	Observe only from the vehicle if animals are present. No excessive noise in the presence of animals.

Appendix E:
Permitted vs. Private Use on Routes for which Traffic Counter Data are Available

Private vs. permitted use was ascertained for six routes, using traffic counter data. These traffic counters are on non-paved roads which are directly associated with one or more Jeep Safari routes.

Route	Beginning 2004 TC number	Ending 2004 TC number	2004 total traffic counter hits = T	Adjusted Total (for two way traffic)	Permitted Vehicle Use, incl. Jeep Safari****	Permitted Use as a Percentage of total use
Behind the Rocks	33,238	67,313	34,071	20,442 (.6 x T)	298 vehicles	1.46%
Strike Ravine	11,540	23,018	11,478	6,887 (.6 x T)	38	0.55%
Gemini*	85,342	115,530	30,188	24,150 (.8 x T)	484	2%
Blue Hills**	40,213	73,186	32,973	26,378 (.8 x T)	19	0.07%
Monitor & Merrimac***	20,102	42,040	21,983	15,388 (.7 x T)	414	2.6%

* = includes 50% of Gold Bar Rim, Metal Masher and Golden Spike
**= entrance to 25% of 3D
*** = includes 50% of Sevenmile Rim and 75% of 3D
**** = combination of Jeep Safari vehicle count, and conversion of user days to vehicles numbers, using the Jeep Safari average of 2.6 persons per vehicle.

Hell's Revenge

The entrance to the Hell's Revenge Jeep Safari route is adjacent to the Sand Flats Booth. Permitted users entering Hell's Revenge drive up to the Sand Flats booth, and tell the person in the booth that they are already permitted (this means they do not have to pay the Sand Flats fee). Sand Flats employees estimate private use of Hell's Revenge at 23,200 vehicles for 2004. Permitted use for 2004 was 1041 vehicles, for a percentage of 4.4%. Hell's Revenge receives 40% of all non-Jeep Safari permitted motorized use due to its proximity to town, scenic values and excitement.

Appendix F
Route Widening Measurements on WSA Boundary Routes Pre and Post-Easter, 2002 - 2005

Year Measured	Route and WSA	Location[4]	Total road width in feet	
			Pre Easter Week	Post Easter Week
2002	Moab Rim (Behind the Rocks WSA)	4 locations near WSA boundary south of private property	11.2 29 28.2 11	12.9 29 29 11.5
2002	Fins-n-Things (Negro Bill WSA)	2 locations where route intersects WSA boundary (one on pre-inventoried route)	8.75 9.16	9.9 7.25
2002	Behind the Rocks	4 locations along SE boundary of WSA	14.075 (avg)	16.225 (avg)
2003	Moab Rim	One wide spot at difficult ledge	32	47.75
2003	Fins-n-Things	2 locations where route intersects WSA boundary (one on pre-inventory route)	11.8 9.8	10.1 10.3
2003	Behind the Rocks	Road width at narrow spot on SE boundary of WSA	9.2	11.0
2004	Moab Rim	Average road width measurements on various route segments	8.0 9.0 10.0	8.0 10.0 12.5
2005	Fins-n-Things	2 locations where route intersects WSA boundary (one on pre-inventory route)	17.5 11.3	17.5 12.6
2005	Behind the Rocks	2 locations along SE boundary of WSA	11.4 35.9	13.0 35.9
2005	Moab Rim	Average road width measurements on various route segments	8.0 10.0 14.0	7.0 10.0 10.0

In addition, measurements were taken in Pritchett Canyon of the parking/view area above "Rocker Knocker". In June, 2003, this area measured 0.31 acres. In April, 2004, the area of disturbance had grown to 0.47 acres.

Note: In some cases, road width actually decreased. This is due primarily to spring season revegetation, as "road width" is measured by distance between visible motor-caused tracks.

[4] Route measurements span the entire route. These routes are primarily boundaries of the WSA; however, it is not known where the original edge of the road was. This makes it difficult to establish the exact amount of widening occurring in the WSA.

Appendix G

Projected Permitted Motorized Use by Route (See Table 4 for details on Jeep Safari Use)

Route	Estimate of Jeep Safari Use (#Vehicles)	Estimate of Projected use by other Permittees (# Vehicles)	Total Number of Projected Permitted Vehicles (# Vehicles)
3-D	89	33	122
Arch Canyon	25	Not applicable	25
Behind the Rocks	196	361	557
Chicken Corners	29	326	355
Cliff Hanger	140	126	266
Copper Ridge	56	36	92
Crystal Geyser	18	28	46
Dolores Triangle	6	0	6
Dome Plateau	76	45	121
Fins and Things	238	338	576
Flat Iron Mesa	116	42	158
Gold Bar Rim (Majority of use on Gemini & Long)	109	1159	1268
Golden Spike	168	155	323
Hell Roaring Rim	23	12	35
Hell's Revenge	187	1866	2053
Hey Joe Canyon (inc. Dubinky)	39	17	56
Hole in the Rock	73	Not applicable	73
Hotel Rock	39	Not applicable	39
Kane Creek Canyon	114	282	396
Lockhart Basin	15	84	99
Metal Masher	156	127	283
Moab Rim	152	168	320
Poison Spider	179	460	639
Porcupine Rim	22	26	48
Pritchett Canyon	53	59	112
Rose Garden Hill	64	71	135
Secret Spire	46	16	62
Sevenmile Rim	97	1318	1415
Steel Bender	162	113	275
Strike Ravine	66	22	88
Top of the World	82	287	369
Wipeout Hill	70	22	92

Estimate of use based on 3 year average post-use Jeep Safari reports (2003, 2004 and 2005) and other permitted use for the route in question. Other permitted use based on doubling 2004 user days, and dividing by 2.6 (the Jeep Safari average of number of passengers per vehicle). Because of the type of commercial vehicle utilizing the Hell's Revenge and Gold Bar Rim routes, a divisor of 6 was used for Hell's Revenge, and a divisor of 4 was used for Gold Bar Rim.

State Historic Preservation Officer Concurrence Letter, Moab Field Office
(Available Upon Request)

State Historic Preservation Officer Concurrence Letter, Monticello Field Office
(Available Upon Request)