

NOTICE OF AVAILABILITY
DOI-BLM-AZ-A020-2010-0001-EA

Dear Interested Party:

Please be advised that a programmatic Environmental Assessment (EA) was prepared (DOI-BLM-AZ-A020-2010-0001-EA) for Commercial Motorized Special Recreation Permits on Vermilion Cliffs National Monument (VCNM) and surrounding areas. This EA is a public document, and it is available for your review and comment.

The proposed action analyzed in the EA (Alternative C) would allow for the enhancement of outdoor recreational opportunities while providing proactive resource management and protection of monument objects and natural and cultural values within the project area. The EA discloses and analyzes environmental and social consequences as they relate to visitor experiences and the potential effects to objects, resources and other uses when considering future authorizations of motorized commercial recreation permits in the project area (VCNM, the Arizona Strip Field Office, and those trailheads associated with the Paria Canyon/Coyote Buttes Special Management Area in Utah).

Alternative A focuses on providing the maximum amount of commercial recreation opportunities to the greatest number of visitors in the project areas while still protecting natural and cultural resources and visitor experiences. This alternative proposes to incorporate the largest number of people and vehicle allowable based on the RMZ prescriptions. However, spatial and temporal restrictions of uses within areas of sensitive resources are incorporated as part of this alternative.

The No Action Alternative, or Alternative B, represents current management of the project area. The number of special recreation permits available in this alternative was developed by considering Recreation Management Zone (RMZ) prescriptions (from the RMPs); as with Alternative A, the total number of permits that could be authorized would be the upper limit allowable under these prescriptions. Alternative B would provide the greatest opportunity for commercial use in the project area with the least restrictions on use. This alternative is the baseline alternative against which the other alternatives have been compared.

Alternative C represents the proposed action for motorized commercial recreation while providing for the protection of natural and cultural resources and visitor experiences. Under this alternative, conservation management of natural resources would be emphasized utilizing an adaptive management program while traditional uses and commercial recreational opportunities would be maintained to the extent possible within the confines of the land management plans. The visitor experiences provided for under this alternative would allow for some areas where visitors could expect to encounter greater numbers of recreationists and some areas where they could expect to see few, if any, other recreational visitors providing the opportunity to experience a wide range of social and physical recreation settings. In some RMZs, commercial motorized recreation permit access would be available in small groups; in other RMZs, the permitted group size and concentration would be expanded. Spatial and temporal restrictions of uses within areas of sensitive resources are incorporated as part

of this alternative.

Alternative D would provide the least human use/influence on the environment and social settings while providing the maximum amount of protection for solitude and remoteness as well as protecting natural and cultural resources. This alternative would protect visitor experiences that lean toward a more remote and solitary experience, where visitors would not expect to encounter many other recreationists. Under this alternative, BLM management would attempt to maintain the recreation experience that is currently available by minimizing use and therefore potential impacts to recreation settings, silence and solitude within the project area. Spatial and temporal restrictions of uses within areas of sensitive resources are also incorporated as part of this alternative.

The proposed action is in accordance with the direction provided in the VCNM RMP, the Arizona Strip Field Office RMP, the Grand Staircase-Escalante National Monument Management Plan, and the Kanab FO RMP, and includes mitigation measures to protect resources and objects including cultural resources, wildlife, vegetation, wilderness characteristics, as well as recreation opportunities.

Copies of the EA are available upon request from, and written comments may be submitted to:

Judy Culver, Outdoor Recreation Planner
Arizona Strip District Office
345 East Riverside Drive
St. George, Utah 84790
judy_culver@blm.gov
(435) 688-3240

This EA has also been posted on the Arizona Strip Field Office's web home page http://www.blm.gov/az/st/en/fo/arizona_strip_field.html. The deadline for receipt of comments is **July 14, 2010**. Public comments are welcome and encouraged.

By law, the names and addresses of those commenting are available for public review during regular business hours. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. All comments from organizations or businesses will be available for public inspection in their entirety.

Sincerely,

Lorraine M. Christian
Arizona Strip Field Office
Field Manager

United States Department of the Interior Bureau of Land Management

Environmental Assessment DOI-BLM-AZ-A020-2010-0001-EA
June 8, 2010

Programmatic EA for Commercial Motorized Special Recreation Permits on Vermilion Cliffs National Monument and Surrounding Areas.

Location: Vermilion Cliffs National Monument and Arizona Strip Field Office in Coconino County, Arizona and Grand Staircase-Escalante National Monument and Kanab Field Office in Kane County, Utah.

Address: Bureau of Land Management, Arizona Strip Field Office 345 East Riverside Drive, St. George, UT 84790

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Programmatic EA for Commercial Motorized Special Recreation Permits on Vermilion Cliffs National Monument and Surrounding Areas.

DOI-BLM-AZ-A020-2010-0001-EA

1.0 PURPOSE & NEED

1.1 Introduction

This Programmatic Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of authorizing Commercial Motorized Special Recreation Permits (SRPs) on designated routes within Vermilion Cliffs National Monument (VCNM) and the Arizona Strip Field Office (ASFO) within the Arizona Strip District (ASDO) and also those trailheads associated with the Paria Canyon/Coyote Buttes Special Management Area (PC/CB SMA) in Utah. The objective of this EA is to develop a programmatic analysis of potential impacts that could result from the implementation of the proposed action or alternatives described below. This Programmatic EA assists the 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 analyzed actions. “Significance” is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of “Finding of No Significant Impact” (FONSI). If the decision maker determines that this project has “significant” impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record may be signed for the EA approving the selected alternative, whether the proposed action or another alternative. A Decision Record (DR), including a FONSI statement, documents the reasons why implementation of the selected alternative would not result in “significant” environmental impacts (effects) beyond those already addressed in this EA.

1.2 Background

In the thirteen years since the Paria Canyon/Coyote Buttes project began, Paria Canyon and Coyote Buttes have become international adventure tourism destinations. Visitors have come from all 50 states and from 47 countries. External publicity is at an all time high, with numerous articles appearing in major national magazines over the past four years, including *Sunset*, *Outside*, *Arizona Highways*, *Reader’s Digest*, and *National Geographic ADVENTURE*. Buckskin Gulch, a Paria Canyon tributary, a part of the Special Management Area (SMA), was mentioned recently in a published travel book as one of the 20 greatest hikes on earth. Many new visitors, attracted to the area by stunning magazine photographs, often lack the requisite backcountry skills needed for safe travel in a rugged wilderness environment. Visitation pressures within the permit areas have led visitors and potential commercial operations to explore the newly discovered White Pocket, Paria Plateau, and most recently Ferry Swale locations resulting in increased requests for unique locations throughout the project area and new types of motorized SRP operations. World-wide advertisements and publications now contain specific GPS location data within VCNM and surrounding areas that are accessible only to experienced

backcountry travelers with 4-wheel drive high clearance vehicles. This has led to a dramatic increase in the number and variations of the types of SRPs requested in the project area. The first two concerns, external publicity and safety, are linked, because when external publicity increases, visitors use also increases, and the risk of backcountry incidents and visitor use conflicts rise.

In addition to fourteen current SRPs, managed by various offices, fourteen new companies have applied for SRPs on VCNM, in the Arizona Strip-Ferry Swale area, and within the PC/CB SMA. Four of the current SRP holders wish for expansions of authorized operations and areas of operations. An additional twenty five companies have contacted the Bureau of Land Management (BLM), including two organizations that would like to hold large events in the Ferry Swale area, but have not yet supplied a completed SRP application packet to the BLM. VCNM is currently fielding as many as four calls a week from companies interested in applying for SRPs, especially within the PC/CB SMA and the Sand Hills area of the Paria Plateau. Current patterns of interest suggest as many as 40 additional recreation based companies could be requesting SRPs within VCNM and the PC/CB SMA.

A temporary moratorium was instituted on issuing commercial motorized SRPs and changing use levels, areas of operations or other operational changes of existing SRPs within VCNM in 2008. The moratorium was established until this EA is completed to determine the types of uses that will be authorized, the carrying capacity for such uses, and a structured process to review and analyze individual SRP applications and the cumulative effects of said applications in order to develop consistent management practices of the SRP program.

The creation of VCNM reserved these lands to protect their scientific and historical objects. The areas addressed within this EA are biologically diverse and offer impressive landscapes for visitors to enjoy. Lands designated as national monuments do not eliminate the BLM's authority to issue SRPs for commercial use. However, with demands for SRPs increasing each year, it is necessary to develop criteria for reviewing SRP applications as well as to evaluate the effects and impacts of issuing motorized/mechanized permits within the project area.

Types of trips suggested /requested through the SRP application process include:

- Driving to the permit areas either for day hiking or backpacking the Paria Canyon.
- ATV tours of the Paria Plateau, Ferry Swale and Cedar Mountain areas
- Road events in Ferry Swale (up to 500 participants)
- Horseback riding into the Paria Canyon-Vermilion Cliffs Wilderness and Ferry Swale using trailers and OHVs for transportation.
- Vehicle tours to overlooks, archaeological or historical/signature tours.
- Photography workshops at White Pocket
- Base camp hiking (cross country hiking for 3-4 days from base camp to base camp across the Paria Plateau)
- Geology/archaeological field trips
- Cattle drives, and Honeymoon Trail hand or wagon cart trips

1.3 Need for the Proposed Action

The proposed action would analyze environmental and social consequences as they relate to visitor experiences and the potential effects to objects, resources and other uses to provide consistent and informed decisions on cumulative impacts when considering future authorizations of motorized commercial SRPs in the project area. As seen in section 1.2 above, requests for and SRP applications within the project area have increased dramatically.

The proposed action is needed to:

- Establish a method for utilizing the RMZ prescriptions to determine group size, types of activities that are appropriate, and under what conditions these activities may occur within each RMZ for commercial SRPs while protecting monument objects and recreation resources.
- Define the potential types, areas of interest and recreation niches of motorized SRPs within the project area and review these SRP types for recreation and social impacts to determine appropriate uses within the project area.
- Establish a standard to monitor Limits of Acceptable Change (LAC), recreation social settings and the effects or mitigation of the implementation of this EA. The need to develop these standards would help resolve the issues identified during public scoping to include concerns over the potential for impacts to cultural resources, soundscapes, solitude, remoteness and visitor use conflicts. There is also a concern for the potential impacts and changes to resource conditions, social and physical settings and the saturation of commercial SRPs beyond the levels established within the Paria Canyon-Vermilion Cliffs Wilderness Plan,
- Establish discernable actions or trigger points to reduce, prevent or rehabilitate unacceptable impacts to resources and recreation settings. This would identify how resource staff would determine what management actions are most suitable to address specific problems. Finally, the establishment of a monitoring process to identify the effectiveness of management actions and to keep track of changes in setting conditions would determine the effectiveness of management actions. Ongoing LAC monitoring in coordination with active permit administration assures a thorough monitoring protocol. This would provide the public land management measures in accordance with FLPMA, the BLM's Land Use Planning Handbook, H-1601; and the decisions and management actions presented within the VCNM RMP.
- Establish evaluation and management criteria for reviewing SRP applications in the form of a Needs Assessment, Appendix C, which would be used as a basis for permitting commercial recreation services on public lands upon the determination of need for those services. Public need is identified by using the land and resource management planning process and several other avenues: market demand and

trends in recreation activities; commercial services needed to meet agency objectives and management goals; identification of the "public need" for private sector uses, and authorizing SRPs only where there is a "demonstrated public need".

- Establish an effective monitoring system that would maintain the high quality wilderness settings that visitors typically want to enjoy while exploring highly scenic slot canyons and other unique geologic formations, in addition to providing a method to protect remote settings and resources. Visitors have the expectation of pristine wilderness conditions and outstanding opportunities for experiencing solitude within the monument and the wilderness. The BLM would use effective adaptive management including the management of the permit area to maintain and/or restore the wilderness conditions upon which these experiences depend. Such management includes the protection of wilderness character through consistent monitoring of high use areas and travel corridors, enforcement of permit conditions and visitor use limits, and the education of visitors.

1.4 Purpose(s) of the Proposed Action

The BLM is authorized to issue commercial SRPs to operators to conduct tours and recreational opportunities within the project area. Guidance for this action comes from the VCNM RMP and the ASFO RMP. Desired future conditions described in the RMPs conclude that recreation and visitor services would be managed to provide varying levels of structured recreation opportunities that offer a range of specific benefits, activities, and experiences within outdoor settings. Visitor limits, supplemental rules, or restrictions would be based on limits of acceptable change (LAC) and carrying capabilities may be established.

The proposed action would allow for resource protection and proactive resource management to allow for the enhancement of outdoor recreational opportunities as long as the intensity of use does not diminish monument objects and natural and cultural value established in the RMPs, Wilderness Management Plan and the Paria Canyon/Coyote Buttes Resource Management Area (RMA) plan.

1.5 Vermilion Cliffs National Monument (VCNM) and Grand Staircase-Escalante National Monument (GSENM)

The majority of the project area is located within the boundary of VCNM. The presidential proclamation that established the Monument describes a vast array of outstanding "objects" (i.e., resources) for which the monument was established. These objects include spectacular geologic features, a wide variety of "outstanding biological objects that have been preserved by remoteness and limited travel corridors," cultural (prehistoric and historic) resources, and a sense of solitude, remoteness, and an unspoiled character (Presidential Proclamation No. 7374, 2000). The project area also includes three trailheads which access the Paria Canyon-Vermilion Cliffs Wilderness that are

located within GSENM. The analysis of impacts to specific resources constitutes the analysis of impacts to Monument objects in this EA.

1.6 Conformance with Land Use Plans

The proposed action described in Chapter 2 is in accordance with the direction provided in the VCNM RMP, the Arizona Strip FO RMP, the GSENM MP, and the Kanab FO RMP.

The proposed action is in conformance with the VCNM RMP (approved January 2008). The proposed action is specifically provided for in the following RMP decisions, and does not conflict with other decisions within the plan:

The following decisions are from Table 2.3. Vegetation and Fire and Fuels Management, in the RMP:

- **MA-VM-15** Certified weed-free feed, mulch, and seed will be required for all permitted uses to limit the spread of noxious weeds and other undesirable species.
- **MA-VM-16** Construction equipment, fire vehicles, and/or vehicles from outside the Monument used to implement authorized projects and/or uses will be required to be cleaned (using air, low pressure/high volume, or high-pressure water) prior to initiating the project. BLM vehicles will also be cleaned after being used within any infested area. As national policy is developed, the more stringent will be implemented.

The following decisions are from Table 2.4 Fish and Wildlife in the RMP:

- **DFC-WF-07** Adverse impacts to wildlife and wildlife resources will be avoided or mitigated.
- **DFC-WF-09** Human/wildlife conflicts will be avoided, resolved, or mitigated.
- **MA-WF-03** Activities that adversely affect breeding, feeding or sheltering activities of priority wildlife species can be modified, mitigated, or otherwise restricted to minimize disturbance to the species.
- **MA-WF-29** Adverse effects to breeding populations (migratory birds) caused by disturbances from authorized activities will be minimized through stipulations and other mitigation.

The following decisions are from Table 2.5, Special Status Species (TE) in the RMP:

- **MA-TE-14** The BLM can further limit or restrict any recreation activity or use that degrades any special status species habitat or may cause disturbance, injury, or mortality to the species.
- **MA-TE-19** Vehicle use in special status plant habitats is limited to designated routes with reasonable use of the shoulder.
- **MA-TE-27** Impacts to special status raptors and/or their habitat from recreational activities will be reduced or eliminated. The presence and intensity of allowable recreational activities within special status raptor habitats will be assessed. Seasonal closures of specifically designated recreation activities can be considered where appropriate.

- **MA-TE-29** The BLM can limit, modify, or relocate authorized and/or permitted activities within 0.5 miles of active bald eagle wintering roosts. Projects and activities causing disturbance to roosting bald eagles shall be avoided from October 15 to April 15.
- **MA-TE-36** Within the 10 (j) area, the BLM will not restrict authorized and/or permitted activities solely for the benefit of California condors. Persons engaged in authorized or permitted actions that encounter a condor will be requested not to haze the birds, but to notify the BLM or the Peregrine Fund. Administrative or other actions implemented by the BLM can be subject to additional stipulations and conservation measures as described in Appendix G of EIS.
- **MA-TE-37** Actions that will adversely affect nesting peregrines between March 1 and August 1 can be subject to stipulations, mitigation, or may not be approved.
- **MA-TE-45** Impacts to riparian-dependent special status bird species and/or their habitat from recreational activities will be reduced or eliminated. Recreation that degrades riparian habitat will be prohibited in riparian areas in the Monument. Restrictions can include:
 - Reducing or eliminating recreational fires.
 - Confining camping areas.
 - Locating recreational activity areas away from suitable or potential SW flycatcher habitat.
 - Minimizing trash, debris, and other attractants to scavengers, predators, and brown-headed cowbirds.

The following decision is from Table 2.9, Wilderness Characteristics (WC) in the RMP:

- **DFC-WC-01** (which states in part)
 - High Degree of Naturalness: Lands and resources affected primarily by the forces of nature and where the imprint of human activity is substantially unnoticeable.
 - Outstanding opportunities for Solitude: When the sights, sounds, and evidence of other people are rare or infrequent and where visitors can be isolated, alone or secluded from others.

The following decisions are from Table 2.13, Recreation & Visitor Services/Interpretation & Environmental Education (RR) in the RMP:

- **DFC- RR-06** In Backways and Specialized TMAs, recreation opportunities associated with somewhat remote settings, such as exploring backcountry roads, vehicle camping, hunting, sightseeing and picnicking will be maintained/enhanced or existing roads, provided they will be compatible with the protection and enhancement of sensitive resource values and Monument objects, where appropriate.
- **DFC- -RR-07** In the Primitive TMA, high quality recreation opportunities associated more with primitive recreation experience opportunities and non-motorized uses such as camping, sightseeing, hiking, horseback riding and hunting, will be maintained/enhanced, provided they will be compatible with the protection and enhancement of sensitive resource values and Monument objects, where appropriate.

- **DFC- RR-11** The House Rock Valley RMZ will be managed for: Scenic backroads driving with access to interpretation, wildlife viewing, and hiking.
- **MA-RR-07** Sensitive areas where increased visitation can create unacceptable changes or impacts to natural or cultural resources will not be publicly promoted. Public information will be provided only for those cultural sites designated for public use.
- **MA-RR-10** Visitor limits, supplemental rules, or restrictions will be based on LAC.
- **MA- RR-09** Recreational activities can be limited or restricted in special status species and other sensitive habitats (see Special Status Species and Vegetation Management decisions).
- **MA-RR-13**
 - Camping can be limited in listed species and other sensitive habitats
 - Camping can be restricted or limited to protect cultural and/or natural resources through campsite monitoring and LAC.
- **MA-RR-15** Vehicle camping along designated routes is allowed only at existing sites where previous camping use is evident...
- **MA-RR-26** Visitor limits, regulations, or restrictions can be instituted and/or adjusted when monitoring of resource and social conditions indicate a trend toward unacceptable resource and social changes brought about by such use.
- **MA-RR-27** SRP application packages (application, operating plan, maps, etc.) will be considered for authorization on a case-by-case basis upon receipt of application. (See 43 CFR 2930 for requirements)
- **MA-RR-28**
 - The current special area permit and fee requirements for Paria Canyon, Buckskin Gulch, Wire Pass, and Coyote Buttes will continue, subject to adaptive management decisions deemed necessary through monitoring and evaluation of resource and social conditions.
 - Commercial SRPs will be considered on a case-by-case basis in Coyote Buttes North. A limit may be established as conditions dictate.
- **MA-RR-29** No motorized speed events are authorized in the Monument.
- **MA-RR-31**
 - Commercial, competitive, organized group/event, and special area permits may be authorized when such uses accomplish or are compatible with management objectives and other plan provisions. Commercial activities in designated wilderness shall meet guidelines for commercial activities in wilderness.
 - Recreation activities requiring use authorization may be limited in listed species and other sensitive habitats (See Special Status Species and Vegetation Management decisions).
- **DFC-MA-RR-28** The public will understand the importance of natural and cultural resources in the Arizona Strip FO through interpretive, watchable wildlife, and other environmental education programs.

The following decision is from Table 2.14, Travel Management (TM) in the RMP:

- **DFC-TM-01** The region's remoteness, scenic beauty, open spaces, and Monument objects will be maintained by careful travel management.

The proposed action is in conformance with the Arizona Strip FO RMP (approved January 2008). The proposed action is consistent with the following decisions and does not conflict with other decisions throughout the plan.

The following decisions are from Table 2.3. Vegetation and Fire and Fuels Management, in the RMP:

- **MA-VM-13** Certified weed-free feed, mulch, and seed will be required for all permitted uses to limit the spread of noxious weeds and other undesirable species.
- **MA-VM-14** Construction equipment, fire vehicles, and/or vehicles from outside the Arizona Strip FO used to implement authorized projects and/or uses will be required to be cleaned (using air, low pressure/high volume, or high-pressure water) prior to initiating the project. BLM vehicles will also be cleaned after being used within any infested area. As national policy is developed, the more stringent will be implemented.
- **DFC-WF-07** Adverse impacts to wildlife and wildlife resources will be avoided or mitigated.
- **DFC-WF-09** Human/wildlife conflicts will be avoided, resolved, or mitigated.
- **MA-WF-03** Activities that adversely affect breeding, feeding or sheltering activities of priority wildlife species can be modified, mitigated, or otherwise restricted to minimize disturbance to the species.

The following decisions are from Table 2.5, Special Status Species (TE) in the RMP:

- **MA-TE-13** The BLM can further limit or restrict any recreation activity or use that degrades any special status species habitat or may cause disturbance, injury, or mortality to the species.
- **MA-TE-19** Vehicle use in special status plant habitats is limited to designated routes with reasonable use of the shoulder.
- **MA-TE-68** Impacts to special status raptors and/or their habitat from recreational activities will be reduced or eliminated. The presence and intensity of allowable recreational activities within special status raptor habitats will be assessed. Seasonal closures of specifically designated recreation activities can be considered where appropriate.
- **MA-TE-70** The BLM can limit, modify, or relocate authorized and/or permitted activities within 0.5 miles of active bald eagle wintering roosts. Projects and activities causing disturbance to roosting bald eagles shall be avoided from October 15 to April 15.
- **MA-TE-77** Within the 10 (j) area, the BLM will not restrict authorized and/or permitted activities solely for the benefit of California condors. Persons engaged in authorized or permitted actions that encounter a condor will be requested not to haze the birds, but to notify the BLM or the Peregrine Fund. Administrative or other actions implemented by the BLM can be subject to additional stipulations and conservation measures as described in Appendix G of EIS.

- **MA-TE-78** Actions that will adversely affect nesting peregrines between March 1 and August 1 can be subject to stipulations, mitigation, or may not be approved.
- **MA-TE-87** Impacts to riparian-dependent special status bird species and/or their habitat from recreational activities will be reduced or eliminated. Recreation that degrades riparian habitat will be prohibited in riparian areas in the Monument. Restrictions can include:
 - Reducing or eliminating recreational fires.
 - Confining camping areas.
 - Locating recreational activity areas away from suitable or potential SW flycatcher habitat.
 - Minimizing trash, debris, and other attractants to scavengers, predators, and brown-headed cowbirds.

The following decisions are from Table 2.13, Recreation & Visitor Services/Interpretation & Environmental Education (RR) in the RMP:

- **DFC-RR-01** Recreation and visitor services will be managed to provide varying levels of both:
 - Structured recreation opportunities that offer a range of specific benefits, activities, and experiences within outdoor settings (SRMAs; and/or
 - Dispersed, unstructured recreation opportunities that focus only on visitor health and safety, user conflict, and resource protection issues.
- **DFC-RR04** The excellent opportunities that exist to enjoy remote, rustic settings that provide moderate challenge and solitude in the Specialized TMAs will be maintained or enhanced.
- **DFC- RR-05** In Backways and Specialized TMAs, recreation opportunities associated with somewhat remote settings, such as exploring backcountry roads, vehicle camping, hunting, sightseeing and picnicking will be maintained/enhanced or existing roads, provided they will be compatible with the protection and enhancement of sensitive resource values and Monument objects, where appropriate.
- **MA-RR-01** To the extent practicable, the natural or “remote” setting in Specialized TMAs will be restored and/or maintained using a combination of projects and natural processes as the need or opportunity arises.
- **MA-RR-07** Sensitive areas where increased visitation can create unacceptable changes or impacts to natural or cultural resources will not be publicly promoted. Public information will be provided only for those cultural sites designated for public use.
- **MA-RR-08** A Limits of Acceptable Change (LAC) framework will be used to establish acceptable resource and social and managerial settings and conditions using appropriate indicators and standards.
- **MA- RR-09** - Recreational activities may be limited or restricted in special status species and other sensitive habitats (see Special Status Species and Vegetation Management decisions).
- **MA-RR-10** Visitor limits, supplemental rules, or restrictions will be based on LAC.

- **MA-RR-13**
 - Camping may be limited in listed species and other sensitive habitats
 - Camping may be restricted or limited to protect cultural and/or natural resources through campsite monitoring and LAC.
- **MA-RR-23** Visitor limits, regulations, or restrictions may be instituted and/or adjusted when monitoring of resource and social conditions indicate a trend toward unacceptable resource and social changes brought about by such use.
- **MA-RR-24** SRP application packages (application, operating plan, maps, etc.) will be considered for authorization on a case-by-case basis upon receipt of application. (See 43 CFR 2930 for requirements)
- **MA-RR-26** Motorized speed events will only be authorized in the Motorized Speed Event Area in the St. George Basin and limited to 300 entrants.
- **MA-RR-28**
 - Commercial, competitive, organized group/event, and special area permits may be authorized when such uses accomplish or are compatible with management objectives and other plan provisions. Commercial activities in designated wilderness shall meet guidelines for commercial activities in wilderness.
 - Recreation activities requiring use authorization may be limited in listed species and other sensitive habitats (See Special Status Species and Vegetation Management decisions).
- **DFC-MA-RR-28** The public will understand the importance of natural and cultural resources in the Arizona Strip FO through interpretive, watchable wildlife, and other environmental education programs.

The following decisions are from Table 2.14, Travel Management (TM) in the RMP:

- **DFC-TM-01** The region's remoteness, scenic beauty, open spaces, and natural and cultural resources will be maintained by careful travel management.

The proposed action is in conformance with the Grand Staircase-Escalante National Monument MP (approved November 1999). The proposed action is consistent with the following decisions and does not conflict with other decisions throughout the plan.

The following decisions are from Recreation Allocations, Notice of Modification in the MP:

- **ALLO-1** The Monument will use the following indicators to determine when and where visitor allocations need to be made: (1) resource damage (e.g., proliferation of campsites, human waste problems, social trailing or vandalism to historical, archaeological, paleontological sites, or destruction of biological soil crusts), (2) conflicts with T&E species and/or (3) the number of social encounters become unacceptable.
- **ALLO-2** Inventories, surveys, and studies will establish baseline data for Monument resources. These data will be used to set up an ongoing monitoring program and to prioritize areas that require more restrictive management. This will be done as part of the adaptive management framework.

The following decisions are from Outfitter and Guide Operations in the MP:

- **OG-1** Outfitter and guide operations will be allowed throughout the Monument in compliance with the constraints of the zones and other Plan provisions.

The proposed action is in conformance with the KFO RMP. The proposed action is consistent with the following decisions and goals and does not conflict with other decisions throughout the plan.

Goals:

- Use adaptive management to meet resource objectives.
- Protect and enhance cultural and natural resources and values using the diversity of tools available to the BLM.
- Provide a variety of recreational, educational, and interpretive opportunities for people to experience public land resources and values.
- Reduce conflicts between users and user groups.

The following decisions are from the Recreation section in the RMP:

- **REC 22-** Management responses to unacceptable resource and/or social conditions will range from least restrictive methods (e.g., information and education) to most restrictive (e.g., visitor limits, supplemental rules, or restrictions). Where feasible, the least restrictive methods will be the first priority.
- **REC-37**
Issue SRPs after evaluation of the various factors including the following:
 - Use conforms to the recreation goals and objectives outlines in the RMP
 - Nature of proposed event or activity (i.e., commercial versus competitive)
 - Size (acreage) and sensitivity of land and resources affected (ACEC, WSA, Wilderness)
 - Compatibility with other uses, activities, and visitors in that area
 - Proposed number of participants and group size
 - Associated vehicle and equipment
 - Time (daily, seasonally) and duration of proposed us
 - Potential social impacts (crowding, group encounters, conflicting activities, and/or experiences)
 - Specific resources impacted (e.g., wildlife, cultural, paleontology, visual, riparian, soil, air and water)
 - Rehabilitation and monitoring needs and feasibility
 - Support needs (people, equipment, supplies, vehicles)
 - Safety issues

The following decisions are from page 70, Fish and Wildlife in the RMP:

- **WL-29** Non-permanent (short-term) activities would be allowed with the spatial buffer [$\frac{1}{4}$ to 1 mile-depending on species] of nests during the nesting season as long as those activities are shown to be non-impacting to nesting raptors.

1.7 Relationship to Statutes, Regulations, or other Plans

This EA has been prepared in accordance with the requirements of NEPA and any additional Federal, State, and local statutes that may be relevant to the proposed action, such as those cited below.

The proposed action is consistent with the Fundamentals of Rangeland Health (43 Code of Federal Regulations [CFR] 4180.1) and Arizona's Standards and Guidelines, which were developed through a collaborative process involving the Arizona Resource Advisory Council and the BLM State Standards and Guidelines Team. The Secretary of the Interior approved the Standards and Guidelines in April 1997. These standards and guidelines address watersheds, ecological condition, water quality, and habitat for sensitive species. These resources are addressed later in this document.

Executive Order 13186 requires the BLM and other Federal agencies to work with the U.S. Fish and Wildlife Service to provide protection for migratory birds. Migratory birds are addressed later in this document.

The project area is primarily located in Coconino County, Arizona. The proposed action is consistent with the *Coconino County Comprehensive Plan* (adopted September 2003). Conservation and Environmental Quality states, "we value our distinctive natural landscapes for the beauty, solitude, recreational opportunities, and ecological function." The Coconino County plan also addresses the concern of "minimizing the potential for 'Open Spaces' to be overused". *Coconino County Comprehensive Plan* goals are 1) to "manage recreation users in a manner that minimizes impacts to communities and the environment" and (2) to "preserve natural quiet and reduce the effects of noise pollution". The proposed action does not conflict with decisions contained within the plan. Local plans are generally supportive of multiple-use recreation management including regional economic development as long as county character is protected including natural quiet, solitude, night skies, and involve the minimization of environmental resources.

The project area also lies partially within Kane County, Utah. The proposed action is consistent with the Kane County Plan, adopted in 1998 and updated in 2003. While specific recreation issues analyzed in this EA are not specifically addressed in the *Kane County Plan*; this action does not conflict with decisions contained within the plan.

Actions proposed under each alternative, must adhere to Arizona state laws and regulations including Arizona Senate Bill 1167.

- Arizona requires all vehicles to be registered within their home state and display a registration sticker. Travel on County roads requires each vehicle to be street legal. In addition, OHVs/ATVs must maintain the State of Arizona requirement of 96 decibels or less.
- Travel is limited to roads, trails and areas that are designated open by the land management agency for motorized vehicle use.

- Travel by motorized vehicles that causes damage to wildlife habitat, riparian areas, cultural or natural resources, or property or improvements is prohibited.
- AZ revised statute 17-308 states that it is unlawful for a person to camp within one-fourth mile of a natural water hole...or man-made watering facility containing water in such a place that wildlife or domestic stock will be denied access to the only reasonable available water.
- Assuming compliance with AGFD regulation 17-308, all camps will be located at least 200 feet from water holes, live water sources, or man-made facilities, or farther if specified by the local office, up to ¼ mile from such features.

In addition, the proposed action would comply with the following laws and/or agency regulations, other plans and are consistent with applicable Federal, State, and local laws, regulations, and plans to the maximum extent possible.

- The Federal Land Policy and Management Act of 1976 (FLPMA), as amended, 43 U.S.C. 1701 et seq.
- Endangered Species Act of 1973, as amended
- The National Historic Preservation Act of 1966, as amended (P.L. 89-665; 80 Stat. 915; 16 U.S.C. 470).
- The Antiquities Act of 1906, 16 U.S.C. 431-433
- The Archeological Resources Protection Act (ARPA), 16 U.S.C. 470aa.
- The National Environmental Policy Act of 1969 (NEPA), as amended, 42 U.S.C. 4321 *et seq*
- The Clean Air Act of 1990, as amended, 42 U.S.C. 7418.
- The Outdoor Recreation Act of May 28, 1963 (16 U.S.C. 4601-1).
- 43 CFR 2930
- BLM Handbook – 2930-1 Recreation Permit Administration
- BLM Manual 8560 - Management of Designated Wilderness Areas
- AGFD statutes
- Clean Air Act Section 176(c) (1)
- The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) 1940.
- Paria Canyon-Vermilion Cliffs Wilderness Management Plan (approved in 1986 and amended in 1997).

1.8 Identification of Issues

The identification of issues for this EA was accomplished by considering the resources that could be affected by implementation of one of the alternatives.

An agency interdisciplinary scoping meeting was conducted on May 11, 2009, which included the identification of any potentially affected resources, issues, and/or concerns; any feasible alternatives that could achieve the purpose and need; and potentially interested or affected stakeholders. A scoping letter was mailed to the public, affected

stakeholders and interested parties on December 10, 2008. In addition, a press release was issued on December 19, 2008.

Relevant issues identified during the scoping process which could be affected by one of the alternatives and will be carried forward for evaluation in this EA are as follows:

- **Air Quality:** Actions authorized under the proposed action would result in vehicle emissions and some fugitive dust from vehicular travel on unpaved roads in the project area.
- **Cultural Resources:** The project area contains numerous sensitive cultural archeological resources which may be impacted by commercial use in the area. Increased access could potentially lead to the dissemination of site locations and sensitive information, and potential for adverse impacts to historic properties, districts, or other resources eligible for listing or listed on the National Register of Historic Places.
- **Recreation:** The project could potentially affect recreation users in the project area creating user conflicts (hikers, hunters, ATV users, commercial vs. private use, and commercial competition), disturbances to the expectation of remoteness and solitude, public safety issues and saturation of commercial services affecting LAC.
- **Socioeconomics:** Local communities in Utah and Arizona receive 25% or less of their economic support by tourism activities, including outdoor recreation (U.S. Census Bureau 2000; U.S. Census Bureau 2006-2008). The social aspect involves remote, unpopulated settings with moderate to high opportunities for solitude. Limiting commercial uses could have an effect on the economy or social aspect of the region.
- **Soil:** The project could affect soils on the trails and at campsites. Most of the soils are resistant to compaction, but the loose sands are easily churned up by tire action making them subject to wind erosion. Water erosion might be increased on the steeper slopes during intense rains. A reduction in cover would increase wind and water erosion.
- **Soundscapes:** The project area is known for silence and solitude. There is a potential for impacts to the natural soundscapes from actions contained within the alternatives. The type of vehicle and total number of vehicles could affect the natural soundscapes of the area.
- **Wildlife (including sensitive species and migratory birds):** The project area contains sensitive wildlife species and migratory birds. The potential for increased focused use could impact wildlife and wildlife habitat (including habitat fragmentation).

- **Wildlife – Threatened and Endangered Species:** California condors range across the entire Arizona Strip, and are known to nest in the Vermilion Cliffs. Potential impacts to California condor include noise disturbance and the deposition of consumable litter. The project area is also within the range of the Mexican spotted owl; increased motorized use could result in disturbance to the species.
- **Wilderness Characteristics:** Would the proposed action impact any areas managed to maintain wilderness characteristics? Actions proposed in this EA would provide access to these areas, which could affect the characteristics of naturalness and opportunities for solitude.
- **Wilderness:** Would the proposed action impact any designated wilderness area? Although motorized operations are not permitted in the wilderness, recreation access to the wilderness requires motorized use and this use has direct impacts to the character of the wilderness. Authorizing motorized use in the areas bordering the wilderness could affect the wilderness characteristics of naturalness and opportunities for solitude.

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

Chapter 1 presents the purpose and need for this EA, as well as the relevant issues, i.e., those elements of the human environment that could be affected by the implementation of the proposed action or one of the alternatives. In order to meet the purpose and need of the proposed action in a way that resolves the relevant issues, the BLM has developed a range of action alternatives. These alternatives are presented in this chapter. The potential environmental impacts or consequences resulting from the implementation of each alternative are then analyzed in Chapter 4 for each of the identified issues.

This EA has been developed to analyze impacts and to develop management decision criteria to authorize motorized special recreation permits on VCNM. VCNM shares land management boundaries with Glen Canyon National Recreation Area, Grand Canyon National Park, GSENM and BLM - Arizona Strip Field Office administered lands.

2.1 Introduction

In January 2008, the VCNM RMP was approved. The range of alternatives in this EA is based on the Recreational Opportunity Spectrum (ROS) prescriptions described in Appendix 3.h of the Arizona Strip Proposed RMP/ Final EIS – Volume 3. Appendix D of this EA describes the recreation setting character conditions required to produce recreation opportunities and facilitate the attainment of both recreation experiences and beneficial outcomes, as targeted in Special Recreation Management Areas. This characterization of settings is used for both describing existing setting character and prescribing desired setting character. Indicators and standards for monitoring setting conditions would be derived and/or developed from the a. through f. components in that table.

The project area was divided into 6 Resource Management Zones (RMZs) in the RMP: House Rock, Uplands, Coyote Buttes, Paria Canyon, Cliffs and Rims, and Vermilion Cliffs. The Uplands RMZ has been divided into 3 distinct planning zones to encompass the unique resource settings and specialized recreation niches in this planning zone while providing a variety of recreation opportunities: Uplands East Side, Uplands West Side, and Ferry Swale-Cedar Mountain. Each planning zone offers unique settings for recreation opportunities; therefore discussions are broken down where appropriate, not only by alternative but these planning zones as well.

2.2 Actions beyond the Scope of this EA

During public scoping, a number of actions were proposed for consideration in this EA. After careful consideration, it was determined that many of these actions are beyond the scope of this EA – actions beyond the scope of this EA include all actions not related to decisions that would occur as a result of the proposed action or one of the alternatives. They include decisions that are not under the jurisdiction of the BLM offices or are beyond the capability of the BLM to resolve as part of this EA process. Actions identified in this category are listed in Table 1.

Table 1

ACTION PROPOSED	RATIONALE FOR DETERMINATION
Agency use of fees	Outside the scope of this analysis ¹ (administrative action – see H-2390-1)
Institute use fees to limit users	Outside the scope of this analysis
Aircraft use (helicopter, airplanes, ultra-lights etc.)	Outside the scope of this analysis (H-2390-1 provides policies)
Allow guides a quota CBN & CBS (in addition to the 20 permits) or require visitors to hire guides.	Outside the scope of this analysis; the BLM does not regulate guide services.
BLM should have some obligation to existing guides not to over-authorize new guides	The BLM does not have the obligation to protect guide services. BLM has an obligation to protect the resource, prevent impacts of commercial SRPs on private users and to avoid user conflicts.
Commercial users should have priority over private users	This does not reflect management plan decisions dating back to 1969.
Southern Paiute tribal monitor should accompany each group (as a paid employee of the guide service)	The BLM does not have the legal ability to require this of an SRP holder.
Respecting traditional uses.	Outside the scope of this analysis, addressed in the RMPs (via land use allocations).
Tribe supports the identification and avoidance of prehistoric cultural sites.	Potential impacts to cultural resources will be addressed in this EA.
Off-road use for collection of pinyon nuts and other non-emergency purposes	Outside the scope of this analysis, not commercial use (direction for this is in the RMPs)
Determine how to identify and inventory all cultural resources that could be affected by SRP activities	Monitoring and compliance item that is standard operating procedure for the BLM (only designated routes, and campsites approved in advance, would be available for SRPs)
Don't promote the use of the Paria Plateau	Outside the scope of this analysis (although one of the needs for action is to help resolve user conflicts and minimize impacts to cultural resources, soundscapes, solitude, and remoteness).
Damage to roads	Outside the scope of this analysis – will be dealt with through implementation of travel management plans.
Eliminate multiple roads	Outside the scope of this analysis – will be dealt with through implementation of travel management plans.

¹ “Outside the scope of this analysis” means that: 1) the action can be implemented as a standard operating procedure under existing policy (so NEPA review is not necessary); 2) the BLM does not have the authority to implement the action proposed; or 3) it is outside the defined purpose and need for the action and is more appropriately addressed by way of a separate action.

Development of new routes and off-road use	Outside the scope of this analysis – will be dealt with through implementation of travel management plans.
Motorized Speed Events	Outside the scope of this analysis – motorized speed events are not permitted within the project area.
Non-motorized SRPs	Areas that do not require motorized vehicular access, such as areas that border Highway 89A, are outside the scope of this analysis, but will be considered under LAC and the Needs Analysis.
Rock Crawling events	Outside the scope of this analysis – rock crawling is not permitted within the project area.
Visitors in rental vehicles should not be encouraged.	Outside the scope of this analysis
Hire additional LEOs	Outside the scope of this analysis
Installation of cell towers	Outside the scope of this analysis
Include standard terms in all SRPs	Administrative action (see H-2390-1) – the BLM already includes standard terms in its SRPs, along with site specific and SRP specific stipulations.
Issuance of SRPs tied to a requirement to own deeded ground in the area (like grazing permits)	Outside the scope of this analysis
New SRP areas should only be permitted for a few guides/companies in order to test the success of the SRP holder; then allow more SRPs until market is “saturated”	Outside the scope of this analysis (administrative action, H-2390-1) as it is worded. Saturation is considered under Needs Analysis and Carrying Capacity.
Implement use limits for Paw Hole and Cottonwood Cove separately	Outside the scope of this analysis
Oppose starting a permit system for White Pocket, at least for now.	Outside the scope of this analysis
Permit cancellation policy	Outside the scope of this analysis (H-2390-1 provides policies)
Permit term should be more than one year.	Outside the scope of this analysis (administrative action, H-2390-1)
Qualifications of SRP holders and their employees	Outside the scope of this analysis (administrative action, H-2390-1)
Hunting and Filming permits	Outside the scope of this analysis since: 1) recreation use is not the primary purpose of film permits; and 2) the state issues and regulates hunting permits.
Regulate hunting methods/target shooting	Outside the scope of this analysis – hunting is regulated by the state and target shooting was addressed in the RMPs.
Each SRP application should be evaluated individually (i.e., not establish a blanket “use	Reviewed in Needs Analysis (recreation niche supported in H2930-1)

cap” but permit those that fit a unique niche)	
Permit limitations in desert tortoise habitat	No tortoise habitat is within project area.
Use Tri-State Jamboree regulations/guidelines for other SRPs	Outside the scope of this analysis, does not address non-event SRPs.

2.3 Alternatives Considered in Detail

2.3.1 Overview of Alternatives

The BLM has developed four alternative strategies for managing commercial motorized SRPs within the project area. Each alternative has a different emphasis, or theme, of management that reflects a different response to the Federal mandate to balance use and conservation of resources on public lands. This section summarizes the four alternatives. It includes a brief description of each alternative plus a comparative summary by alternative. The alternatives were developed by considering the Desired Future Conditions indentified in the RMPs that address specific prescriptions in the Special Recreation Management Areas, and the Travel Management Areas, as well as social attributes described in the individual Recreation Management Zones (RMZs) as seen on the Alternative B – No Action map below, and the Recreation Settings (Social) Map 2.11, which map the desired social attributes as it relates to Contacts (with other groups), Group Size (other than your own) and Evidence of Use.

House Rock RMZ, which specifies a group size of no larger than 12, could conflict with commercial group sizes on the Arizona National Scenic Trail which has no group size limits and can be accessed from BLM Road 1065 from the north (outside of the proposed project area) or from BLM Road 1065 from the south which is part of the House Rock RMZ.

The Uplands RMZ was divided into three different sub-regions, two of which are within the Paria Plateau “bottle-neck”, which would increase emphasis on the social and physical (sound, dust, soil and vegetative) impacts of commercial motorized use in the area and are subject to the benefits (desired results) established in the Cliffs and Rims RMZ, in which the majority of the overlooks are located. The East Side, would be managed to correspond with current use patterns and future desired results for remote and solitary recreation opportunities, where visitors would not expect to encounter many other recreationists. The West Side would be managed to correspond with current use patterns and future desired results for recreation opportunities ranging from remote and solitary to areas with the likelihood of a greater number and frequency of contacts. This sub-region provides one of the main access routes to the Coyote Buttes RMZ, which includes the Coyote Buttes permit areas and the Maze Public Use Site, the Condor Viewing Area and the West Bench Pueblo Public Use site. The Ferry Swale-Cedar Mountain sub-region would be managed for larger groups and a wider range of activities that is not subject to a travel network bottle-neck effect and would provide the likelihood

of a greater number and frequency of contacts outside of the Cliffs and Rims RMZ boundaries.

Alternative A

The total number of SRPs available in Alternative A was developed by considering the RMZ prescriptions and providing the maximum number of people and visitors allowable based on these prescriptions. Spatial and temporal restrictions of uses within areas of sensitive resources are incorporated as part of this alternative. Alternative A would therefore provide the greatest opportunity for commercial use while protecting sensitive resources.

Alternative B (No Action)

The number of SRPs available in this alternative was developed by considering RMZ prescriptions; as with Alternative A, the total number of SRPs that could be authorized would be the upper limit allowable under these prescriptions. Alternative B would provide the greatest opportunity for commercial use in the project area with the least restrictions on use. This alternative represents continuation of current management.

Alternative C (Proposed Action)

The numbers for Alternative C were obtained by using the RMZ physical and social settings, social and recreation site survey results in combination with the requested locations from SRP applications, to determine the group size, vehicle type and number, and the total number of commercial visitors appropriate for the RMZ. For example, higher group size numbers could be made available for the interior of the plateau versus the overlooks which are located in the Cliffs and Rims RMZ or where access to the Coyote Buttes permit areas occurs as the group size is limited to the maximum of 6 people in these areas. Within this alternative, physical constraints, current and future expected social and physical settings, and recreation resources were considered in the development of what is believed to be the appropriate numbers. A needs assessment and a carrying capacity matrix has been developed to provide a method to develop meaningful fluctuations of these numbers if in the future, it is determined that social or physical settings have been exceeded. In addition, spatial and temporal restrictions of uses within areas of sensitive resources are incorporated as part of this alternative.

Alternative D

Alternative D was obtained by using current commercial use patterns, implementing the RMZ prescriptions and minimizing human use/influence on the environment while maintaining or repairing physical setting attributes for each RMZ utilizing the most restrictive RMZ prescription within the given area as the deciding factor in creating the numbers. For example: in Uplands RMZ-East Side, there are currently no authorized commercial ATV operations; this would be carried forward in Alternative D. Uplands RMZ-West would be limited by use patterns which currently utilize the West Side for access to overlooks, scenic viewing and permits areas, which limit the group size to 6. Within this alternative, physical constraints, current and future expected social and physical settings, and recreation resources were considered in the development of what is believed to be the appropriate numbers to minimize human use/influence on the

environment and provide the opportunity for silence, solitude and the experience of remoteness. In addition, spatial and temporal restrictions of uses within areas of sensitive resources are incorporated as part of this alternative.

Commercial Permits within the Paria Canyon/Coyote Buttes Permit areas

Within the permit areas, commercial operators compete with private users for on-line permits on an equal basis. Commercial operators can win 1 walk-in permit through the lottery for up to 6 people, including the guide, once a week for each Coyote Buttes permit area. Currently, approximately 10-20 Paria overnight permits (group size up to 10), 20-30 Coyote Buttes South and 10-20 Coyote Buttes North permits (group size up to 6) are issued directly to valid commercial SRPs holders each year. Currently, the majority of commercial use in the permit areas is obtained through visitors contacting the commercial SRP holder after obtaining permits for a specific permit area. Under this scenario, the hired guide does not count toward the total number of people on the permit. According to the Federal Register (book of rules and regulations, see glossary), group size within the PC/CB permit areas would not include the guide, if the permit was obtained by a private user before the guide was hired.

There are no restrictions on the number of on-line permits a commercial operator can obtain in one year, so potentially Coyote Buttes South could be mostly commercial operators while the lottery for Coyote Buttes North would limit the total number of commercial SRPs to luck except for the first and the 15th of each month where leftover permits are available on a first-come, first-served basis. According to the Paria Canyon-Vermilion Cliffs Wilderness Plan and the Paria Canyon-Coyote Buttes Management Plan, commercial SRPs should not conflict with private users, and if visitor use restrictions are needed, commercial use would be controlled.

As stated in the VCNM RMP, there may need to be restrictions placed on the number of permits an SRP holder can obtain within a week or a month from on-line permits for each permit area for which this EA would set standards and triggers for future conformance planning. Regulations allow commercial SRP holders to be hired as many times as possible from a private permit holder who already obtained permits. Although Coyote Buttes South is the only permit area with the Paria Canyon-Coyote Buttes Permit areas that is solely accessed through VCNM, all three permit areas (Coyote Buttes North, Coyote Buttes South and the Paria Canyon day-use and overnight permits), are co-managed by the Paria Team, operate under the same business plan, and are accessed solely through motorized use from multiple trailheads in Arizona and Utah and should therefore be considered within this EA to maintain consistency and cohesive management.

2.3.2 Summary Comparison of the Alternatives

Table 2 was developed based on the Benefits Based Management/Recreational Opportunity Spectrum prescriptions in Appendix 3.H of the Arizona Strip Proposed Plan/Final EIS. The Recreation Setting (Social) describes the character of recreational and

tourism use including group size, physical evidence of use and the number of contacts with other groups. This is used to determine the maximum group size in Table 2.

Table 2: Summary Comparison of Alternatives:

		Alternative A	Alternative B No Action	Alternative C Proposed Action	Alternative D
House Rock RMZ					
Group Size-total # guests		12	12	12	10
Participant to guide ratio		6/1	6/2	6/1	6/1
Ratio # OHV/ATV		2/12	2/12	2/12	2/10
Commercial	Total # SRPs/ # guests	30/9,630	30/9,630 ²	~20 ³ /5,000	12/3,200
	Cumulative # vehicles	25,000 vehicles	25,000 vehicles ²	1,800	1,000
	Proposed OHV	12 new permit requests			
	Proposed ATV	4 new permit requests /12 vehicles per trip			
Motorized/Competitive Event		No events would be authorized			
Duration of use		Maximum of 14 days		1-3 days	1-2 days
The RMZ will be managed to produce recreation opportunities in the following essential settings:					
Physical Settings		Remoteness – On or near improved country roads, but at least ½ mile from all highways. Naturalness - Naturally-appearing landscape except for obvious primitive roads to landscapes partially modified by roads, power lines etc. but no modifications overpowering natural landscape features.			
Social Settings		Group Size 4-12 3-6 contacts off routes 7-15 contacts on travel routes			
Evidence of Use		Vehicle tracks and soil erosion. Vegetation becoming worn to well-worn soils, litter may be frequent.			
Uplands RMZ-East Side					
Group Size-total # guests		25	25	6	0
Participant to guide ratio		6/1	6/1	6/1	0
Ratio # OHV/ATV		4/25	4/25	2/0	0
Commercial	Total # SRPs/ # guests	15/800	15/800 ²	~10 ³ /300	0
	Cumulative # vehicles	600 vehicles	600 vehicles ²	100 vehicles	0
	Proposed OHV	8 new permit requests			
	Proposed ATV	2 new permit requests /12 vehicles per trip			
Areas managed to maintain wilderness characteristics		No motorized use would be authorized in any area managed to maintain wilderness characteristics.			
Motorized/Competitive Event		No events would be authorized			
Duration of use		Maximum of 14 days		1-4 days	0
Season of Use		Year-round except for the following restrictions:			

² Total number of guests/vehicles could exceed this number since no spatial or temporal restrictions on SRP activities would be imposed under Alternative B, resulting in the potential for more trips per year.

³ This number is the anticipated maximum number of SRPs that would be issued under this alternative. However, this number could be less based upon monitoring and limits of acceptable change.

	<ul style="list-style-type: none"> No activities within ½ mile of active condor or golden eagle nests 2/01 to 11/30 No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of active Mexican spotted owl nests 3/01 to August 31 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within Vermilion Cliffs Wildlife Habitat Area (WHA) 4/01 to 7/15; the following areas are exempted from this restriction: Becky's, One Toe Ridge overlooks. 	No use restrictions	<ul style="list-style-type: none"> No activities within ½ mile of active condor or golden eagle nests 2/01 to 11/30 No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of active Mexican spotted owl nests 3/01 to August 31 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within Vermilion Cliffs WHA 4/01 to 7/15; the following areas are exempted from this restriction: Becky's, One Toe Ridge overlooks. Vehicles traveling on unpaved roads within House Rock Valley chisel-toothed k-rat habitat would not exceed 15 mph. 	<ul style="list-style-type: none"> No activities within ½ mile of active condor or golden eagle nests 2/01 to 11/30 No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of active Mexican spotted owl nests 3/01 to August 31 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within the Vermilion Cliffs WHA year-round; the following areas are exempted from this restriction: Becky's, One Toe Ridge overlooks. No activities within House Rock Valley chisel-toothed k-rat habitat. 	
The RMZ will be managed to produce recreation opportunities in the following essential settings:					
Physical Settings	Remoteness – On or near 4 WD roads, but at least ½ mile from all improved roads, but at least ½ mile from all improved roads, though they may be in sight. Naturalness – Naturally-appearing landscape having modifications not readily noticeable except for obvious primitive roads.				
Social Settings	Group Size 3-25 3-6 contacts off routes < 6-15 contacts on travel routes				
Evidence of Use	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn.				
	Alternative A	Alternative B No Action	Alternative C Proposed Action	Alternative D	
Uplands RMZ-West Side					
Group Size-total # guests	25	25	10	6	
Participant to guide ratio	6/1	6/2	6/1	5/1	
Total # OHV/ATV	4/25	4/25	2/8	1/0	
Commercial	Total # SRPs/ # guests	25/5,000	25/5,000 ²	~15 ³ /2,500	8/1,555
	Cumulative # vehicles	1,220 vehicles	1,220 vehicles ²	500 vehicles	300 vehicles
	Proposed OHV	8 new permit requests			
	Proposed ATV	2 new permit requests /12 vehicles per trip			
Areas managed to maintain wilderness characteristics	No motorized use would be authorized in any area managed to maintain wilderness characteristics.				

Motorized/Competitive Event	No events would be authorized				
Duration of Use	Maximum of 14 days		1-3 days	2 days or less	
Season of Use	Year-round except for the following restrictions:				
	<ul style="list-style-type: none"> No activities within ½ mile of active condor or golden eagle nests 2/01 to 11/30 No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within Vermilion Cliffs Wildlife Habitat Area (WHA) 4/01 to 7/15; the following areas are exempt from this restriction: Powells Monument, Wrather Arch, overlooks; and Sand Hill Crack. 	No use restrictions	<ul style="list-style-type: none"> No activities within ½ mile of active condor or golden eagle nests 2/01 to 11/30 No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within Vermilion Cliffs WHA 4/01 to 7/15; the following areas are exempt from this restriction: Powells Monument, Wrather Arch, overlooks; and Sand Hill Crack. 	<ul style="list-style-type: none"> No activities within ½ mile of active condor or golden eagle nests 2/01 to 11/30 No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within the Vermilion Cliffs WHA year-round; the following areas are exempt from this restriction: Powells Monument, Wrather Arch, overlooks; and Sand Hill Crack. 	
The RMZ will be managed to produce recreation opportunities in the following essential settings:					
Physical Setting	Remoteness – On or near 4 WD roads, but at least ½ mile from all improved roads, but at least ½ mile from all improved roads, though they may be in sight. Naturalness - Naturally-appearing landscape having modifications not readily noticeable except for obvious primitive roads.				
Social Settings	Group Size 3-25 3-6 contacts off routes < 6-15 contacts on travel routes				
Evidence of Use	Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn.				
Uplands RMZ-Ferry Swale-Cedar Mountain					
Group Size-total # guests	25	25	16	10	
Participant to guide ratio	6/1	6/1	6/1	6/1	
Total # OHV/ATV	4/25	4/25	4/12	2/10	
Commercial	Total # SRPs/ # guests	15/1,676	15/1,676 ²	~15 ³ /500	10/500
	Cumulative # vehicles	2,500 vehicles	2,500 vehicles ²	300 vehicles	100
	Proposed OHV SRPs/ # vehicles	4 new permit requests 2 new permit requests /12 vehicles per trip 1 motorized event request of 500 people			
	Proposed ATV SRPs/ # vehicles				
Motorized/Competitive Events outside of the Monument					
Group Size	25	25	25	25	
# of Groups in area per event	4	4	2	1	
Participant to guide ratio	1/12	1/12	1/12	1/12	
Total # OHV/ATV	20/100	20/100	10/50	5/25	
Duration of Use	1-2 days	1-2 days	1 day	1 day	
Season of Use	Year-round except for the following restrictions:				
	<ul style="list-style-type: none"> No activities within 	No use restrictions	<ul style="list-style-type: none"> No activities within 	<ul style="list-style-type: none"> No activities within 	

	<p>½ mile of active condor or golden eagle nests 2/01 to 11/30</p> <ul style="list-style-type: none"> No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No motorized activities within Vermilion Cliffs Wildlife Habitat Area (WHA) 4/01 to 7/15; the following areas are exempt from this restriction: Cedar Mountain and Paria Canyon overlooks and BLM routes 1094, 1441, 1442 and 1438. In the event that Jacobs Pool is acquired by the BLM, continuation of BLM route 1397 would be included within these exemptions. 		<p>½ mile of active condor or golden eagle nests 2/01 to 11/30</p> <ul style="list-style-type: none"> No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within Vermilion Cliffs WHA 4/01 to 7/15; the following areas are exempt from this restriction: Cedar Mountain and Paria Canyon overlooks and BLM routes 1094, 1441, 1442 and 1438. In the event that Jacobs Pool is acquired by the BLM, continuation of BLM route 1397 would be included within these exemptions. 	<p>½ mile of active condor or golden eagle nests 2/01 to 11/30</p> <ul style="list-style-type: none"> No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within the Vermilion Cliffs WHA year-round; the following areas are exempt from this restriction: Cedar Mountain and Paria Canyon overlooks and BLM routes 1094, 1441, 1442 and 1438. In the event that Jacobs Pool is acquired by the BLM, continuation of BLM route 1397 would be included within these exemptions.
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The RMZ will be managed to produce recreation opportunities in the following essential settings:

Physical Setting	<p>Remoteness- more than ½ mile from any kind of road with no road in sight to on or near improved country roads, but at least ½ mile from highways.</p> <p>Naturalness- Naturally-appearing landscape having modifications not readily noticeable to landscape partially modified by roads, utility lines etc., but none overpower natural landscape features</p>				
Social Setting	<p>Group Size 3-25 3-6 contacts off routes < 6-15 contacts on travel routes</p>				
Evidence of Use	<p>Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn.</p>				
	Alternative A	Alternative B No Action	Alternative C Proposed Action	Alternative D	
Coyote Buttes RMZ					
Group Size-total # guests	6	6	6	6	
Participant to guide ratio	6/1	6/1	6/1	6/1	
Total # OHV/ATV to access	2/7	2/7	2/7	2/0	
Commercial	Total # SRPs/ # guests	20/1,600	20/1,600	10/900	6/500
	Shuttles	100	100	40	20
	Cumulative # of vehicles	1,070 vehicles	1,070 vehicles	500 vehicles	300 vehicles
	Proposed OHV	6 new permit requests			
	Proposed ATV	1 new permit request			

Duration of Use		Day use only			
Restrictions for all permits		No competitive/motorized events are authorized in designated wilderness per H 2930-1			
The RMZ will be managed to produce recreation opportunities in the following essential settings:					
Physical Setting		Remoteness - more than 1/2 mile from any kind of road to on/near improved county roads, but at least 1/2 mile from highways Naturalness - Undisturbed natural landscape to naturally-appearing landscape except for obvious roads			
Social Setting		Group Size 3-6 (limited to 6 people per group per day per permit area) < 3 contacts is CBS 3-6 contacts off routes in CBN < 6 contacts in CBS 7-15 contacts on travel routes in CBN			
Evidence of Use		Only footprints to footprints plus slight vegetation trampling at campsites (at trailheads) & on travel routes. Only infrequent litter.			
Paria Canyon RMZ					
Group Size-total # guests		10	10	10	10
Participant to guide ratio		10/1	10/1	10/1	10/1
Total # OHV/ATV to access		2/0	2/0	2/0	2/0
Commercial	Total # SRPs/ # guests	20/1000	11/70	16/200	11/100
	Shuttles	600	151	300	200
	Cumulative # of vehicles	1,000 vehicles	1,000 vehicles	400 vehicles	300 vehicles
	Proposed OHV	9 new permit requests			
	Proposed ATV	No requests			
Duration of use		Max of 14 days	8 days	8 days	8 days
Restrictions for all permits		No competitive/motorized events are authorized in designated wilderness H 2930-1			
The RMZ will be managed to produce recreation opportunities in the following essential settings:					
Physical Setting		Remoteness – more than 3 miles from any road to more than 1/2 mile from any kind of road, and less than 3 miles from road and no road in sight Naturalness – undisturbed natural landscape to naturally-appearing landscape having modifications not readily noticeable			
Social Setting		Group Size 3-10 (limited to 10 people per group per day in permit area) < 3 contacts in Paria Canyon corridor, 3-6 contacts off routes < 6 contacts in Paria Canyon corridor, 7-15 contacts on travel routes			
Evidence of Use		Only footprints to footprints plus slight vegetation trampling at campsites (at Trailheads) & on travel routes. Only infrequent litter.			
Cliffs and Rims RMZ					
Group Size-total # guests		6	6	6	6
Participant to guide ratio		6/1	6/1	6/1	6/1
Total # OHV/ATV		2/7	2/7	2/6	2/0
Commercial	Total # SRPs/ # guests	15/1,300	15/1,300	~10 ³ /180	5/90
	Cumulative # of vehicles	400 vehicles	400 vehicles	100 vehicles	100 vehicles
	Proposed OHV	8 new permit requests			
	Proposed ATV	2 new permit requests /12 vehicles per trip			
Duration of Use		Maximum of 14 days	1 day	1-2 days	1 day
Season of Use		Year-round except for the following restrictions:			
		<ul style="list-style-type: none"> No activities within 1/2 mile of active condor or golden eagle nests 2/01 to 	No use restrictions	<ul style="list-style-type: none"> No activities within 1/2 mile of active condor or golden eagle nests 2/01 to 	<ul style="list-style-type: none"> No activities within 1/2 mile of active condor or golden eagle nests 2/01 to

	<p>11/30</p> <ul style="list-style-type: none"> No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within Vermilion Cliffs WHA 4/01 to 7/15; the following areas are exempt from this restriction: Becky’s, One Toe Ridge, Powells Monument, Wrather Arch, Cedar Mountain and Paria Canyon overlooks; Sand Hill Crack, Cathedral Wash, Badger Creek and Sevenmile undeveloped trails; and Sun Valley Mine Public Use Site. In the event that Jacobs Pool is acquired by the BLM, it would be included within the exemption. 		<p>11/30</p> <ul style="list-style-type: none"> No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within Vermilion Cliffs WHA 4/01 to 7/15; the following areas are exempt from this restriction: Becky’s, One Toe Ridge, Powells Monument, Wrather Arch, Cedar Mountain and Paria Canyon overlooks; Sand Hill Crack, Cathedral Wash, Badger Creek and Sevenmile undeveloped trails; and Sun Valley Mine Public Use Site. In the event that Jacobs Pool is acquired by the BLM, it would be included within the exemption. 	<p>11/30</p> <ul style="list-style-type: none"> No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of active Mexican spotted owl nests 3/01 to 8/31 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within the Vermilion Cliffs WHA year-round; the following areas are exempt from this restriction: Becky’s, One Toe Ridge, Powells Monument, Wrather Arch, Cedar Mountain and Paria Canyon overlooks; Sand Hill Crack, Cathedral Wash, Badger Creek and Sevenmile undeveloped trails; and Sun Valley Mine Public Use Site. In the event that Jacobs Pool is acquired by the BLM, it would be included within the exemption.
Restrictions for all permits	No competitive/motorized events are authorized in designated wilderness per H 2930-1			
The RMZ will be managed to produce recreation opportunities in the following essential settings:				
Physical Settings	<p>Remoteness – more than 3 mile from any kind of road to on/near improved county roads, but at least ½ mile from highways</p> <p>Naturalness – undisturbed natural landscape to naturally-appearing landscape having modifications not readily noticeable</p>			
Social Setting	<p>Group Size 4-6</p> <p><3-6 contacts off routes</p> <p><7-15 contacts on travel routes</p>			
Evidence of Use	Footprints plus slight vegetation trampling at campsites (trailheads) & on travel routes. Only infrequent litter.			
Vermilion Cliffs RMZ				
Group Size-total # guests	50	50	50	25
Participant to guide ratio	10:1	10:1	10:1	6:1
Total # OHV/ATV	8/0 ⁴	8/0 ⁴	8/0 ⁴	4/0 ⁴

⁴ This RMZ consists of the Highway 89A corridor and the area around the communities of Cliff Dwellers and Vermilion Cliffs. Since these lands do not have roads designated as open to the public and ATVs are not permitted to be on the highway, authorized ATVs would be 0 under all alternatives.

Commercial	Total # SRPs/ # guests	6/6000	6 ² /6,000	~4 ³ /1,605	2/800
	Cumulative # of vehicles	2,500 vehicles	2,500 vehicles ²	800 vehicles	250 vehicles
	Proposed OHV	No requests			
	Proposed ATV	No requests			
Duration of Use	Maximum of 14 days		1-3 days	1-2 days	
Season of Use	Year-round except for the following restrictions:				
	<ul style="list-style-type: none"> No activities within ½ mile of active condor or golden eagle nests 2/01 to 11/30 No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within Vermilion Cliffs WHA 4/01 to 7/15; the following areas are exempt from this restriction: the Highway 89A corridor. In the event that private lands within this RMZ are acquired by the BLM, those lands would be included within the exemptions.. 	No use restrictions	<ul style="list-style-type: none"> No activities within ½ mile of active condor or golden eagle nests 2/01 to 11/30 No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within Vermilion Cliffs WHA 4/01 to 7/15; the following areas are exempt from this restriction: Badger Creek, Sevenmile and Sun Valley Mine undeveloped trailheads; and Highway 89A corridor. In the event that private lands within this RMZ are acquired by the BLM, those lands would be included within the exemptions.. 	<ul style="list-style-type: none"> No activities within ½ mile of active condor or golden eagle nests 2/01 to 11/30 No activities within ½ mile of active peregrine nests 3/01 to 8/01 No activities within ½ mile of active Mexican spotted owl nests 3/01 to 8/31 No activities within ½ mile of golden or bald eagle winter roosts 10/01 to 4/15 No activities within the Vermilion Cliffs WHA year-round; the following areas are exempt from this restriction: Badger Creek, Sevenmile and Sun Valley Mine undeveloped trailheads; and Highway 89A corridor. In the event that private lands within this RMZ are acquired by the BLM, those lands would be included within the exemptions. 	
The RMZ will be managed to produce recreation opportunities in the following essential settings:					
Physical Settings	Remoteness – On or near improved primary roads, but still within a rural area. Naturalness - Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features.				
Social Settings	Group Size 4-25 7-29 contacts off routes 15-30 or more contacts on travel routes				
Evidence of Use	Paved routes protect soils and vegetation, but noise, litter, and facility impacts are pervasive. and Vehicle tracks and occasional litter and soil erosion. Vegetation becoming worn.				

2.3.3 Best Management Practices

All Alternatives

- All camps would be located at least 200 feet from any known archaeological sites, including prehistoric camps, rock shelters, caves, and historic buildings.
- All existing camps intended for commercial SRP use would be inventoried for cultural resource values and closed if sensitive sites are being impacted either by current SRP users, or members of the general public.
- Any additional camp sites identified for commercial use would be inventoried for the protection of cultural resources and, depending on the absence or presence of sensitive cultural resources, use would be approved or denied as applicable.
- All camps would be located at least ¼ mile from springs, seeps or livestock or wildlife water catchments, tanks, drinkers, etc.
- Clean campsites/lunch sites must be maintained, including proper disposal of micro-trash. California condors are highly susceptible to the effects of micro-trash. Micro-trash includes small and easily ingestible materials such as bottle caps, broken glass, cigarette butts, small plastic bits, lead bullets, and bullet casings, even food materials. The campsite/lunch site would be cleaned up at the end of each day of use (e.g., trash removed, scrap materials picked up) to minimize the likelihood of condors visiting the site.
- If California condors visit a specific overlook or campsite while activities are underway, the permit holder must notify the BLM wildlife team lead at (435) 688-3239. Project activities would be modified or delayed if those activities have adverse effects on condors.
- No hazing or harassment of wildlife is permitted.
- Vehicles from outside the area used for authorized purposes are required to be cleaned (using air, low pressure/high volume, or high-pressure water) prior to entering the project area. As national policy is developed, the more stringent will be implemented. Vehicles leaving the area and later returning to continue the activity will require re-cleaning.
- Routes available for use would only be those designated open to all users.

2.3.4 Alternative A

This alternative focuses on providing the maximum amount of commercial recreation opportunities to the greatest number of visitors in the project areas while still protecting natural and cultural resources (i.e., Monument objects) and visitor experiences. While this alternative could authorize the largest number of people and vehicles allowable based on the RMZ prescriptions, sensitive resources would be protected by implementing spatial and temporal limitations in certain critical areas (see Table 2).

SRP ATV access would be provided for in each RMZ along with the opportunity to host large groups for as many as 14 days. This would also result in a higher concentration of contacts per day and less ability to experience silence and solitude.

The PC/CB permit system would remain much as it is currently with the possibility that it could be made more restrictive for commercial SRPS at some time in the future, if it is determined that commercial SRPs have met the needs assessment for the wilderness area and/or are impacting private SRPs thereby decreasing recreation opportunities for private recreationists. Once the threshold has been reached, SRP holders would have to compete with an unspecified number of SRP holders who provide similar if not identical recreation opportunities. The concern from management and private users is that this would result in lost recreation opportunities in varied settings and the inability of the BLM to monitor recreation prescriptions in bordering RMZs that require group sizes as small as six people, with as few as three contacts with other groups per day, as seen in the Cliffs and Rims and Coyote Buttes RMZs. With the recreation management provided by this alternative, visitation would probably be substantially higher within two to three years and may not peak until 2025 or later than the other alternatives.

2.3.5 Alternative B – No Action

Management under this alternative represents continuation of current management, whereby new SRPs would be issued on a case-by-case basis. This is the baseline alternative required by NEPA against which the other alternatives will be compared.

This alternative would result in continuing to issue new motorized SRPs within the project area as applications are received, pending environmental review. Restrictions on use (such as group sizes in the various RMZs) would be based solely upon the allocations identified in the project area RMPs; no determination of the upper limits of appropriate recreation use throughout the project area utilizing Limits of Acceptable Change (LAC) would be made and no carrying capacities would be established. This alternative would authorize the largest number of people and vehicles allowable under the RMZ prescriptions.

2.3.6 Alternative C –Proposed Action

This alternative represents the proposed action for motorized commercial recreation while providing for the protection of natural and cultural resources (i.e., Monument objects) and visitor experiences. Under this alternative, conservation management of natural resources would be emphasized utilizing an adaptive management program while traditional uses and commercial recreational opportunities would be maintained to the extent possible within the confines of the RMPs. The visitor experiences provided for under this alternative would allow for some areas where visitors could expect to encounter greater numbers of recreationists and some areas where they could expect to see few, if any, other recreational visitors providing the opportunity to experience a wide range of social and physical recreation settings. In some RMZs, SRP ATV access would be available in small groups, in other RMZs, the SRP group size and concentration would be expanded.

The permit system would remain much as it is currently with the likelihood that it would be made more restrictive for commercial SRPs at some time in the future, if it is

determined that commercial SRPs have met the needs assessment for the wilderness area and/or are impinging on the ability for private parties to obtain permits thereby resulting in the decrease of recreation opportunities for private recreationists. In all likelihood, adaptive management would tend to restrict the growth of commercial recreation use in parts of the project area while allowing it to grow in other RMZs. This would include multi-day hiking on and around the rim of the Paria Plateau, specialized photography seminars, ATV and OHV travel, and the ability to have support vehicles for non-motorized activities like wagon and horseback trips and destination hiking from base camp to base camp.

2.3.7 Alternative D

Management under this alternative would provide the least human use/influence on the environment and social settings while providing the maximum amount of protection for solitude and remoteness as well as protecting natural and cultural resources. This alternative would emphasize visitor experiences that lean toward a more remote and solitary experience, where visitors would not expect to encounter many other recreationists.

Under this alternative, BLM management would attempt to maintain the recreation experience that is currently available by minimizing use and therefore potential impacts to recreation settings, silence and solitude within the project area. In most RMZs, SRP ATV access would not be available, while in other RMZs, the SRP group size and concentration may be expanded from current use patterns. A single OHV could carry the same number of people (8) as 2 ORVs or eight ATVs. This would provide for the opportunity to recreate outside of the influence of ATV travel, noise and congestion associated with potentially large numbers of ATVs while providing recreationists the opportunity for silence, solitude and remoteness or the protection of Monument objects preventing unacceptable resource and social changes brought on by such use while providing ATV use in other portions of the project area.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

The purpose of this chapter is to describe the existing environment potentially affected by the alternatives in order to assist the reader in understanding the existing situation. The affected environment of this EA was considered and analyzed by an interdisciplinary team of resource specialists. The resources identified below include the relevant physical, social and biological conditions that may be impacted with implementation of the proposed action, and provides the baseline for comparison of impacts described in Chapter 4.

3.2 General Setting

The project area includes public lands along the Arizona-Utah border. It is within VCNM and the Arizona Strip Field Office (ASFO) area known as Ferry Swale in Arizona, and the Paria Canyon/Coyote Buttes Special Recreation Area (referred to as the permit areas) which shares management with GSENM and the KFO, in Utah. It is bordered by Glen Canyon National Recreation Area (GLCA) to the east, GSENM to the north (although three trailheads included for analysis are located within GSENM), the Kaibab National Forest to the west and northwest and the Arizona Strip Field Office to the south. No communities exist within VCNM; however, several small residential/commercial areas lie along the VCNM boundary at the foot of the Vermilion Cliffs along U.S. Highway 89A in the vicinity of Marble Canyon. Other close communities include Page and Fredonia, Arizona, and Kanab and Big Water, Utah.

The project area is within the region commonly known in the tourism industry as the Grand Circle, which is an international outdoor recreation destination. While U.S. Highway 89A provides excellent passage along the southern boundary of the project area, much of the area's landscape of steep cliffs, deep canyons, and loose sand make vehicular entry deep into its boundary challenging. Spectacular scenic vistas are common from the rims of the Paria Plateau and visitors are offered a sense of isolation and remoteness in much of the area. Other notable recreation destinations, such as Grand Canyon, Zion and Bryce Canyon National Parks, are within a few hours' drive.

The project area is within the Colorado Plateau physiographic province. This region contains a variety of ecological zones, each with a distinctive assemblage of plant species. The ecological zones, as displayed on Map 3.11 of the Arizona Strip Proposed RMP/Final EIS (BLM 2007), found in the project area are:

- Riparian – located along the Paria River and a few springs. The Paria River is known for low base flows with seasonal flash floods of enormous proportions. Dominant plant species present include cottonwood, willow, and salt cedar.
- Great Basin – the Paria Plateau contains the wide range of vegetation communities found in the Great Basin. Valleys contain grasslands and shrublands, dominated by sagebrush. Pinyon-juniper woodlands are also found here.

- Colorado Plateau Transition – this ecological zone occurs along the Vermilion Cliffs and the Paria River. Components of the Great Basin and Plains-Grassland ecological zones can be found mixed together here; dominant plant species include sagebrush, juniper, and a variety of perennial grasses.
- Plains-Grassland – this ecological zone occurs below the Vermilion Cliffs, in the rain shadow of the Kaibab Plateau; consequently, precipitation is generally lower and less dependable than in other nearby areas. Typical grasses include grama, muhly, needlegrass, wheatgrass, brome, galleta, fescue, and dropseed. An occasional cactus, shrub, or juniper may also be present.

Recreation opportunities and the scenic qualities of an area are based in large part on vegetation.

3.3 Elements/resources of the Human Environment

The BLM is required to consider many authorities when evaluating a proposed Federal action. Those elements of the human environment that are subject to the requirements specified in statute, regulation, or executive order, and must be considered in all EAs (*National Environmental Policy Act*, BLM Handbook H-1790-1), have been considered by BLM resource specialists to determine whether they would be potentially affected by the proposed action. These elements are identified in Table 3, along with the rationale for determination on potential effects. If any element was determined to be potentially impacted, it was carried forward for detailed analysis in this EA; if an element is not present or would not be affected, it was not carried forward for analysis. Table 3 also contains other resources/concerns that have been considered in this EA. As with the elements of the human environment, if these resources were determined to be potentially affected, they were carried forward for detailed analysis in this document.

Table 3: Summary Evaluation of Elements/Resources of the Human Environment

Resource	Determination*	Rationale for Determination
* NP = Not present in the project area NI = Present, but not affected to a degree that would mean detailed analysis is required. PI = Present with potential for impact; analyzed in detail in the EA.		
Air Quality	PI	Actions authorized under the alternatives would result in minor amounts of fugitive dust from vehicular travel on unpaved roads in the project area. Air quality as it pertains to fugitive dust could be affected so this issue is analyzed in detail.
Areas of Critical Environmental Concern	NP	There are no Areas of Critical Environmental Concern in the project area.
BLM or State Sensitive Plants	NI	One Arizona state listed sensitive plant occurs in the project area, <i>Sclerocactus sileri</i> which generally occurs within the wilderness. Occurrence outside of wilderness is rare and widespread. The actions proposed in this EA would have a "no effect" on the sensitive status species, as vehicular travel would be restricted to designated routes.

Resource	Determination*	Rationale for Determination
Cultural Resources	PI	The project area contains numerous sensitive cultural resources that could be affected by the activities analyzed in this EA, so this issue is analyzed in detail.
Environmental Justice	NI	The proposed action would have no disproportionately high or adverse human health or other environmental effects on minority or low-income segments of the population. The proposed action would also have no effect on low-income or minority populations.
Farmlands (Prime or Unique)	NP	There are no prime or unique farmlands within the project area.
Floodplains	NI	No actions are proposed that would result in permanent fills or diversions, or placement of permanent facilities in floodplains or special flood hazard areas. The proposed action would not affect the function of the floodplains within the project area.
Fuels/Fire Management	NI	Active fuel treatments (connected with salt cedar removal) are occurring along the Paria River, but would not affect any actions proposed in this EA. No other fuels management projects are actively occurring within other parts of the project area. No actions are proposed that would result in impacts to Fuels/Fire Management.
Geology/Mineral Resources/Energy Production	NI	No actions are proposed that would result in impacts to geology, mineral resources, or energy production because the proposed action would not affect opportunities for mineral development in the Arizona Strip Field Office portion of Ferry Swale. In addition, the proposed action would not alter any known geologic features.
Invasive, Non-native Species	NI	Vehicular travel would occur on designated routes and established dispersed campsite locations. The proposed action is not expected to contribute to the spread of invasive species because mitigation measures to decrease the potential for the spread of invasive species would be implemented (see Section 2.3.3).
Lands/Access	NI	ROWS including utilities and communication towers are present in the area. The proposed action would not affect these facilities. No lands/access issues have been identified.
Livestock Grazing	NI	The project area is located within multiple active grazing allotments. Vehicular traffic would be maintained on designated routes and previously dispersed campsites. Campsites that impact range and wildlife waters would be closed to the public and thus closed to commercial use. Therefore, this project would not affect management or use of the allotments.
Native American Religious Concerns	NP	During consultations with American Indian Tribes who claim cultural affiliation to northern Arizona, no Native American religious concerns have been identified in relation to the project area.
Paleontology	NI	Paleontological resources are known to occur in the project area within the Paria Canyon-Vermilion Cliffs Wilderness and also within the Ferry Swale area. Use of motorized or mechanized vehicles is not permitted within the wilderness and would be permitted only on routes designated as open to public use so no effects to paleontological resources are anticipated to occur.
Recreation	PI	The project could adversely affect recreation users in the project area due to potential limits on use, and potential conflicts between users groups.
Socioeconomic Values	PI	Nearby communities are supported by tourism (including outdoor recreation), construction, and light industry. The project could have an effect on the economy or social aspect of the region since there could potentially be displacements or disruption to established businesses or uses of the area. This issue is therefore carried forward for detailed analysis.
Soils	PI	The project could affect soils on routes and at campsites. Most of the soils are resistant to compaction, but the loose sands are easily churned up by tire action making them subject to wind erosion. Water erosion might be increased on the steeper slopes during intense rains.

Resource	Determination*	Rationale for Determination
Threatened, Endangered, or Candidate Animal Species	PI	There are two threatened or endangered animal species that occur (or may occur) within the project area: California condor and Mexican spotted owl. In 1996 California condors were reintroduced to Arizona in the Vermillion Cliffs as a non-essential experimental population under the Endangered Species Act's (ESA) 10(j) rule. Subsequent releases have occurred annually. California condors are known to nest in the Vermilion Cliffs. The project area is also within the range of the Mexican spotted owl (<i>Strix occidentalis lucida</i>). Actions proposed in this EA may result in disturbance to these species.
Threatened, Endangered, or Candidate Plant Species	NI	One Federally-listed plant occurs in the project area: Welsh's milkweed (<i>Asclepias welshii</i>). This plant grows on open, sparsely vegetated semi-stabilized sand dunes and the lee slopes of actively drifting sand dunes. It is found in small numbers in the sand dunes of Coyote Buttes. In the past, OHV activity was the main threat to this species, but it is now well protected due to the designation and management of the Paria Canyon-Vermilion Cliffs Wilderness, which encompasses Coyote Buttes. Since no motorized activities can occur in the wilderness and foot traffic generally occurs on social trails outside of Welsh's Milkweed known locations, the actions proposed in this EA would not affect this species.
Vegetation	NI	Use of motorized or mechanized vehicles would only occur on routes designated as open to public use so no effects to vegetation are anticipated.
Visual Resources	NI	The proposed action is located within an area designated as VRM Class II. Actions proposed under the alternatives would only occur on existing roads, so the existing landscape characteristics would not be altered.
Wastes (hazardous or solid)	NI	The proposed action includes measures to protect the area from hazardous or solid waste spills. Effects associated with the project would therefore be negligible.
Water Quality (drinking/ground)	NI	Perennial water sources within the project area are generally focused on springs and seeps. Range waters are sourced from springs, deep wells and pipelines. Camping is not permitted within ¼ mile of water sources. Motorized travel would only be authorized on designated roads which does not include travel over seeps and spring sources. The proposed action would therefore result in no effects to water quality.
Wetlands/Riparian Zones	NI	Although there is riparian vegetation and habitat in the project area (e.g., cattails and rushes), the designated routes for which all vehicular travel would occur are not within any wetland/riparian area. Thus, the proposed action would result in no effects to wetland/riparian areas.
Wild and Scenic Rivers	NI	The Paria River has been determined to be suitable for inclusion in the National Wild and Scenic Rivers System as a wild river. Visitor use limits have been established to protect this resource. Commercial use will not exceed the visitor use limits for the Paria River. Commercial use would not affect the parameters used for the suitability report therefore; the proposed action would not affect the suitability of this river.
Wild Horses and Burros	NP	The project area is not located within a wild horse or burro herd management area.
Wilderness	PI	Although motorized operations are not permitted in the wilderness, recreation access to the wilderness requires motorized use and this use could impact the character of the wilderness. Authorizing motorized use in the areas bordering the wilderness could affect the wilderness characteristics of naturalness and opportunities for solitude as the majority of motorized commercial use accesses areas of interest within designated wilderness.
Wilderness Characteristics	PI	Actions proposed in this EA would provide access to these areas, which could affect the characteristics of naturalness and opportunities for solitude.

Resource	Determination*	Rationale for Determination
Wildlife (including sensitive species and migratory birds)	PI	The project area contains sensitive species including spotted bat (<i>Euderma maculatum</i>), big free-tailed bat (<i>Nyctinomops macrotis</i>), American peregrine falcon (<i>Falco peregrinus</i>), and ferruginous hawk (<i>Buteo regalis</i>), which could be affected by the proposed action.
Woodland/Forestry	NI	Actions proposed in this EA would not affect the availability of, or access to, these resources.

3.4 Resources/Issues Brought Forward for Analysis

Based upon the Arizona Strip Field Office’s internal scoping and input received through public scoping, the following issues are carried forward for analysis in this EA.

3.4.1 Air Quality

The Clean Air Act (CAA), as amended, establishes National Ambient Air Quality Standards. The Arizona Department of Environmental Quality (ADEQ) is the regulating and enforcing agency for Arizona air quality standards and has adopted these Federal standards as the Arizona Ambient Air Quality Standards. Geographic areas (commonly referred to as airsheds) are designated attainment, non-attainment, or unclassified for ambient air quality and pollutant emission sources. Areas in which levels of a pollutant measure below the NAAQS are designated “attainment” areas; areas that exceed the NAAQS may be designated “non-attainment” – these are usually urban regions and/or regions with higher density industrial development. The given status of an area is designated separately for each pollutant.

The entire project area is unclassified for all pollutants and has been designated as Prevention of Significant Deterioration (PSD) Class II. The Clean Air Act established programs and permitting processes designed to protect and improve air quality. Section 176(c) (1) contains the legislation that mandates the general conformity rule.

Air quality in the project area is generally good. Exceptions include short-term pollution (particulate matter) resulting from vehicular traffic on unpaved roads. Fugitive dust is also generated by winds blowing across the area, coming from roads and other disturbed areas.

3.4.2 Cultural Resources

The prehistory and history of what is now the Arizona Strip covers nearly all human occupation of North America from the Paleoindian period (circa 9500-7000 BC) to the recent historic Anglo-European colonization. The Paleoindian period was characterized by highly mobile groups with a sophisticated flaked-stone technology whose subsistence focused largely, but not exclusively, on hunting. Following the Paleoindian is the Archaic period (circa 7,000-300 BC), characterized as a time of increasing sophistication in hunting and gathering techniques through both technological development and the

evolution of ever more complex subsistence-settlement systems, in conjunction with a gradually increasing dependence upon floral food resources.

The succeeding Formative period (circa 300 BC-AD 1250) is associated with the Virgin branch of the Anasazi culture. The Virgin Anasazi lifeway was characterized by a subsistence system based on horticulture supplemented by foraging; by predominately small settlements consisting of pithouses, storage structures, and – in the later periods – masonry roomblocks; and (after AD 400) by ceramic production. Site types and settlement patterns show considerable diversity.

By the mid-thirteenth century, most of the Virgin Anasazi had migrated to adjacent regions; their migration most likely resulted from a prolonged drought. By 1300, if not earlier, the Southern Paiute had arrived in the area. The Southern Paiute lifeway was based primarily on hunting and gathering, although limited horticulture was also practiced. Subsistence depended upon a strategy of nomadism, organized between higher elevation camps in warm seasons and lower elevations the rest of the year.

In the 1850s, Mormons arrived in the area. Mormon settlers soon began to displace the Southern Paiute, who were confined – starting in 1872 – to reservations.

Very little of the public lands within the project area has have been inventoried for cultural resources. However, it is known that much of the area and its environs were intensively utilized during the Formative period, and based on what has been documented it is clear that sensitive cultural resources are present across the entire region. It is also known that impacts to these resources are occurring from both human and natural causes. At the current time it is thought that these impacts are for the most part having a minor to moderate impact to a limited number of sites. The majority of the sites are in good condition. The entire span of human history in the region is potentially represented. The largest and most obvious archaeological sites are related to the Anasazi, or Pueblo related ancestors with pueblos, farmsteads, artifact scatters, and rock art. There are also Archaic, historic ranch, and inscription sites located in the region related to both American Indian and Anglo American occupation and use of the land.

3.4.3 Recreation Resources

Recreation and visitor services within VCNM are managed to provide a variety of recreation opportunities that offer a range of benefits, activities, and experiences. VCNM contains distinct zones (or RMZs) that each provide a particular recreation niche. These RMZs are discussed below.

House Rock RMZ is used extensively for motorized as well as non-motorized recreation. This RMZ is managed for scenic backroads driving with access to interpretation, wildlife viewing and hiking but also includes activities such as hunting, OHV, ATV and motorcycle riding, dispersed camping, backpacking, hiking, and access the Paria Canyon/Coyote Buttes permit area. This is the main throughway into VCNM excluding the Cedar Mountain/Ferry Swale area. It is likely that individual groups would meet in

parking lots and along the House Rock RMZ corridor while accessing the permit areas, Stateline Campground, West Bench Pueblo, and the condor viewing site.

Uplands RMZ:

The east side of this RMZ receives minimal self-directed motorized recreation with access to non-motorized opportunities. This area is managed for self-directed, motorized access to non motorized activities and off-highway adventure driving and exploring which also currently includes such activities as scenic viewing, wilderness exploring, scenic photography, and dispersed camping. The area contains the evidence of historic and undocumented archeological occupation that attract visitors to the area. It is unlikely that individual groups will meet face to face during daily activities although groups may rarely meet briefly on roads accessing Cliffs and Rims.

The west side receives extensive use to access the Paria Canyon/Coyote Buttes permit area trailheads of Coyote Buttes South (Paw Hole, Lone Tree and Cottonwood Cove) and White Pocket. This area is managed for self-directed, motorized access to non motorized activities and off-highway adventure driving and exploring which also currently scenic viewing, wilderness exploring, scenic photography, and dispersed camping. The area contains two public use sites (west Bench Pueblo and the Maze) that attract visitors to the area. It is unlikely that individual groups will meet face to face during daily activities outside of accessing the Coyote Buttes South permit area, although groups may occasionally meet briefly on roads accessing the southern portion of Cliffs and Rims.

The Cedar Mountain/Ferry Swale side of this RMZ receives extensive OHV and ATV based recreational use because of its proximity to the communities of Kanab and Big Water, Utah and Page and Greenhaven, Arizona. This area is managed for self-directed, motorized access to non motorized activities and off-highway adventure driving and exploring which also currently includes activities such as scenic viewing, wilderness hiking, scenic photography, equestrian trail riding, and dispersed camping. This area has the most concentrated weekend and holiday OHV and ATV use in the project area.

Coyote Buttes receives extensive pressure from outside publications and promotion. It is managed for adventure tourism with activities that range from hiking and scrambling to viewing and photographing scenic vistas. It is likely that individual groups will meet in the Coyote Buttes parking lots and along the House Rock RMZ corridor while accessing the permit areas, Stateline Campground, West Bench Pueblo, and the Condor viewing site.

Paria Canyon also receives extensive pressure from outside publications and promotion. It is managed for world-class wilderness trekking adventure with activities that range from hiking, backpacking and viewing scenic vistas. It is likely that individual groups will meet in the parking lots and along the House Rock RMZ corridor while accessing the

permit area and Stateline Campground. Current use will likely result in individual hiking parties meeting one to two other parties in the canyon daily until the hiking party reaches Big Spring and begins hiking south to Lees Ferry at which time the groups will meet other groups rarely if at all.

Cliffs and Rims receive minimum recreational use which is self-directed, non-motorized access for remote and primitive adventure to include hiking, scrambling, hunting and scenic viewing. It is unlikely that individual groups will meet face to face during daily activities although groups may rarely meet briefly on roads accessing Cliffs and Rims.

Vermilion Cliffs RMZ is a small area located adjacent to the communities of Cliff Dwellers and Vermilion Cliffs. The primary activities within this RMZ are viewing the Vermilion Cliffs and education-type recreation. Due to its proximity to communities, users can expect frequent encounters with other people.

3.4.4 Socioeconomics

The project area is located primarily in Coconino County, Arizona, and includes the portion of the Paria Canyon-Vermilion Cliffs Wilderness located within Kane County. Coconino County, Arizona, is currently (2008 estimate) averaging about a 10.5% growth in population from 2000 to 2008. Page, Arizona had an estimated population of 6,794 in 2005 with a median household income of \$46,935 with 20% of the economic job basis focused on Arts, entertainment, recreation, accommodation and food services. Fredonia had an estimated population of 1,054 in 2005 with a median household income of \$30,288 with 13.4% of the economic job basis focused on arts, entertainment, recreation, accommodation and food services. Retired residents along with a seasonal influx of visitors contribute substantially to the local economies.

The Vermilion Cliffs RMZ, within Coconino County, Arizona, includes the communities of Cliff Dwellers and Vermilion Cliffs; it is proximate to Marble Canyon and consists of a series of lodges, a river outfitters commercial warehouse, Colorado River-based businesses, and isolated homesites and ranches. The area has an estimated population of 120 in 2010 with 80% of the economic job base focused on tourism many of whom are American Indian (Navajo).

Kane County, Utah, is currently (2008 estimate) averaging about an 8.8% growth in population from 2000 to 2008. Big Water, Utah had an estimated population of 415 with a median household income of \$30,278 in 2005 with 25.4% of the economic job basis focused on arts, entertainment, recreation, accommodation and food services. Kanab has an estimated population of 3,516 in 2005 with a median household income of \$35,125 in 2005 with 14.1% of the economic job basis focused on Arts, entertainment, recreation, accommodation and food services.

Closure or increased management of illegal open OHV areas on Utah and Arizona State Lands and federal lands has resulted in the shift of OHV and ATV use to the project area and specifically to the Uplands and Cedar Mountain/Ferry Swale RMZs to include

requests from local resources for large organized events in and around the old dump. This, in combination with population growth, has resulted in increased recreation resource pressure. Moderate local use on designated routes includes minor to moderate seasonal illegal motor vehicle operations on adjacent NPS lands, canyons, and wilderness resources. Growth outside Arizona may have an even greater impact on use as the RMZ as the area becomes more well-known as a challenging OHV, ATV area even when the recreationist is restricted to designated routes. The RMZ already has substantial non-local use, and the non-local share of use is predicted to increase.

Although population increase in the long-term, may be a major determinant of growth in visitor use, that use could increase faster than the local population for periods of several years, if not 5 to 10 years. The potential for steep growth is currently being experienced, as commercial SRP use in the project area has increased from 6 in 2007 to 12 in 2009, four of which have obtained partial permits, in the last two years. There are currently 8 application packages pending in addition to the 12 active permits, most of which would likely require changes to their permits once this EA is completed. In addition the BLM has received three requests for information by local organizations for large group events and is currently receiving 2-3 requests for information about commercial use in the project area. The Cedar Mountain/Ferry Swale area is a relatively new area to SRP applicants and that is changing as SRP applicants seek out new activities outside of heavily used areas like Moab. As word of the area's diversity and richness spreads, recreationists who might have gone elsewhere, like Moab, instead may opt to discover the experiences available in the project area through SRPs. In economic terms, this areas "market share" could potentially grow exponentially.

3.4.5 Soil

Most of the soils of the project area are generally sandy and droughty. The dominant soils on top of the Paria Plateau are the Arches - Pensom complex which are mostly stabilized sand dunes derived from the under-lying Navajo sandstone. Arches are shallow and Pensom is deep. They both have a wind erosion hazard of very high and a water erosion hazard of moderate. Arches have rapid permeability and Pensom has very rapid permeability. Runoff is slow for both soils.

The main soils in the House Rock portion of the project area are Aneth, Strych, and the Monue-Seeg complex which formed on sandy or gravelly alluvial fans from sandstone and/or limestone. They are all very deep soils. The wind erosion hazard is moderate for Strych and very high for the others. The water erosion hazard is slight for Strych and moderate for the others. Permeability for Aneth is rapid, for Monue it is moderately rapid and for Strych and Seeg it is moderate. Runoff for Strych and Monue is medium, and for Aneth and Seeg it is slow.

The main soils in the Ferry Swale portion of the project area are the Arches-Pensom complex, Needles, Sheppard, and the Pagina-Wahweap complex all of which formed on dunes or alluvium from sandstone. Arches, Wahweap and Needles are shallow, Pagina is moderately deep, Pensom and Sheppard are deep to very deep. The wind erosion hazard is very high for all of these soils. The water erosion hazard is very high for the Sheppard

soil and moderate for the rest of them. Permeability is very rapid for Pensom and Needles, rapid for Arches and Sheppard, and moderately rapid for Pagina and Wahweap. Runoff is slow for all of these soils.

3.4.6 Soundscapes

Noise is defined as unwanted sound that interferes with normal activities or in some way reduces the quality of the environment. Response to noise varies according to its type, perceived importance, appropriateness in the setting, time of day, duration, and the sensitivity of the individual receptor.

In general, places away from highways and communities are quiet places in the project area and not subject to modern sources of unnatural sound intrusion or noise. The major noise producers in the project area are traffic along Highways 89 and 89A, military overflights, and small locally-based aircraft. Occasional noise also occurs on the unpaved roads from vehicular travel. Noise intrusions are most prevalent during high use seasons (such as during hunting seasons). Aircraft overflights create unnatural sound intrusion year-round. An advisory ceiling of 2,000 feet has been established by the Federal Aviation Administration (FAA) over designated wilderness. Noise related to aircraft overflights is also associated with public land management activities such as fire fighting, wildlife inventories, introduction and monitoring of special status or wildlife species (California condor, antelope, bighorn sheep, etc.), and animal damage control.

3.4.7 Wilderness Characteristics

The project area includes areas managed to maintain wilderness characteristics. These characteristics are defined as:

- **Naturalness:** Lands and resources exhibit a high degree of naturalness, are affected primarily by the forces of nature, and are areas in which the imprint of human activity is substantially unnoticeable. The BLM has authority to inventory, assess, and/or monitor the attributes of the lands and resources on public lands, which, taken together, are an indication of an area's naturalness. These attributes may include the presence or absence of roads and trails, fences and other improvements, the nature and extent of landscape modifications, the presence of native vegetation communities, and the connectivity of habitats.
- **Outstanding Opportunities for Solitude:** Visitors may have outstanding opportunities for solitude when the sights, sounds, and evidence of other people are rare or infrequent and where visitors can be isolated, alone, or secluded from others.
- **Outstanding Opportunities for a Primitive and Unconfined Type of Recreation:** Visitors may have outstanding opportunities for primitive and unconfined types of recreation where the use of the area is through non-motorized, non-mechanical means, and where no or minimal developed recreation facilities are encountered (BLM 2008a).

There are no designated routes within the areas managed to maintain wilderness characteristics. However, the east side of the Uplands RMZ provides access to areas managed to maintain wilderness characteristics. The west side of this RMZ also provides access to areas managed to maintain wilderness characteristics, primarily White Pocket and One Toe Ridge.

3.4.8 Wilderness

The Paria Canyon-Vermilion Cliffs Wilderness straddles the Utah-Arizona state line. This wilderness area is nationally and internationally known for its beauty and solitude. Paria Canyon has towering walls streaked with desert varnish, huge red rock amphitheaters, sandstone arches, wooded terraces, and hanging gardens. Along the bottom of the canyon, the Paria River and numerous springs combine to form a ribbon-like oasis of willows and cottonwoods.

Joining Paria Canyon at its mouth are the Vermilion Cliffs. This 3,000-foot escarpment dominates the area with its thick Navajo Sandstone face; steep, boulder-strewn slopes; rugged arroyos; and stark overall appearance. This attraction is visible along a Highway 89A and 89 south of Page, Arizona. Coyote Buttes is a geologically spectacular area where crossbeds of the Navajo Sandstone exhibit colorful banding in surreal hues of multiple colors. It is internationally recognized and continues to gain fame, creating a greater demand for visitors wanting to enter the area.

Uplands RMZ provides access to the Paria Canyon-Vermilion Cliffs Wilderness
East provides access to a remote portion of the Paria Canyon-Vermilion Cliffs Wilderness.
West is within the Paria Canyon-Vermilion Cliffs Wilderness.
Cedar Mountain/Ferry Swale is within the Paria Canyon-Vermilion Cliffs Wilderness.

Coyote Buttes, Paria Canyon, and Cliffs and Rims RMZs are all within the Paria Canyon-Vermilion Cliffs Wilderness.

Vermilion Cliffs RMZ is immediately adjacent to the Paria Canyon-Vermilion Cliffs Wilderness.

3.4.9 Wildlife

BLM Sensitive Species, Wildlife Species of Concern, and Migratory Birds

Species listed as sensitive by the BLM typically consist of small and widely dispersed populations, inhabit ecological refugia or specialized or unique habitats, could become endangered or extirpated from the State or within a significant portion of its range; is under status review by the U.S. Fish and Wildlife Service (USFWS); or is State-listed, but may be better conserved through application of BLM sensitive species status.

Arizona wildlife species of special concern are ones whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines, as described by the Arizona Game and Fish Department's (AGFD) listing of Wildlife of Special Concern in Arizona. Utah wildlife species of concern are those species for which there is credible scientific evidence to substantiate a threat to continued population viability. Table 4 lists the sensitive animal species and wildlife species of concern that may occur within the project area.

Table 4: Sensitive Wildlife Species and Wildlife Species of Concern that are Known to Occur or have the Potential to Occur* in the Project Area

Species	Occurrence	BLM Sensitive	Arizona Wildlife Species of Concern	Utah Wildlife Species of Concern
Bald eagle (<i>Haliaeetus leucocephalus</i>)	potential	no	yes	yes
Golden eagle (<i>Aquila chrysaetos</i>)	potential	no	no	yes
American peregrine falcon (<i>Falco peregrinus</i>)	verified	yes	yes	yes
Ferruginous hawk (<i>Buteo regalis</i>)	potential	yes	yes	yes
Swainson's hawk (<i>Buteo swainsoni</i>)	potential	no	yes	yes
Western burrowing owl (<i>Athene cunicularia hypugea</i>)	potential	yes	no	yes
Loggerhead shrike (<i>Lanius ludovicianus</i>)	potential	yes	no	yes
Spotted bat (<i>Euderma maculatum</i>)	verified	yes	yes	yes
Western small-footed myotis (<i>Myotis ciliolabrum</i>)	verified	yes	no	no
Fringed myotis (<i>Myotis thysanodes</i>)	verified	yes	no	no
Big free-tailed bat (<i>Nyctinomops macrotis</i>)	verified	yes	yes	yes
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	verified	no	no	yes
Great Plains toad (<i>Bufo cognatus</i>)	potential	no	no	yes

* "Potential to occur" means that suitable habitat exists, but species presence has not been verified.

Executive Order 13186 requires the BLM and other Federal agencies to work with the USFWS to provide protection for migratory birds. These species are protected by legislation and it is important to maintain habitat for these species so migratory patterns are not disrupted. All migratory birds are protected under the 1918 Migratory Bird Treaty Act (16 USC 703), which prohibits the taking of any migratory birds, their parts, nests, or eggs except by regulations (50 CFR Subpart B). Additional protection is

provided by the Neotropical Migratory Bird Conservation Act of 2000 (16 USC Chapter 80).

Bald and golden eagles are protected by the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c). This law, enacted in 1940 and amended several times since, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs.

The peregrine falcon was delisted in October 1999. There are monitoring requirements developed by the USFWS to assess the status of the species regionally. Historic and active nests are monitored annually on the Arizona Strip District. There are four historic nest sites along the Vermilion Cliffs, in the Cliffs and Rims RMZ. At least one active nest occurs in Paria Canyon RMZ. Optimum peregrine falcon habitat is considered to be steep cliffs overlooking woodlands, riparian habitats or other areas supporting abundant avian prey species. Peregrines return to breeding areas in Arizona from mid-February to mid-March. Egg laying occurs from mid-March through mid-May, and the young can fledge from May through August.

Western burrowing owls are known to occur in northern Arizona, generally year-round, with only a few winter records on the Colorado Plateau in the northeastern part of Arizona (AGFD 2001i); there is no specific data regarding occupancy or foraging use of the project area. These owls are infrequently observed, typically in burrows provided by ground squirrels or badgers. Habitat is in open, well-drained grasslands, steppes, deserts, prairies, and agricultural lands, often associated with burrowing mammals. There is habitat across the state line in Utah that is listed by UDWR as primary breeding habitat.

Loggerhead shrikes range across the Arizona Strip. Habitat requirements include tree or shrub nesting substrate, perches for hunting and territory advertisement, open foraging areas, and prey impaling sites. Pockets of critical value habitat for this species occur just over the state line in Utah. Their habitat requirements are expected to be adequately met in VCNM. Range-wide, the loggerhead shrike is in decline due primarily to loss and degradation of suitable habitat. Arizona Strip habitat has not been altered to the degree of most of the overall shrike range. This species is expected to occur in the project area, but population data is not available.

The spotted bat, western small-footed myotis, fringed myotis, big free-tailed bat and Townsend's big-eared bat are known from the project area. All five species have been captured and recorded as part of a monitoring program. On the Utah portion of the Paria and Coyote Buttes RMZs, the UDWR has listed the locality as substantial value habitat for the western small-footed myotis, fringed myotis, big free-tailed bat, and a mixture of limited and high value habitat for Townsend's big-eared bat.

There is high potential for the Great Plains toad to be present in the project area. This species is found in all of Arizona's warm and temperate grassland communities. It also enters sagebrush plains, mesquite woodlands, creosote flats, and has occasionally been found in high montane forest. This species has adapted well to the use of man-made

water sources. In nearby parts of Utah, the habitat is listed by UDWR as substantial value with pockets of critical value habitat.

Other Wildlife Species

The Arizona portion of the project area is in AGFD's Game Management Unit (GMU) 12B. Mule deer (*Odocoileus hemionus*) are expected to be found. GMU 12B is primarily winter range for migratory deer from both the North Kaibab Plateau in Arizona and from the Paunsaugunt Plateau in southern Utah. Migration studies conducted from 1996 to 1999 have shown that a portion of deer which summer on the Paunsaugunt will cross the state line to winter in Arizona. Paunsaugunt deer arrive in GMU 12B in mid-October and their movements extend southward about 8 miles into Arizona. Deer from the North Kaibab also migrate northward to merge with the Utah deer in early November. The east half of Unit 12B, the Paria Plateau (Uplands RMZ East and West and Cliffs and Rims RMZ), has a low-density resident deer population. Mass migration of deer on or off the Paria Plateau does not occur, however, there may be limited seasonal movement. Those deer that do move from and into this area may come from either the Kaibab Plateau or Utah. Overall the GMU 12B deer population is considered stable and increasing.

Desert bighorn sheep (*Ovis canadensis*) have been present in the project area since their reintroduction to the Vermilion Cliffs area in 1984. There are approximately 62,030 acres of suitable habitat along the Vermilion Cliffs identified by AGFD as the Paria Canyon - Vermilion Cliffs Habitat Area. The VCNM RMP allocated 57,070 acres of this site as the Vermilion Cliffs Wildlife Habitat Management (WHA) Area (Cliffs and Rims and Vermilion Cliffs RMZ), with the focus on managing the habitat for the benefit of desert bighorn sheep. Bighorn sheep come onto the Paria Plateau (Uplands RMZ East and West, Cliffs and Rims and Vermilion Cliffs RMZ) for occasional foraging and water, and to travel across the plateau to access other suitable habitat areas. Surveys for bighorn sheep are conducted annually in GMU 12B. Bighorn sheep were extirpated from this GMU prior to 1900, but translocations occurred in 1984 and 1985, totaling 52 sheep. The population grew to about 160 individuals within the first eight years, but began to slowly decline in the mid 1990s. The current population is estimated to be 90 bighorn sheep. At the present time, the population of desert bighorn sheep is low but stable.

Very little habitat suitable for pronghorn (*Antilocapra americana*) occurs within the project area. Approximately 20 percent of the Paria Plateau (in the southwestern portion) is categorized by AGFD as poor quality pronghorn habitat. More suitable habitat for pronghorn is present in nearby House Rock Valley (Uplands RMZ West portion between Highway 89A and the Vermilion Cliffs). The population of pronghorn in this area is cyclic in a direct relationship with precipitation. Survey population estimates have varied from 91 to 142 pronghorn over the past 10 years. During periods of drought, poor fawn survival has resulted in low recruitment and, conversely, during normal to above normal precipitation years, fawn survival and recruitment increase (AGFD 2007).

Other wildlife found in the project area is typical of the area, including a variety of common mammals (such as coyote, bobcat, gray and red fox, badger, antelope ground squirrel, kangaroo rat, skunk, porcupine, jack rabbit, desert cottontail, and bats), grassland birds, passerines, raptors, reptiles, and invertebrates.

3.4.10 Wildlife – Threatened and Endangered Species

Mexican Spotted Owl

The Mexican spotted owl (*Strix occidentalis lucida*) was listed as threatened on April 15, 1993. The range of the Mexican spotted owl extends from the southern Rocky Mountains in Colorado and the Colorado Plateau in central and southern Utah, southward through Arizona and New Mexico and into northern Mexico. Although the Mexican spotted owl's entire range covers a broad area of the southwestern United States and Mexico, it does not occur uniformly throughout its range. Instead, it occurs in disjunct localities that correspond to isolated forested mountain systems, canyons, and in some cases steep, rocky canyon lands. Surveys have revealed that the species has an affinity for older, uneven-aged forests, and the species is known to inhabit a physically diverse landscape in the southwestern United States and Mexico. Steep slopes and canyons with rocky cliffs characterize much of the owl's habitat on the Colorado Plateau (which includes the majority of the Arizona Strip). The Arizona Strip District is surrounded by areas where Mexican spotted owls have been detected, including Grand Canyon, Zion, and Canyonlands national parks, and GSENM.

Designated critical habitat was established for this species in 2001 and revised in 2004. No designated critical habitat occurs within the project area. The Mexican spotted owl requires steep, narrow canyons with micro-sites that remain cool during most of the day. They can also use mixed conifer stands. There is no mixed conifer in the project area, and canyons (with the exception of Paria Canyon) are generally too open and hot to support Mexican spotted owls. However, there are areas in Paria Canyon and the Vermilion Cliffs that are identified as potential spotted owl habitat by the Spotskey-Willey Mexican Spotted Owl Habitat Model (Willey, 2001, and 1997), which is a tool for predicting suitable canyon habitats that may have higher potential for species occupancy and nesting birds than other nearby canyons. The model uses terrain parameters to determine depth and width of canyons (owls need cooler micro-sites for nesting and roosting) and other features (such as distance to water and north facing cliff sites). The model predicts the canyons most likely to support nesting owls; from this it can then be determined if any "higher quality" habitat (according to the model) exists. It is important to note that any model is only an analysis tool, and experience with the current owl model has shown it to be accurate in some cases, but not in others (such as delineating cliff faces outside of canyons as high potential owl habitat). For canyon habitats, the primary constituent elements of habitat include one or more of the following attributes: 1) cooler and often more humid conditions than the surrounding area; 2) clumps or stringers of trees and/or canyon walls with crevices, ledges or caves; 3) high percent of ground litter and woody debris; and 4) riparian or woody vegetation. Habitat predicted from the Mexican spotted owl habitat models occurs in the Paria Canyon RMZ and Cliffs and Rims RMZ.

The breeding period for Mexican spotted owls runs approximately February 15-March 15; nesting occurs from March 15-June 15; and the fledging period runs until about July 15.

Owl surveys were conducted in Paria and Wrather canyons in 1991, 1992, 2003 and 2004. Soap Creek Canyon, north of Cliff Dwellers, was also surveyed in 1991 and 1992. Mexican spotted owl feathers were found in Paria Canyon in 2008, indicating at least transient use. To date, no spotted owls have been found to nest on the Arizona Strip.

California condor

The California condor (*Gymnogyps californianus*) was listed as endangered in 1967. Condors occur across VCNM and nest in the Vermilion Cliffs. Condors are generally present on the west side of the Paria Plateau, where their pre-release pens are located and supplemental feeding takes place. This population is designated as non-essential experimental under section 10(j) of the Federal Endangered Species Act (ESA). The reintroduction of condors to northern Arizona began with the release of six captive-reared birds on the Vermilion Cliffs in 1996. As of February 17, 2010, there were 74 condors in the wild in northern Arizona. The reintroduced population as a whole appears to be stable and is increasing. Two pairs of Arizona condors incubated eggs in 2009. Both eggs hatched and two chicks were visually confirmed (although one appears to have died). The reintroduction continues annually as captive-reared birds are released along the Vermilion Cliffs. Each released condor is equipped with radio telemetry or GPS satellite transmitters and numbered wing tags to allow observers to track their movements.

California condors are thought to be monogamous, maintaining stable pair bonds over a period of multiple years (Snyder and Schmitt 2002). Courtship and nest site selection by breeding California condors occur from December through the spring months. The female of a reproductively mature, paired California condor normally lays a single egg between late January and early April. Pairs not attending a dependent fledgling from the previous year may attempt breeding annually, but pairs successfully rearing a young typically nest every 2 years (Snyder and Hamber 1985). The egg is incubated by both parents and hatches after approximately 56 days. Both parents share responsibilities for feeding the nestling. At 2 to 3 months of age, the California condor chick leaves the actual nest cavity but remains in the vicinity of the nest where it is fed by its parents. The chick takes its first flight at about 6 to 7 months of age but may not become fully independent of its parents until the following year.

Condors range widely, easily covering over 100 miles in a day, and their current range includes the entire Arizona Strip, throughout the Grand Canyon, into adjacent Utah and Nevada, and south of the Grand Canyon in Arizona. Condors are most commonly observed near the release site on the Vermilion Cliffs, at Navajo Bridge near Marble Canyon, on the Kaibab Plateau, and on the South Rim of the Grand Canyon. They have also been seen flying over Fredonia. Depending upon weather conditions and the hunger of the bird, a California condor may spend most of its time perched at a roost. Although California condors usually remain at roosts until mid-morning, and generally return in

mid- to late afternoon, it is not unusual for a bird to stay perched throughout the day. While at roosts, California condors devote considerable time to preening and other maintenance activities. Roosts may also serve some social function, as it is common for two or more California condors to roost together and to leave a roost together (USFWS 1984). There may be adaptive as well as traditional reasons for California condors to continue to occupy a number of widely separated roosts, such as reducing food competition between breeding and non-breeding birds. Condors are strictly scavengers and prefer to eat large, dead mammals such as mule deer, elk, pronghorn, bighorn sheep, cattle, and horses. While the condors now find much of their food on their own, carcasses of dairy calves are provided near the Vermilion Cliffs release site in order to provide carrion which is contaminant free.

4.0 ENVIRONMENTAL IMPACTS

4.1 Introduction

This chapter describes the potential impacts of the proposed action and alternatives to the natural and human environment. A detailed impact analysis was accomplished using an interdisciplinary team (IDT) of BLM resource specialists who examined each of the 4 proposed alternatives, and each action within each alternative, to determine the potential impacts to the human environment that may occur with the implementation of the alternatives. The conclusions reached through this analysis are based on the IDT's knowledge of resources and the project area, review of existing literature, and information provided by experts in the BLM or other agencies.

Only discussions on management actions that would have a potential impact on resources are discussed in this EA (see Table 2 in Chapter 3). Because resources within the project area are so broad and diverse, the project area was divided into RMZs: House Rock, Uplands, Coyote Buttes, Paria Canyon, Cliffs and Rims, and Vermilion Cliffs. The Uplands RMZ was divided into 3 distinct zones to encompass the unique resource settings and specialized recreation niches in each zone while providing a variety of recreation opportunities: East Side, West Side, Ferry Swale-Cedar Mountain. Each zone offers unique settings for recreation opportunities; therefore impact discussions are broken down where appropriate, not only by alternative but by these zones as well.

The following terminology was used for the determination of impacts and incorporates intensity, context, and duration of impacts into the analysis of probable effects of alternatives.

Negligible: The impact is at the lower level of detection; there would be no measurable change.

Minor: The impact is slight but detectable; there would be a small change.

Moderate: The impact is readily apparent; there would be a measurable change that could result in a small but permanent change.

Major: The impact is severe; there would be a highly noticeable, long-term, or permanent measurable change.

Localized Impact: The impact would occur in a specific site or area. When comparing changes to existing conditions, the impacts would be detectable only in the localized area.

Short-Term Effect: The effect would occur only during or immediately after implementation of the alternative.

Long-Term Effect: The effect could occur for an extended period after implementation of the alternative. The effect could last several years or longer.

The analysis included determination of three types of impacts, where applicable: direct, indirect, and cumulative. Direct effects are those that are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or removed in distance but are still reasonably foreseeable. Cumulative effects are impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions.

4.2 Direct/Indirect Impacts

Each of the resources discussed in Chapter 3 that were identified as potentially being affected are analyzed below for their direct and indirect impacts. The direct effects of this proposal are those caused by the action and occur at the same time and place of the proposed event. For example, in this EA direct effects are considered those caused by the actual guided ATV rides on existing roads and trails.

Also, indirect effects are those caused by the action but are later in time or farther removed in distance, yet are still reasonably foreseeable. For this EA, indirect effects are caused by the guided ATV rides on existing roads and trails but further removed in space (throughout the three County area) and time (perhaps over years) from the actual event.

Each of the resources listed below will be analyzed for:

- a. Cause of the impact or what action would cause an impact?
- b. Nature of the impact or what would be affected and how would it be affected?
- c. Context or intensity of the impact such as where would it occur or what would be the extent or duration of the impact?

4.2.1 Alternative A

4.2.1.1 Air Quality

Common to all RMZs

As stated in Chapter 3, the project area is a Class II airshed. Air quality monitoring has not been conducted within the area. However, fugitive dust experiments have been performed in similar environments on dry soils utilizing three types of vehicles: the 4-wheeler (quad), the dune buggy, and the dirt bike (motorcycle). “The general trend is clear: most PM₁₀ was emitted by the 4-wheeler and this at all driving speeds” on all surface types with silty surfaces producing more PM₁₀ emissions than sandy surfaces. Most dust was produced on silt/clay with gravel and desert pavements whereas the sandy surfaces produced the least amounts of dust.” (Goossens, D., Buck, B., Dust emission by

off-road driving: Experiments on 17 arid soil types, Nevada, USA, *Geomorphology* (2009), doi:10.1016/j.geomorph.2008.12.001 pg 11). A minor amount of fugitive dust would be created on the sandy soils increasing to moderate dust impacts on the loamy soils. This would vary and may increase or decrease according to soil moisture and texture, vehicle type, number of vehicles, and their speeds. There would be minor amounts of emissions from engines. Class II standards are not likely to be exceeded. This alternative would have the most impacts because the most vehicle use would be authorized, although the short-term impacts would be localized, they would occur more frequently and would require monitoring to determine if or when the impacts reach LAC levels.

The Paria Plateau and most of the Ferry Swale area within VCNM generally have sandy surfaces that, have a low potential for producing fugitive dust. House Rock Valley on the other hand, generally has silt/soils that produced the most amount of fugitive dust regardless of the type of vehicle used.

House Rock RMZ

The nature of the potential impacts would be the creation of fugitive dust as vehicles travel along BLM Road 1065. Moderate impacts may result from the physical presence of vehicles on BLM Road 1065. The duration and intensity of these potential impacts would be moderate due to the maximum number of potential vehicles on these routes. The group size under this alternative would be 12 people per group, but the number of commercial vehicles in use over the course of a year could be as many as about 25,000. The amount of fugitive dust in comparison to current conditions would dramatically increase but the total amount of fugitive dust under this alternative that could be created would vary depending on the type of soil, the amount of moisture in the soil, the amount of wind, and the number of participants. The duration of the impact would be repetitive short-term and localized with up to ½ mile per each vehicle pass, dependent on the amount of fugitive dust and the direction and speed of the localized winds. It is expected that two to three OHVs would pass any point along the route within 5 minutes, while 12 ATVs could take as long as 30-45 minutes depending on topography, vegetative cover, experience of the rider and the amount of fugitive dust in the air.

Uplands RMZ

East Side

Moderate impacts in relation to current conditions would be expected under this alternative. The duration and intensity of these potential impacts would be moderate due to the maximum number of potential vehicles on these routes. The group size would be up to 25 people per group and the number of SRPs issued could be up to 15. The number of commercial vehicles in use would increase from an estimate of 20 a year to an estimate of about 600 vehicles a year. The amount of fugitive dust in would be minor to moderate but the total amount of fugitive dust under this alternative that could be created would vary depending on the type of soil, the amount of moisture in the soil, the amount of wind, and the number of

participants. The duration of the impact would be repetitive short-term and localized with up to 1/8 mile per each vehicle pass, dependent on the amount of fugitive dust and tight corners, limited routes, “bottleneck” conditions entering and exiting the Paria Plateau and the thick vegetation along designated routes. It is expected that up to 4 OHVs would pass any point along the route within 15-20 minutes, while 25 ATVs could take as long as an 1 hour to pass depending on topography, vegetative cover, experience of the rider and the amount of fugitive dust in the air. However, implementation of spatial/temporal restrictions would result in no fugitive dust in certain portions of the project area during certain times of the year (see Table 2), which would reduce the amount of fugitive dust created in these localized areas.

West Side

Moderate impacts in relation to current conditions would be expected under this alternative. The duration and intensity of these potential impacts would be minor to moderate due to the maximum number of potential vehicles on these routes. The group size under this alternative could be as many as 25 persons and the number of SRPs issued could be up to 25. The number of commercial vehicles in use could be as many as 1,220 vehicles a year. The amount of fugitive dust would be minor to moderate but the total amount of fugitive dust under this alternative that could be created would vary depending on the type of soil, the amount of moisture in the soil, the amount of wind, and the number of participants. The duration of the impact would be repetitive short-term and localized with up to 1/8 mile per each vehicle pass, dependent on the amount of fugitive dust and tight corners, limited routes, “bottleneck” conditions entering and exiting the Paria Plateau and the thick vegetation along designated routes. It is expected that up to 4 OHVs would pass any point along the route within 15-20 minutes, while 25 ATVs could take as long as an 1 hour to pass depending on topography, vegetative cover, experience of the rider and the amount of fugitive dust in the air. However, implementation of spatial/temporal restrictions would result in no fugitive dust in certain portions of the project area during certain times of the year (see Table 2), which would reduce the amount of fugitive dust created in these localized areas.

Cedar Mountain/Ferry Swale

Moderate impacts in relation to current conditions would be expected under this alternative. The duration and intensity of these potential impacts would be moderate due to the maximum number of potential vehicles on these routes. The group size could be as large as 25 and the number of SRPs issued could be up to 15 SRPs plus up to 3 large group events a year. The number of commercial vehicles in use could be as many as 2,500 vehicles a year excluding the number of vehicles associated with large events. To mitigate the issues related to fugitive dust with large

events in this area, the maximum group size of 25 would be permitted with each group, per event required to be geographically separated (Cedar Mountain, Ferry Swale east, and west etc.), as determined by the BLM and written into the event stipulations. The amount of fugitive dust would be moderate but the total amount of fugitive dust under this alternative that could be created would vary depending on the type of soil, the amount of moisture in the soil, the amount of wind, and the number of participants. The duration of the impact would be repetitive short-term and localized with up to 600 feet per each vehicle pass, dependent on the amount of fugitive dust and tight corners and the limited routes entering roads based in washes. It is expected that up to 4 OHVs would pass any point along the route within 5-10 minutes, while 25 ATVs could take as long as a ½ hour to pass depending on topography, vegetative cover, experience of the rider and the amount of fugitive dust in the air. However, implementation of spatial/temporal restrictions would result in no fugitive dust in certain portions of the project area during certain times of the year (see Table 2), which would reduce the amount of fugitive dust created in these localized areas.

Vermilion Cliffs

The creation of fugitive dust would be negligible as vehicle travel off Highway 89A to trailheads and parking areas would be generally be less than 500 feet.

Other RMZs

Moderate impacts in relation to current conditions would be expected under this alternative. The duration and intensity of these potential impacts would be moderate due to the maximum number of potential vehicles to access these areas. Use would be focused on BLM Roads 1065, 1066, 1088, 1079, 1082, 1323, 1106, 1102, 1100 and 1017 with potential for focused use on other BLM routes in the area dependent on new use patterns developed through increased numbers of SRPs. The group sizes accessing these areas could be as large as 25 and vehicle numbers could be as many as 4 OHVs and 25 ATVs. The number of commercial vehicles in use to access these areas could be as many as 800 vehicles a year.

4.2.1.2 Cultural Resources

Common to all RMZs

Direct and indirect potential impacts to cultural resources could result from increased road use creating erosion or previously undocumented cultural resource site exposure issues, the use of camp sites not previously inventoried for the presence of cultural resources, the potential for the illegal collection of artifacts, and the potential for unauthorized visitation to sites not allocated to Public Use under the RMP. However, since all vehicular travel is required to remain on designated routes, and all camps

proposed for use would be inventoried for the presence of cultural resources (and not authorized for use if cultural resources are present), impacts are expected to be minor to and limited to localized areas. Vehicular impacts would be contained on designated routes previously disturbed due to use by the general public and no additional surface disturbance would occur.

In addition, the potential for adverse impacts related to improper visitor etiquette at historic properties and archeological sites authorized for commercial use (including West Bench Pueblo, Maze Site, Sun Valley Mine, Dominquez Escalante Trail, and the Honeymoon Trail) should be reduced due to the training given to the SRP holders and their guides during yearly SRP meetings held in conjunction with GSENM. Guides would then educate their clients regarding these sensitive resources, which would minimize the potential for visitor-related effects at rock art sites or historic sites from commercial use.

4.2.1.3 Recreation

There are many uses that co-exist across the project area. Advertising associated with this area has increased the awareness of the recreational opportunities that are available in the area resulting in increased visitation. Current use patterns suggest that public awareness of area resources has direct impacts on the number of commercial requests the BLM is experiencing in the project area.

SRPs allow the BLM to regulate and monitor appropriate motorized activity within specific areas more efficiently for both commercial SRPs and large groups if the local land management area determines the need for organized group SRPs. In addition, permittees provide self promoted monitoring services by providing timely information and details of unauthorized commercial operations and resource damage. By preventing the development of SRPs focused on specialized recreation niches, the ability for the BLM to receive aid in monitoring remote locations would diminish and would prevent the BLM from offering the public the ability to recreate within specialized recreation niches that require specialized equipment or skills.

Currently off highway vehicle usage is increasing during the spring and fall months within the project area especially the Ferry Swale area and on the Paria Plateau. Social groups vary in size from two to three vehicles and people up to 10- 25 ATVs. Many of these groups have been displaced from state lands or federal lands that are beginning to manage for resources by closing illegal open areas and/or roads into private or sensitive areas resulting in the need to locate new OHV areas. These groups are generally coming from Utah, Arizona, California and Nevada and are promoting their trips as common adventure trips among their OHV clubs. Developing a standard in which the BLM will require organized groups to have an SRP is paramount in resource protection and monitoring. There are many varied recreation uses that currently exist in these areas including similar activities as those that would occur through commercial use, i.e. ATV or four-wheeling exploration, photography, hiking, backpacking trips.

Any long-term impacts to recreation as a result of this alternative would be due to conflicts caused by competition for use of the same area at the same time or conflicts that may be the result of user preferences, resource social and physical expectations and experiences and direct competition for special recreation permits for the Paria Canyon/Coyote Buttes permit areas. Potential conflicts would include moderate short-term adverse effects to non-motorized activities such as hiking, backpacking, wilderness solitude and silence, OHV exploration or hunting. These may include increased localized dust, noise, congestion of a specific area, or a general unwillingness to share the area with others, including other motorized users. This would result in having a less-satisfying recreation experience than would otherwise occur.

Potential impacts are enhanced by the limited number of routes available for use in the project area specifically on the “bottleneck” of the Paria Plateau (Uplands East and West) which restricts vehicular traffic due to wilderness and geographically boundaries. All motorized travel would occur on designated roads. The daily limits on the number of vehicles and expected contacts with other groups using the routes would have moderate impacts by the increased use of commercial operations under this alternative. These impacts have historically increased focused pressures during the high use season (March through November). High use is generally restricted by seasonal weather fluctuations but new information has indicated that the shoulder seasons are extending to include the entire year. Any particular point along a route could have short-term, localized effects lasting 15-20 minutes for OHVs while 25 ATVs could take as long as an 1 hour to pass depending on topography, vegetative cover, experience of the rider and the amount of fugitive dust in the air. Contacts with other recreating public would be frequent and transitory on the main routes, and could result in moderate congestion at frequently visited recreation sites, overlooks and cultural points of interest, where during the hot periods of the year, all users visit trailheads, overlooks and photographic opportunities during the early or late hours of day especially around sunrise and sunset for those interested in photography. However, contacts with other users would be expected in the Vermilion Cliffs RMZ (due to its rural setting) so conflicts between various recreational user groups are not expected to occur there.

Motorized vehicle type recreation activities are popular in the area. Most of these are unorganized and are based around small groups of friends or family. The potential for long-term localized impacts on the expectations of these groups could occur from increased commercial use in the project area in direct correlation with the number, type and size of commercial use authorized in each RMZ.

Hikers and other recreational users seeking a more primitive experience may use these same roads and trails to travel by vehicle to a trailhead or parking area, park their vehicle, and then move into more remote areas. They would be indirectly affected by frequent short-term, localized encounters on the road, since travel is limited to existing roads and trails. It is more likely that other users would feel crowded or hear noise and see a dust plume in the distance, resulting in direct long-term effects. Congestion on the main routes could potentially become a problem requiring commercial use to become directional if necessary.

Primitive recreation including the expectation of solitude and silence could be impacted long-term if mitigation and carrying capacity in the form of the Needs Assessment, Appendix C is not addressed. Therefore the use of the Needs Assessment will be required for all future decisions for SRPs. Adaptive management would be utilized to mitigate impacts to recreation expectations and user conflicts.

Recreation use under this alternative would increase to the maximum number of available permits within the permit areas. Currently, the permit areas quotas for walk-in permits (Coyote Buttes North) and all permits for Coyote Buttes South, are not maximized during the shoulder season or during the months of December and January. Currently, Paria Canyon permit quotas are not maximized outside of the May through June and September through October timeframes. Current use patterns show increased use in the shoulder season with the prediction that in the next two years, all walk-in and on-line permits will be filled from mid to late February to late November of each year. Recreation use under this alternative, outside of the permit areas, would increase due to users who become more familiar with the area through photographs, blogs, commercial SRP promotions and media outlets. This would contribute to increased moderate impacts to the area. However, since the participants would be exposed to land use and ethics education that would not be provided to the casual user, this may decrease the impacts when mitigation and needs analysis are considered during the permitting process. This may result the potential for reduced impacts to other recreationists.

4.2.1.4 Socioeconomics

Common to all RMZs

One of the primary factors influencing visitor use in the project area is continued external publications and photographs of the resource. Continued population growth, economic impacts from economic downturn that decreases the ability to travel long distances, and increased awareness of the resources in the project area would bring about increased recreation use, especially the Cedar Mountain/Ferry Swale area because of its proximity to local communities.

This alternative would provide the maximum number of motorized commercial recreation opportunities while providing the potential for an economic stimulus to the local area by bringing participants into the area where they would purchase food, fuel, entertainment, goods, and lodging. While existing businesses operating in the area could supply the current level of demand for goods or services, the potential for growth under this alternative may exceed the existing supply of goods and services, thereby creating the economic opportunity for new businesses.

House Rock RMZ

Limiting the group size to 12 would have negligible economic impacts as the average group size currently is 6 or less but the number of SRPs would increase. This alternative may have minor to moderate economic impacts for commercial

users. The ability to provide ATV based trips in this area would benefit ATV based commercial use.

Uplands RMZ

East Side

Providing for a maximum group size of 25 and allowing the maximum number of SRPs allowable could have minor to moderate economic impacts by providing increased opportunities for businesses supplying this type of service. If increased confrontations or accidents between participants and other users occur as a result of authorizing an SRP of this size, mitigation measures such as directional traffic, seasonal use for large groups or denial of large groups SRPs may be required. The ability to provide ATV based trips in this area may have minor to moderate impacts on ATV based commercial use.

West Side

Providing for a maximum group size of 25 and allowing the maximum number of SRPs allowable could have minor to moderate economic impacts by providing increased opportunities for businesses supplying this type of service. If increased confrontations or accidents between participants and other users occur as a result of authorizing an SRP of this size, mitigation measures such as directional traffic, seasonal use for large groups or denial of large groups SRPs may be required.

Allowing for the maximum group size in the southern portion of Paria Plateau, including the area between Highway 89A and the Vermilion Cliffs, and the maximum number of authorized SRPs allowable could also have minor to moderate economic impacts by providing increased opportunities for ATV based commercial providers. However, as stated above, if increased confrontations or accidents between participants and other users occurs as a result of authorizing an SRP of this size, mitigation measures such as directional traffic, seasonal use for large groups or denial of large groups SRPs may be required.

Cedar Mountain/ Ferry Swale

Under this alternative, increasing the group size to 25 and the number of authorized SRPs could have minor to moderate economic impacts by providing increased opportunities for businesses supplying this type of service. If increased confrontations or accidents between participants and other users occurs as a result of authorizing an SRP of this size, mitigation measures such as directional traffic, seasonal use for large groups or denial of large groups SRPs may be required. The ability to provide ATV based trips in this area may have minor to major impacts on ATV based commercial use.

Coyote Buttes RMZ

Under this alternative, the number of authorized SRPs would increase according to LAC and the Needs Analysis process. The potential for meeting the ceiling in this area would likely occur in 2010 or 2011 for both Coyote Buttes North and the South. This alternative may result in minor to moderate impacts to private users. Currently the walk-in lottery process for Coyote Buttes South is being instituted on an as needed basis. Increased commercial use of Coyote Buttes South is likely to result in the need to institute an on-line and walk-in lottery process. If LAC determines a Coyote Buttes South lottery is needed, the likelihood of obtaining permits to access the area would decrease, which could affect businesses that provide services to this area.

Coyote Buttes North permits are already limited. These permits are available through a lottery process in which there are likely to be 1,000 or more people competing for the same permits, so the likelihood of an SRP holder obtaining Coyote Buttes North permit is small and would decrease as the number of authorized SRPs increases. Impacts from this alternative could be mitigated by the ability to visit areas similar known geological structures in GSENM, Coral Pink Sand Dunes and Snow Canyon State Parks within the region. Monies spent by private users and SRPs authorized through this process would mitigate economic impacts.

Paria Canyon RMZ

Under this alternative, the number of authorized SRPs would increase according to LAC and the Needs Analysis process. The potential for meeting the ceiling in this area would likely occur under this alternative within the next few years. This alternative would have less of an economic impact than this alternative but may result in minor to moderate impacts to private users. The local economy may realize minor impacts to commercial enterprises, wishing to focus on the Paria Canyon as the number of available permits is determined by the first-come, first-served on-line process for which there is direct competition from other SRPs and private users. If LAC determines a lottery is needed in this area, the likelihood of obtaining permits to access the area would decrease. Increased commercial use is likely to result in the need to institute an on-line lottery. Impacts from this alternative could be mitigated by the ability to visit areas similar well known slot canyons in GSENM, Zion National Park, and Antelope Canyon and little known canyons within the region. Monies spent by private users and SRPs authorized through this process would mitigate economic impacts.

Cliffs and Rims RMZ

Under this alternative, the group size would be limited to 6. Large groups would be required to manage, organize and monitor the group size limits to assure that the group size remains at 6 people or less. This area currently sees little commercial use. There would be minor economic impacts to increasing the number of authorized SRPs as there have been few requests for commercial use in this area.

Vermilion Cliffs RMZ

Providing for a maximum group size of 50 could have minor to moderate economic impacts by providing increased opportunities for businesses wishing to supply services in the area. The number of SRPs issued is likely to be limited due to the limited number of access points, controlled access from community based lodges and limited recreation resources within the RMZ. There is a potential for increased confrontations between participants and local land owners as a result of authorizing an SRP of this size in the RMZ. Mitigation measures and coordination with affected communities would be required to minimize the potential for these confrontations.

4.2.1.5 Soil

Common to all RMZs

The compaction of soil surfaces can affect the infiltration and runoff characteristics of routes and campsites. Most of the soils in the area have sandy surfaces which resist compaction. The Strych soil along the main access roads in the House Rock area can be compacted. With the small percentage of area being affected (i.e., existing roads), a negligible change in the timing, duration, and intensity of runoff from the areas watersheds is predicted. There might be some minor to moderate water erosion on the steeper slopes of shallow soils. The loose sands are easily churned up by tire action making them subject to wind erosion. This alternative (along with Alternative B) would have the most potential impacts on soil resources due to the highest number of potential vehicles traveling within the project area.

4.2.1.6 Soundscapes

Impacts to soundscapes from travel on designated roads by OHVs and ATVs would be localized but could be extended to more than one hour due to the increased number of vehicles traveling in the area along designated routes.

House Rock RMZ

Under this alternative, it is expected that two to three OHVs would pass any point along the roads in this RMZ within 5-10 minutes, while 12 ATVs could take as long as 30-45 minutes to pass depending on topography, vegetative cover, experience of the rider, traffic, and visibility (i.e., the amount of fugitive dust in the air). Vehicle traffic in the House Rock RMZ would increase, which could affect users of the Arizona National Scenic Trail and wilderness that borders BLM Road 1065 (to include those areas contained within the Coyote Buttes RMZ).

Uplands RMZ

Under this alternative, it is expected that three to four OHVs would pass any point along the roads in this RMZ within 10-15 minutes, while 25 ATVs could take

longer than 45 minutes to pass a single point as a result of challenging topography and soils, vegetative cover, experience of the rider, traffic, and the amount of fugitive dust in the air and the requirement that groups no larger than 6 visit the Cliffs and Rims RMZ. Impacts to the soundscape are expected to be greatest under this alternative (along with Alternative B) since more vehicle use would occur.

East Side

Under this alternative, it is expected that four OHVs would pass any point along the roads in this RMZ within 10-15 minutes while 25 ATVs could take as long as one hour to pass as a result of topography and soils, vegetative cover, experience of the rider, traffic and the amount of fugitive dust in the air. Under this alternative, groups of 25 would need to split into 4 different groups to access the Cliffs and Rims RMZ extending the time and exposure to soundscape disturbances within this RMZ. Impacts to soundscapes are expected to be greatest under this alternative (along with Alternative B) since more vehicle use would occur.

West Side

Under this alternative, it is expected that four OHVs would pass any point along the roads in this RMZ within 10-15 minutes, while 25 ATVs could take between 15-30 minutes to pass as a result of topography and soils, vegetative cover, experience of the rider, traffic and the amount of fugitive dust in the air. Under this alternative, groups of 25 would need to split into 4 different groups to access the Cliffs and Rims RMZ extending the time and exposure to soundscape disturbances within this RMZ. Impacts to soundscape are expected to be greatest under this alternative (along with Alternative B) since more vehicle use would occur.

Cedar Mountain/Ferry Swale

Under this alternative, it is expected that four OHVs would pass any point along the roads in this RMZ within 10-15 minutes, while 25 ATVs could take between 15-20 minutes to pass as a result of challenging topography and soils, vegetative cover, experience of the rider, traffic and the amount of fugitive dust in the air. Impacts to soundscape are expected to be moderate.

Coyote Buttes RMZ

Under this alternative, it is expected that two OHVs would pass any point along the roads in this RMZ within 10-15 minutes, while 6 ATVs could take between 10-20 minutes to pass as a result of challenging topography and soils, vegetative cover, experience of the rider, traffic and the amount of fugitive dust in the air. Impacts to soundscape are expected to be minor because group size, the total number of permits issued and motor vehicle access is limited to those designated routes outside of the wilderness. Vehicle contacts could increase while traveling to the trailheads associated with this permit area.

Paria Canyon RMZ

Under this alternative, impacts to soundscape would be negligible because group size, the total number of permits issued and motor vehicle access is limited to those designated routes outside of the wilderness. Vehicle contacts could increase while traveling to the trailheads associated with this permit area.

Cliffs and Rims RMZ

Under this alternative, groups of 25 would need to split into 4 different groups extending the time and exposure to soundscape disturbances within this RMZ. Excluding the small portion of the RMZ that borders Highway 89A, all access points to this RMZ require motorized vehicles. Impacts to this RMZ are unknown at this point but could potentially have moderate impacts to the soundscape due to the increased number of vehicles that could be authorized.

Vermilion Cliffs RMZ

Under this alternative, groups of 50 would have negligible impacts to the soundscape within this RMZ because vehicular travel would be limited to the Highway 89A corridor and the majority of the traffic is anticipated to be buses decreasing the overall number of vehicles. In addition, this RMZ is located adjacent to the small communities of Cliff Dwellers and Vermilion Cliffs so human activity already occurs there. However, when permitted SRP activities would occur, noise levels would increase, but this increase would only be temporary.

Impacts on soundscapes would be extended by ATV use versus 4 X 4 (OHV) use due to the duration of time it would take multiple vehicles (ATVs) to travel by a specific location carrying the same number of individuals as would be carried in a single OHV. The amount of impacts would be directly correlated with the number of ATVs in each group and the number of groups traveling the road corridors on a given day. OHVs must maintain the State of Arizona requirement of 96dB or less for ATVs operated in the state per AZ revised statute 17-308 which would mitigate soundscape impacts across the project area.

4.2.1.7 Wilderness Characteristics

VCNM is known for the opportunity to experience remote, challenging and primitive adventures where one can leave behind civilization and the fast paced lifestyle. Independence and self-reliance are enjoyed as much as exploring motorized and non-motorized areas. It is most evident on the Paria Plateau where the absence of signs, facilities and contact with others recreating in the area is expected. Increased contacts, large group sizes and user conflicts within this area are most likely to result in complaints from the public. Recreation user expectations in areas managed to maintain wilderness characteristics include the lack of the imprint of human activity and the outstanding opportunity for solitude where one can remove themselves from sights, sounds and evidence of other people except on rare or infrequent occasions.

Uplands RMZ

East Side

Moderate impacts in relation to current conditions would be expected under this alternative for the area including the overlooks, White Knolls and the private inholding known as Joes Tank. Current commercial use consists of one vehicle with an average group size of 4 traveling through the area 2-3 times a year. Of the 4 SRPs that are authorized to access this area, only 2 have had use in this area. Any increased use of this area would have minor to moderate impacts on the three wilderness characteristics in areas adjacent to designated routes. Maintaining the authorized group size of 25 would require logistics to manage, separate and organize the group to accommodate the limits in group size within the Cliffs and Rims RMZ of 6 and a group of 12 within the House Rock RMZ. Therefore, a group of 25 would visit an overlook within Cliffs and Rims RMZ over a period of between 2-4 hours. Twenty-five ATVs could take as long as 1-4 hours to pass other users groups depending on topography, vegetative cover, experience of the rider and the amount of fugitive dust in the air. The extended length of time it would require a group of 25 to visit the overlooks within this area would extend the amount of exposure in time, noise, fugitive dust and the opportunity for solitude in areas adjacent to designated routes beyond the Limits of Acceptable Change.

West Side

Moderate impacts in relation to current conditions would be expected under this alternative for the area including White Pocket north to the wilderness boundary and east of Sand Hill Loop road. Current use in this area includes 5 SRPs whose current use averages a group size of 3 with an occasional group size of 7-10 people with 2 guides although SRPs have the authorization for a group size of 10, plus 2 guides in this area. Recreation users have the ability to experience silence and solitude without the imprint of human activity excluding the parking lot area and the old sandy roadway with rare to non-existent disturbance. Occasional heavy use does occur on weekends or holidays for which the BLM receives complaints about overcrowding.

The southern portion of Paria Plateau currently sees little commercial use although local clubs and groups visit the overlooks. No commercial use is occurring between Highway 89A and the Vermilion Cliffs. The group size has averaged 5 or less in this area. An increase to 25 would impact the expectations for solitude and silence in this area of Uplands West although the proximity of Highway 89A and BLM Road 1065, the community of Marble Canyon and the Dominguez Escalante interpretive site decrease the relative impacts.

4.2.1.8 Wilderness

As identified in section 3.4.8, the Paria, Coyote Buttes and Cliffs and Rims RMZs contain designated wilderness. All the other RMZs provide access to designated wilderness. Much of the recreation use within VCNM involves motor vehicles accessing Paria Canyon-Vermilion Cliffs Wilderness. Activities within wilderness include hiking, backpacking, adventure exploration, scenic photography and viewing scenic overlooks. Many designated roads approach within several hundred yards of the wilderness or form the wilderness boundary within House Rock Valley along the southern boundary of the Vermilion Cliffs and along the northern end of the House Rock RMZ. No designated roads occur within the wilderness.

This alternative would increase the number of requests for commercial services for similar recreation activities relating to photographic seminars and vehicle touring but the number of commercial applications will continue to increase as a result of external publications on the area. The potential for impacts to private users within the permit areas could be seen without careful implementation of the Needs Assessment in Appendix C.

Tours could result in groups of people concentrating at specific areas. Thus, moderate impacts to wilderness values are expected to occur with the implementation of this alternative. The potential for impacts could be caused by the increased number of vehicles traveling on designated routes adjacent to the wilderness boundary and the number of hikers in the wilderness. This alternative would likely increase the use of specific areas within the wilderness.

The opportunities for primitive and unconfined recreation and solitude could be diminished by sights and sounds by activities authorized under this alternative outside the PC/CB permit areas and could have minor effects within the PC/CB permit areas by decreasing the likelihood of an “off season” time in which recreation users could avoid all contact with other permit holders. This would include engine noise, people noise, group size, number of contacts per day, dust, and movement. Since motorized activities would stay on existing routes outside of wilderness, there would be no new impacts to naturalness related to increased vehicle traffic. However, increased foot traffic and repeated use of particular areas within the wilderness could result in moderate impact naturalness as social trails, soil compaction and invariable damage to fragile resources occur, although the probability of this should be minimized by providing training to SRP holders and their guides; this would minimize the potential for social trails and associated impacts to wilderness characteristics.

Only lands within close proximity to the designated roads could be affected by motor vehicles. The number of users that would be affected is anticipated to be moderate because these areas are remote, receive less recreation use than other destinations and the expectation of solitude is high. The impact from sights and sounds would be short-term and intermittent since the group size of 6 or less would be maintained and contacts with other groups would be maintained between 3-6, dependent upon LAC and monitoring data, within the wilderness per day.

Managing the Cliffs and Rims RMZ outside of the Paria River corridor for the prescribed group size of six within this zone would benefit from reducing impacts on project area resources and social settings and reducing probability of user-wildlife conflicts. The difficulty of managing the group size may occur as related to adjoining RMZ prescriptions that permit larger group sizes. Monitoring would therefore need to occur on a regular basis to verify stipulation compliance within this RMZ. It is likely that the sheer number and size of groups within this alternative would have moderate impacts to resources and social settings.

Impacts could include short-term or possibly long-term reduction in opportunities for solitude or primitive and unconfined recreation for visitors using areas adjacent to routes utilized by SRP holders. In addition, there could be short-term or possibly long-term reduction in opportunities for solitude or primitive and unconfined recreation for visitors within the wilderness if the visitors' entire day involves continuous exposure to other groups.

4.2.1.9 Wildlife

Common to all RMZs

Humans can disturb wildlife in a variety of ways. Disturbance can come from vehicle noise, wildlife being chased, or the mere presence of humans. Different species, and individuals within species, react differently to disturbances. The type of reaction also differs with time of year, location of disturbance in relation to breeding sites, type of disturbance, and duration of disturbance. In general, the greater the intensity or longer the duration of any disturbance, the greater the chance of an adverse effect. When disturbance comes during critical times of the year (including breeding, rearing young, and wintering), the impacts are more acute because energy is spent fleeing from humans rather than on feeding and/or caring for young. Winter in particular is a physiologically difficult time for wildlife due to harsh environmental factors, the additional energy being expended to find food, and the low nutritional value of what food is available.

Disturbance caused by motorized recreation activities proposed in this EA could place added stress on those individuals that winter in and near the project area, causing them to expend valuable energy resources to flee from/avoid the disturbance.

Disturbance effects during breeding may vary with distance to the breeding area (nest, lambing area, etc.), stage of the breeding cycle, and individual animal's acclimation to the disturbance, and various natural factors such as weather and food supply (Howe et al. 1994). The effects of recreation activities on raptors have been studied. Peregrine falcons are particularly sensitive to disturbance by humans. If not accustomed to the disturbance (including vehicles, hikers, and campers), or the activity is intermittent, they become noticeably concerned and agitated (Pagel 1991). Camping (a relatively prolonged recreational activity) near breeding areas may result in sufficient disturbance to cause nest abandonment. Camping may also disrupt foraging behavior. Camping by small groups (12 or less people) is generally considered a low impact activity; camping

by large (more than 12 people) should be considered a high impact activity. Raptors such as ferruginous hawks and peregrine falcons flush from their nests at the approach of humans. Recurring disturbance may lead to reduced productivity through egg breakage and missed feedings or nest abandonment, especially early in the nesting cycle. Motor vehicles may cause disturbance through noise or direct encounters. OHV use can lead to adverse effects to wildlife from direct mortality, harassment, and noise. However, raptors can be protected from human disturbance by both spatial and temporal restrictions on recreational activities (Howe et al 1994). Under this alternative, no SRP activities would be allowed within ½ mile of active golden eagle or peregrine falcon nests, thus protecting these species from human disturbance during breeding season. In the Cliffs and Rims RMZ, impacts would also be minimized by limiting the group size to 6 and limiting the number of contacts with other groups per day to 3.

Desert bighorn sheep are also sensitive to human disturbance. Human encroachment in bighorn sheep habitat impacts the species through habitat fragmentation, increased noise, and an increased number of humans. Numerous researchers have documented altered bighorn sheep behavior in response to human-related disturbance, including hiking, camping, and motorized vehicle use. Bighorn sheep may also alter their use of essential resources resulting in physiological effects or abandonment of traditional habitat as a result of human disturbance (Wallis 2005). Frequent vehicle activity causes sheep to reduce or abandon their use of water sources and surrounding areas. In addition, energy losses due to disturbances (flight, loss of foraging time, and increased stress levels) might result in deleterious effects on physiology, behavior, or fat reserves of sufficient magnitude to reduce survival and reproductive success. Research has shown that the particular type of human activity was the most influential variable affecting the behavioral response of bighorn sheep to disturbance. Interactions with hikers caused bighorn sheep to flee much more often than interactions with vehicles (Papouchis et al 2001). However, the potential for impacts on desert bighorn sheep under this alternative would be mitigated by prohibiting use of bighorn sheep habitat areas by SRP holders during lambing season.

Impacts from disturbance on other wildlife species would also be minimized through implementation of permit stipulations which would be incorporated into all SRPs issued. These stipulations (listed in Section 2.3.3 of this EA) include such practices as not harassing wildlife. In addition, not authorizing activities within ½ mile of critical wildlife areas (i.e., bald eagle roosts, golden eagle nest sites, and peregrine falcon nest sites) would also lessen impacts to other wildlife species. Focusing use in established dispersed campsites should minimize campsite selection that results in new areas of soil and resource damage, as well as minimize the potential to dislodge wildlife from previously safe areas.

Disturbance would be mitigated by providing training (including leave no trace, tread lightly, and nightly clean-up of campsites) to SRP holders and their guides. This training should help reduce impacts on wildlife by explaining the impact recreationists can have on wildlife and cautioning them not to participate in disturbing behavior (such as approaching wildlife, driving off established routes, and leaving trash).

House Rock RMZ

Group size authorized in this RMZ would be up to 12, which (as described above) would be considered a low impact activity. However, frequent encounters with vehicles/people may occur since this RMZ encompasses the BLM Road 1065 corridor and the total number of commercial vehicles in use over the course of a year could be as many as about 25,000. The duration of potential interactions between vehicles and wildlife would be repetitive, short-term, and localized.

Uplands RMZ

East Side

The group size in this RMZ would be up to 25 people (which would be considered “high impact”) and the number of SRPs issued could be up to 15. The number of commercial vehicles in use would increase from an estimated 20 per year to an estimate of about 600 vehicles a year. The duration of potential interactions would be repetitive, short-term and localized due to the limited routes in this area and the “bottleneck” conditions entering and exiting the Paria Plateau. However, implementing spatial/temporal restrictions would reduce the potential for impacts to breeding raptors, bighorn sheep, and other wildlife species that occur within these areas. Wildlife would also be able to “hide” from vehicles and people due to the thick vegetation along designated routes.

West Side

The group size in this RMZ could be as many as 25 persons (which would be considered “high impact”) and the number of SRPs issued could be up to 25. The number of commercial vehicles in use could be as many as 1,220 vehicles a year. As in the East Side of this RMZ, the duration of potential interactions between vehicles and wildlife would be repetitive, short-term and localized due to the limited routes in the area and the “bottleneck” conditions entering and exiting the Paria Plateau. Implementing spatial/temporal restrictions would reduce the potential for impacts to breeding raptors, bighorn sheep, and other wildlife species that occur within these areas. Wildlife would also be able to “hide” from vehicles and people due to the thick vegetation along designated routes.

Cedar Mountain/Ferry Swale

The group size in this RMZ could be as large as 25 (which would be considered “high impact”) and the number of SRPs issued could be up to 15 SRPs plus up to 3 large group events a year. The number of commercial vehicles in use could be as many as 2,500 vehicles a year excluding the number of vehicles associated with large events. To mitigate the impacts to resources from large events in this area, the maximum group size of 25 would be permitted with each group (per event) required to be geographically separated (Cedar Mountain, Ferry Swale east, and west etc.), as determined by the BLM and written into the event stipulations. However, implementing spatial/temporal restrictions

would protect breeding raptors, bighorn sheep, and other wildlife occurring in these localized areas from the impacts described at the beginning of this section.

Vermilion Cliffs

Disturbance to wildlife would be negligible as vehicle travel off Highway 89A to trailheads and parking areas would be generally be less than 500 feet and the proximity of this RMZ to Highway 89A and developed private land means that frequent human presence and activity already occur.

Other RMZs

The maximum group size in these RMZs would vary from 6 (Coyote Buttes and Cliffs and Rims) to 10 (Paria Canyon), all of which would be considered low impact. Motorized use would be focused on BLM Roads 1065, 1066, 1088, 1079, 1082, 1323, 1106, 1102, 1100 and 1017 (since the majority of these RMZs is within designated wilderness), which would result in potential encounters between vehicles and wildlife being localized to the route itself and the area immediately adjacent. In addition, implementing spatial/temporal restrictions in the Cliffs and Rims RMZ would protect breeding raptors, bighorn sheep, and other wildlife occurring in these localized areas from the impacts described at the beginning of this section.

4.2.1.10 Wildlife – Threatened and Endangered Species

Mexican spotted owl

Recreational activities may affect Mexican spotted owls directly through disturbance at the nest, roost, or foraging sites or indirectly through alteration of habitat caused by trampling. Recreation can cause nest or territory abandonment, egg loss (through egg breakage or decreased nest attentiveness), or reduced reproductive success (by reduced ability to provide food to nestlings, increased predation of young, or increased nestling exposure). The type of reaction differs with time of year, location of disturbance in relation to nesting and roosting sites, type of disturbance, and duration of disturbance.

Mexican spotted owls generally do not appear to be sensitive to human presence, even in the nest area. This is largely due to the fact that spotted owl nests in canyon country (such as found on the Colorado Plateau) are found in inaccessible areas in cliff walls. However, frequent disturbances in the nest or roost vicinity could affect foraging activities of adults and the delivery of prey items to the female or young at the nest site. Disturbances at foraging sites may influence spotted owls' ability to attain food. This may lead to reduced fitness of adults which in turn may affect egg production, nestling survival, and adult survival. Flushing of spotted owls from foraging or roosting sites may cause expenditure of energy reserves, and exposure of birds to predators and thermal or weather extremes may also reduce fitness or survival.

As described for impacts to other raptor species on page 61, camping near Mexican spotted owl nest or roost sites may result in sufficient disturbance to cause nest

abandonment and disrupt foraging behavior. Wildlife photography and wildlife observation are often greatly encouraged recreational activities that if unregulated can adversely affect wildlife. This type of activity may be more disruptive than accidental encounters between humans and wildlife because photographers and wildlife observers are actively seeking out wildlife, including rare species such as the Mexican spotted owl. Motor vehicles may cause disturbance through noise, visible encounters, or habitat alteration. Such recreational activities have also been shown to cause decreases in potential Mexican spotted owl prey. Motor vehicles may also result in abandonment of roost sites (Howe et al 1994).

Mexican spotted owls can be protected from human disturbance by both spatial and temporal restrictions on recreational activities. The most critical period for both the male and female appears to be May. In May, breeding females spend most of their time incubating eggs while males are responsible for feeding themselves, their mates, and their offspring for the first ten days after hatching. Disturbing males at this time may have more impact than later in the season when both members of the pair share the responsibility of feeding offspring (Center for Conservation Biology 2010). Limiting activities within ½ mile of an active nest would reduce the potential for the disturbances described above. Outside the breeding season, spotted owls range more widely, and recreational usage does not need to be restricted unless such use would result in extensive habitat disturbance (Howe et al 1994). All motorized vehicles should be restricted to existing routes. Under this alternative, no motorized vehicle use would occur off existing, designated routes and no activities would be authorized within ½ mile of an active nest. In addition, disturbance would also be mitigated by education including leave no trace, tread lightly, and nightly clean-up of campsites used by SRP holders. This training should help reduce impacts on spotted owls by explaining the impact recreationists can have on the owls and cautioning them not to participate in disturbing behavior (such as approaching owls). Thus, no impacts are anticipated to occur on Mexican spotted owls.

California condor

Recreational activities could have an effect on California condors if they intrude into areas where the species is roosting, foraging, or feeding (on the ground). Condors are naturally curious and often fly near human activity areas such as the visitor center in Grand Canyon National Park. This behavior can place the birds at risk of injury (i.e., ingestion of microtrash, collisions with transmission lines, and illegal shootings). Condors have been observed raiding picnic coolers, perching on houses and aerials, and, in one instance, breaking into a summer cabin and ransacking the interior (J. Grantham, pers. comm., 2008). Acclimation potentially draws condors to areas in which human activities could inadvertently harm individual birds and can modify the species' behavior. However, lead poisoning (presumably obtained from the ingestion of fragments of lead bullets in shot mammal carcasses) is considered to be the most significant current cause of recent condor mortality. In addition, microtrash, including small bits of plastic and metal such as bottle caps, pop-tops, and broken glass that are inadvertently fed to hatchlings by their parents, is an important factor affecting condor breeding success (Grantham 2007b; Mee et al. 2007). Because bone chips are a normal part of a growing

condor's diet and provide an important source of calcium to mineralize growing bones, it is generally assumed that adult condors inadvertently feed bits of microtrash to young believing the hard pieces to be bone (Houston et al. 2007). Although the digestive systems of young condors might be well adapted to digesting bone fragments, they are not suited to handling plastic, metal, and glass. Other possible reasons for microtrash ingestion include aiding in the production of food pellets that contain other indigestible items such as hair and horns from carcasses, and possibly as a mistaken source of short-term energy when carrion sources are scarce (Houston et al. 2007). Microtrash may come from several possible sources, including roadsides, camp sites, and scattered refuse piles.

Human actions that cause the birds to fly off of roosts or carcasses can interfere with their natural behavior. Since California condors range across the entire project area, activities proposed under this alternative would occur in areas where condors could fly over and feed or perch. The intentional or inadvertent harassment of condors feeding on carcasses, roosting in trees or on rock outcrops, or that are otherwise utilizing areas within the project area could cause significant disruption of normal feeding or roosting behaviors in individual condors. In addition, as previously noted, microtrash is known to be a source of injury and/or mortality to condor chicks; microtrash can be left by SRP holders and their clients. However, measures to minimize the potential of microtrash and minimize harassment of condors (see Section 2.3.3 of this EA) would be incorporated as a part of all SRPs issued, and training would be provided to all SRP holders and their guides (to explain the impact recreationists can have on condors, including approaching the birds and leaving microtrash).which would further minimize the potential for effects.

Throughout the project area, a network of unimproved roads exists. Their use is not likely to have an adverse effect on California condors because similar uses have not been shown to have adverse impacts on California condors in other areas in the species' range (Dudek 2009). In addition, no motorized SRP activities would be authorized within ½ mile of an active condor nest during breeding season (February 1 through November 30). This would avoid any disturbance to nesting condors.

4.2.2. Alternative B – No Action

4.2.2.1 Air Quality

House Rock RMZ

Impacts would be the same as those described for Alternative A.

Uplands RMZ

East Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, fugitive dust could be generated along designated routes at all times of year, and in all portions of the project area, from SRP activities.

West Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, fugitive dust could be generated along designated routes at all times of year, and in all portions of the project area, from SRP activities.

Cedar Mountain/Ferry Swale

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, fugitive dust could be generated along designated routes at all times of year, and in all portions of the project area, from SRP activities.

Other RMZs

Impacts would be the same as those described for Alternative A.

4.2.2.2 Cultural Resources

All RMZs

Impacts would be the same as those described for Alternative A.

4.2.2.3 Recreation

House Rock RMZ

Impacts would be the same as those described for Alternative A.

Uplands RMZ

East Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, conflicts between user groups could occur across the entire project area at all times of year.

West Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, conflicts between user groups could occur across the entire project area at all times of year.

Cedar Mountain/Ferry Swale

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, conflicts between user groups could occur across the entire project area at all times of year.

Other RMZs

Impacts would be the same as those described for Alternative A.

4.2.2.4 Socioeconomics

House Rock RMZ

Impacts would be the same as those described for Alternative A.

Uplands RMZ

East Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, ATV and OHV businesses could operate year-round across the project area, potentially resulting in the capacity to provide more trips, and more economic benefits.

West Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, ATV and OHV businesses could operate year-round across the project area, potentially resulting in the capacity to provide more trips, and more economic benefits.

Cedar Mountain/Ferry Swale

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, ATV and OHV businesses could operate year-round across the project area, potentially resulting in the capacity to provide more trips, and more economic benefits.

Other RMZs

Impacts would be the same as those described for Alternative A.

4.2.2.5 Soil

Impacts would be the same as those described for Alternative A.

4.2.2.6 Soundscapes

House Rock RMZ

Impacts would be the same as those described for Alternative A.

Uplands RMZ

East Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, motor vehicles associated with SRP activities (and

associated noise) could operate year-round and in all portions of the project area. This alternative has the greatest potential for impacts on soundscapes.

West Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, motor vehicles associated with SRP activities (and associated noise) could operate year-round and in all portions of the project area. This alternative has the greatest potential for impacts on soundscapes.

Cedar Mountain/Ferry Swale

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, motor vehicles associated with SRP activities (and associated noise) could operate year-round and in all portions of the project area. This alternative has the greatest potential for impacts on soundscapes.

Coyote Buttes RMZ

Impacts would be the same as those described for Alternative A.

Paria Canyon RMZ

Impacts would be the same as those described for Alternative A.

Cliffs and Rims RMZ

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, motor vehicles associated with SRP activities (and associated noise) could operate year-round and in all portions of the project area. This alternative has the greatest potential for impacts on soundscapes.

Vermilion Cliffs RMZ

Impacts would be the same as those described for Alternative A.

4.2.2.7 Wilderness Characteristics

Uplands RMZ

East Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, motor vehicles associated with SRP activities could operate year-round and in all portions of the project area, which could affect the wilderness characteristics of solitude, naturalness, and opportunities for primitive and unconfined recreation in those areas

adjacent to designated routes. This alternative has the greatest potential for impacts on wilderness characteristics.

West Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, motor vehicles associated with SRP activities could operate year-round and in all portions of the project area, which could affect the wilderness characteristics of solitude, naturalness, and opportunities for primitive and unconfined recreation in those areas adjacent to designated routes. This alternative has the greatest potential for impact son wilderness characteristics.

4.2.2.8 Wilderness

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, motor vehicles associated with SRP activities could operate year-round and in all portions of the project area, which could affect the wilderness characteristics of solitude, naturalness, and opportunities for primitive and unconfined recreation in those portions of the wilderness adjacent to designated routes. This alternative has the greatest potential for impacts on wilderness characteristics. However, overall impacts to wilderness values are still expected to be minor with the implementation of this alternative since no motor vehicle use could occur within the wilderness.

4.2.2.11 Wildlife

Common to All RMZs

Disturbance to wildlife would be mitigated by providing training (including leave no trace, tread lightly, and nightly clean-up of campsites) to SRP holders and their guides. This training should help reduce impacts on wildlife by explaining the impact recreationists can have on wildlife and cautioning them not to participate in disturbing behavior (such as approaching wildlife to view or photograph them, driving off established routes, and leaving trash).

House Rock RMZ

Impacts would be the same as those described for Alternative A.

Uplands RMZ

East Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, disturbance to wildlife species could occur during all times of year from SRP activities. The disturbance effects described in Section 4.2.19 of this EA could result in nest abandonment and disruption in foraging behavior of raptors, as well as alteration in the use of essential

resources, energy losses due to disturbances (flight, loss of foraging time, and increased stress levels), and reduced lamb survival and reproductive success of desert bighorn sheep. This alternative has the greatest potential for impacts on wildlife since no spatial/temporal restrictions would be implemented.

West Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, disturbance to wildlife species could occur during all times of year from SRP activities. The disturbance effects described in Section 4.2.19 of this EA could result in nest abandonment and disruption in foraging behavior of raptors, as well as alteration in the use of essential resources, energy losses due to disturbances (flight, loss of foraging time, and increased stress levels), and reduced lamb survival and reproductive success of desert bighorn sheep. This alternative has the greatest potential for impacts on wildlife since no spatial/temporal restrictions would be implemented.

Cedar Mountain/Ferry Swale

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, disturbance to wildlife species could occur during all times of year from SRP activities. The disturbance effects described in Section 4.2.19 of this EA could result in nest abandonment and disruption in foraging behavior of raptors, as well as alteration in the use of essential resources, energy losses due to disturbances (flight, loss of foraging time, and increased stress levels), and reduced lamb survival and reproductive success of desert bighorn sheep. This alternative has the greatest potential for impacts on wildlife since no spatial/temporal restrictions would be implemented.

Coyote Buttes RMZ

Impacts would be the same as those described for Alternative A.

Paria Canyon RMZ

Impacts would be the same as those described for Alternative A.

Cliffs and Rims RMZ

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, disturbance to wildlife species could occur during all times of year from SRP activities. The disturbance effects described in Section 4.2.1.9 of this EA could result in nest abandonment and disruption in foraging behavior of raptors, as well as alteration in the use of essential resources, energy losses due to disturbances (flight, loss of foraging time, and increased stress levels), and reduced lamb

survival and reproductive success of desert bighorn sheep. This alternative has the greatest potential for impacts on wildlife since no spatial/temporal restrictions would be implemented. However, impacts to wildlife in this RMZ would be minimized by the social settings prescription in the RMP which limits group size to 6 while also limiting the number of contacts (with other groups) per day to 3.

Vermilion Cliffs RMZ

Impacts would be the same as those described for Alternative A.

4.2.2.10 Wildlife – Threatened and Endangered Species

Common to All RMZs

Disturbance to wildlife would be mitigated by providing training (including leave no trace, tread lightly, and nightly clean-up of campsites) to SRP holders and their guides. This training should help reduce impacts to Mexican spotted owls and California condors by explaining the impact recreationists can have on wildlife and cautioning them not to participate in disturbing behavior (such as approaching the birds to view or photograph them, driving off established routes, and leaving trash). In addition, measures to minimize the potential of microtrash and minimize harassment of condors (see Section 2.3.3 of this EA) would be included in all SRPs issued, which would minimize the potential for effects to California condors.

House Rock RMZ

Impacts would be the same as those described for Alternative A.

Uplands RMZ

East Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, the disturbance effects described in Section 4.2.1.10 of this EA could result in nest abandonment and disruption in foraging behavior of Mexican spotted owl. This alternative has the greatest potential for impacts on wildlife since no spatial/temporal restrictions would be implemented.

West Side

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, the disturbance effects described in Section 4.2.1.10 of this EA could result in nest abandonment and disruption in foraging behavior of Mexican spotted owls. This alternative has the greatest potential for impacts on wildlife since no spatial/temporal restrictions would be implemented.

Cedar Mountain/Ferry Swale

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, disturbance to wildlife species could occur during all times of year from SRP activities. The disturbance effects described in Section 4.2.1.10 of this EA could result in nest abandonment and disruption in foraging behavior of Mexican spotted owls. This alternative has the greatest potential for impacts on wildlife since no spatial/temporal restrictions would be implemented.

Coyote Buttes RMZ

Impacts would be the same as those described for Alternative A.

Paria Canyon RMZ

Impacts would be the same as those described for Alternative A.

Cliffs and Rims RMZ

Impacts would be similar to those described for Alternative A except that no use restrictions (spatial and temporal) would be imposed under this alternative. Thus, disturbance to Mexican spotted owls and California condors could occur during all times of year from SRP activities. The disturbance effects described in Section 4.2.1.10 of this EA could result in nest abandonment and disruption in foraging behavior of raptors, as well as alteration in the use of essential resources, energy losses due to disturbances (flight, loss of foraging time, and increased stress levels). This alternative has the greatest potential for impacts on threatened and endangered wildlife species since no spatial/temporal restrictions would be implemented. However, impacts to Mexican spotted owls and California condors in this RMZ would be minimized by the social settings prescription which limits group size to 6 while also limiting the number of contacts (with other groups) per day to 3.

Vermilion Cliffs RMZ

Impacts would be the same as those described for Alternative A.

4.2.3 Alternative C –Proposed Action

4.2.3.1 Air Quality

House Rock RMZ

The nature of the potential impacts would be the same as those described for Alternative A due to the creation of fugitive dust from vehicles traveling along BLM Road 1065. The amount of fugitive dust that could be created would vary depending on the type of soil, the amount of moisture in the soil, the amount of wind, and the number of participants. Impacts would be repetitive, short-term and localized. However, under this alternative, the total number of vehicles would be substantially less than what would occur under Alternative A based upon

implementation of the LAC and needs analysis (approximately 1,800 vehicles vs. as many as 25,000).

Uplands RMZ

East Side

The nature of potential impacts would be the same as those described for Alternative A due to the creation of fugitive dust from vehicles traveling on unpaved roads. However, under this alternative no ATV SRPs would be authorized for this portion of the RMZ and group size would decrease as compared to Alternative A. In addition, implementation of the LAC and needs analysis would result in the total number of commercial vehicles authorized being much less than for Alternative A. All of these factors would result in the creation of less fugitive dust.

West Side

The nature of potential impacts would be the same as those described for Alternative A due to the creation of fugitive dust from vehicles traveling on unpaved roads. However, under this alternative substantially less ATV SRPs would be authorized for this portion of the RMZ (down from 25 to 8) and group size would decrease as compared to Alternative A. In addition, implementation of the LAC and needs analysis would result in the total number of commercial vehicles authorized being much less than for Alternative A. All of these factors would result in the creation of less fugitive dust.

Cedar Mountain/Ferry Swale

The nature of potential impacts would be the same as those described for Alternative A due to the creation of fugitive dust from vehicles traveling on unpaved roads. However, under this alternative substantially less ATV SRPs would be authorized for this portion of the RMZ (down from 25 to 12) and group size would decrease as compared to Alternative A. Implementation of the LAC and needs assessment (Appendix C) would result in the total number of commercial vehicles authorized being much less than for Alternative A (300, excluding 3-5 large events per year, versus over 1,600).

The amount of fugitive dust that could be created would vary depending on the type of soil, the amount of moisture in the soil, the amount of wind, and the number of participants. The duration of the impact would be repetitive short-term and localized with up to 300-800 feet of dust plume per each vehicle pass (Culver 2008-2010). It is expected that up to 4 OHV would pass any point along the route within 5-10 minutes, while 12 ATVs could take 15-20 minutes to pass depending on topography, vegetative cover, experience of the rider and the amount of fugitive dust in the air. However, given the reduced number of vehicles as compared to

Alternative A, less fugitive dust would be generated under this alternative than under Alternative A.

Vermilion Cliffs RMZ

Impacts would be the same as those described for Alternative A.

Other RMZs

Minor to moderate in relation to current conditions would be expected under this alternative. The duration and intensity of these potential impacts would be minor due to the maximum number of potential vehicles to access these areas. Use would be focused on BLM Roads 1065, 1066, 1088, 1079, 1082, 1323, 1106, 1102, 1100 and 1017 with potential for focused use on other BLM roads in the area dependent on new use patterns developed through increased authorization of SRPs. The group sizes accessing these areas would remain the same in the permit areas, and decrease in the Cliffs and Rims RMZ from 12 to 6. Under this alternative no ATV SRPs would be authorized to access the permit areas.

4.2.3.2 Cultural Resources

Impacts would be the same as those described for Alternative A.

4.2.3.3 Recreation

Impacts would be similar to those described for Alternative A except that total number of SRPs issued (based upon the LAC and needs analysis) would decrease, so total number of guests and vehicles would also decrease. This would result in less contacts with other groups using the routes under this alternative, although contacts would still occur. Contacts with other recreating public would be regular but transitory on the main routes and could result in minor to moderate impacts due to congestion at frequently visited recreation sites, overlooks and cultural points of interest, where during the hot periods of the year, all users visit trailheads, overlooks and photographic opportunities during the early or late hours of day especially around sunrise and sunset for those interested in photography.

Recreation use under this alternative, outside of the permit areas, would result in minor to moderate impacts as users who become more familiar with the area through photographs, blogs, commercial SRP promotions and media outlets visit the area.

4.2.3.4 Socioeconomics

House Rock RMZ

Decreasing the total number of permits that could be issued (based upon LAC) could have minor economic impacts on businesses that provide ATV/OHV tours. Less permits available could limit the opportunities for some businesses to establish or expand. However, the ability to provide ATV based trips in this area

would still be available, and the overall impact to local economies would be minor.

Uplands RMZ

East Side

Under this alternative for the area including the overlooks, White Knolls and the private inholding known as Joes Tank, commercial use would be limited to a group size of 6 (a decrease of 75% as compared to Alternative A). The number of SRPs available would also decrease (from 15 down to 10). While there may be some economic impacts to businesses that wish to establish or expand (due to competition for available permits), the overall impact to local economies would be minor.

West Side

This RMZ includes White Pocket north to the wilderness boundary, the area east of Sand Hill Loop Road, and the southern portion of Paria Plateau (including the area between Highway 89A and the Vermilion Cliffs). Decreasing the group size to 10 (as compared to 25 for Alternative A) and decreasing the number of SRPs available (from 25 down to 10) could result in economic impacts to businesses that wish to establish or expand (due to competition for available permits). However, these impacts are expected to be minor as current commercial use patterns show a group size of 6 or less using this area. The impacts to local economies are also expected to be minor.

Cedar Mountain/ Ferry Swale

Decreasing the total number of permits that could be issued within the VCNM portion of this RMZ (based upon LAC) could have minor economic impacts on businesses that provide ATV/OHV tours. Less permits available could limit the opportunities for some businesses to establish or expand. However, the ability to provide ATV based trips in this area would still be available, and the overall impact to local economies would be minor.

Coyote Buttes RMZ

Under this alternative, the number of authorized SRPs would decrease according to LAC and the needs analysis process. The potential for meeting the ceiling in this area would likely occur in the North in 2010 or 2011 but is undetermined in Coyote Buttes South. This alternative may result in minor to moderate impacts to private users. The local economy may realize negligible to minor impacts to commercial enterprises as the number of available permits is determined by the first-come, first-served on-line process for Coyote Buttes South, for which there is direct competition from other SRPs and private users. If LAC determines a Coyote Buttes South lottery is needed, the likelihood of obtaining permits to access the area would decrease.

Coyote Buttes North permits are already limited; these permits are available through a lottery process in which there may be 1,000 or more people competing for the same permits, so the likelihood of obtaining Coyote Buttes North permit is small. The local economy may realize minor impacts to commercial enterprises, wishing to focus on Coyote Buttes, but could be mitigated by the ability to visit areas similar known geological structures in GSENM, Coral Pink Sand Dunes and Snow Canyon State Parks within the region. Monies spent by private users and SRPs authorized through this process would mitigate economic impacts.

Paria Canyon RMZ

Under this alternative, the number of authorized SRPs would increase (as compared to current condition) according to LAC and the Needs Analysis process. The potential for meeting the ceiling in this area is undetermined. This alternative would have less of an economic impact than the no action alternative but may result in minor to moderate impacts to private users. The local economy may realize minor impacts to commercial enterprises, wishing to focus on the Paria Canyon as the number of available permits is determined by the first-come, first-served on-line process for which there is direct competition from other SRPs and private users. If LAC determines a lottery is needed in this area, the likelihood of obtaining permits to access the area would decrease. Impacts from this alternative could be mitigated by the ability to visit areas similar well known slot canyons in GSENM, Zion National Park, and Antelope Canyon as well as little known canyons within the region. Monies spent by private users and SRPs authorized through this process would mitigate economic impacts.

Cliffs and Rims RMZ

Under this alternative for the area, no commercial use would be authorized with access from Uplands East but the rest of the area would be available for commercial use. This area currently sees little commercial use with group sizes of 6 or less; keeping the maximum group size at 6 while decreasing the total number of available SRPs could have some economic impacts to businesses that wish to establish or expand (due to competition for available permits), but the overall impact to local economies would be minor.

Vermilion Cliffs RMZ

Impacts would be the same as those described for Alternative A.

4.2.3.5 Soil

Impacts would be the same as those described for Alternative A.

4.2.3.6 Soundscapes

Impacts to soundscapes from travel on designated roads by OHVs and ATVs would be localized.

House Rock RMZ

Under this alternative, it is expected that two OHVs would pass any point along the roads in this RMZ within 5-10 minutes, while 12 ATVs could take as long as 30-45 minutes depending on topography, vegetative cover, experience of the rider, traffic and the amount of fugitive dust in the air. Increased traffic in the House Rock RMZ would have a minor to moderate impact on the Arizona National Scenic Trail and wilderness that borders BLM Road 1065 (to include those areas contained with the Coyote Buttes RMZ).

Uplands RMZ

East Side

Under this alternative, it is expected that two OHVs would pass any point along the roads in this RMZ within 10-15 minutes as a result of challenging topography and soils, vegetative cover, experience of the rider, traffic and the amount of fugitive dust in the air. Commercial ATV use would not be permitted under this alternative. Impacts to soundscape are expected to be minor.

West Side

Under this alternative, it is expected that two OHVs would pass any point along the roads in this RMZ within 10-15 minutes, while 8 ATVs could take between 10-20 minutes to pass as a result of challenging topography and soils, vegetative cover, experience of the rider, traffic and the amount of fugitive dust in the air. Impacts to soundscape are expected to be minor to moderate.

Cedar Mountain/Ferry Swale

Under this alternative, it is expected that four OHVs would pass any point along the roads in this RMZ within 10-15 minutes, while 12 ATVs could take between 15-20 minutes to pass as a result of challenging topography and soils, vegetative cover, experience of the rider, traffic and visibility (from the amount of fugitive dust in the air). Impacts to soundscape are expected to be minimal.

Coyote Buttes RMZ

Under this alternative, it is expected that two OHVs would pass any point along the roads in this RMZ within 10-15 minutes, while 6 ATVs could take between 10-20 minutes to pass as a result of challenging topography and soils, vegetative cover, experience of the rider, traffic and the amount of fugitive dust in the air. Impacts to soundscape are expected to be minor.

Paria Canyon RMZ

Impacts to soundscape would be similar to those described for Alternative A in that group size would remain the same. However, the total number of permits available and total vehicles that could operate per year would be reduced, resulting in minimal noise being generated.

Cliffs and Rims RMZ

Under this alternative, groups of 10 would need to split into 2 different groups extending the time and exposure to soundscape disturbances within this RMZ on the west side of the plateau. Excluding the small portion of the RMZ that borders HWY 89A, all access points to this RMZ require motorized vehicles. Impacts to this RMZ are unknown at this point but could potentially have minor to moderate impacts to the soundscape.

Vermilion Cliffs RMZ

Impacts would be similar to those described for Alternative A, except that number of SRPs, number of guests, and number of vehicles per year would be less. This RMZ is in close proximity to Highway 89A and the communities of Cliff Dwellers and Vermilion Cliffs, so human activity (and associated noise) is already occurring. Impacts to soundscapes would therefore be minimal under this alternative.

4.2.3.7 Wilderness Characteristics

Uplands RMZ

East Side

Minor impacts in relation to current conditions would be expected under this alternative for the area including the overlooks, White Knolls and the private in-holding known as Joes Tank. Current commercial use consists of one vehicle with an average group size of 4 traveling through the area 2-3 times a year. Of the 4 SRPs that are authorized to access this area, only 2 have had use in this area. Any increased use of this area would have minor to moderate impacts on wilderness characteristics. Maintaining the authorized group size of 6 would minimize the requirement for logistics for the BLM and the SRP to manage the group. It is expected that a group of 6 would visit an overlook within Cliffs and Rims RMZ over a period of about 20 minutes and travel in 1 vehicle decreasing the exposure in time, noise, fugitive dust and the opportunity for solitude beyond the Limits of Acceptable Change within the area. Currently there are no ATV SRPs authorized to operate in this area so impacts from ATV use would be negligible. LAC and the Needs Analysis would be especially important for the management of this area, as currently authorized SRPs are not using this area, although the BLM has been notified that the 2 SRPs who are not currently using this area, plan to do so in 2010. Increasing the number of SRPs authorized to utilize this area could compound the impacts as use patterns of SRPs changes.

West Side

Moderate impacts in relation to current conditions would be expected under this alternative for the area including White Pocket north to the wilderness boundary and east of Sand Hill Loop road. Current use in this area includes 5 SRPs whose current use averages a group size of 3 with an

occasional group size of 7-10 people with up to 2 guides although SRPs have the authorization for a group size of 10, plus 2 guides in this area. Recreation users have the ability to experience silence and solitude without the imprint of human activity excluding the parking lot area and the old sandy roadway with rare to non-existent disturbance. Occasional heavy use does occur on weekends or holidays for which the BLM has received complaints about overcrowding.

The southern portion of Paria Plateau within this area currently sees little commercial use although local clubs and groups visit the overlooks. No commercial use is occurring between Highway 89A and the Vermilion Cliffs. The group size has averaged 5 or less in this area. An increase to 10 would pose minor to moderate impacts to the Limits of Acceptable Change and expectations for solitude and silence in this area of Uplands West although the proximity of Highway 89A and BLM Road 1065, the community of Marble Canyon and the Dominguez Escalante interpretive site decrease the relative impacts of this area.

4.2.3.8 Wilderness

The permit system could be made more restrictive for commercial SRPs at some time in the future if it is determined that commercial SRPs have met the needs assessment for the wilderness area and/or are impinging on the ability for private parties to obtain permits thereby resulting in the decrease recreation opportunities for private recreationists. In all likelihood, adaptive management would tend to restrict the growth of commercial recreation use in parts of the project area while allowing it to grow without restriction in others. Because any restrictions at all would reduce potential growth beyond current use, the overall level of use under this alternative would be less than the No Action alternative. There would also be a somewhat different mix of uses between commercial and private, between motorized/mechanized and foot traffic, and between different areas within the project area than under the No Action alternative.

Minor impacts to wilderness values are expected to occur with the implementation of the proposed action. These potential impacts could occur from vehicles traveling on designated routes. However, the number of permits that could be issued under this alternative, and the total number of vehicles that could occur per year, would decrease as compared to current conditions. Areas associated with the proposed action would not provide exclusive use as to time or the area but would decrease the use of specific areas within the wilderness. Thus, the opportunities for primitive and unconfined recreation and solitude would be maintained. The number of wilderness users that could be affected by motorized use along the periphery of designated wilderness is anticipated to be minor because these areas are remote, receive low use, and the expectation of solitude is high. The impact from sights and sounds would be short-term and intermittent. Impacts could include temporary reduction in opportunities for solitude or primitive and unconfined recreation for visitors using areas adjacent to routes utilized by SRP holders.

4.2.3.9 Wildlife

Common to All RMZs

Disturbance to wildlife would be mitigated by providing training (including leave no trace, tread lightly, and nightly clean-up of campsites) to SRP holders and their guides. This training should help reduce impacts on wildlife by explaining the impact recreationists can have on wildlife and cautioning them not to participate in disturbing behavior (such as approaching wildlife to view or photograph them, driving off established routes, and leaving trash).

House Rock RMZ

As described in Chapter 3 of this EA, humans can disturb wildlife in a number of ways (including vehicle noise and the mere presence of humans), potentially resulting in reduced productivity, direct mortality, and/or harassment. Impacts under this alternative would be similar to those described for Alternative A in that group size would be the same (no more than 12) so authorized activities would still be considered “low impact” (Pagel 1991). Since wildlife can be disturbed by the mere presence of vehicles/people, impacts still have the potential to occur. However, this alternative would authorize substantially less overall use than Alternative A (approximately 1,800 total vehicles per year versus up to 25,000), so the presence of vehicles associated with commercial use would be less frequent, reducing the risk of disturbance to wildlife. In addition, focusing use in established dispersed campsites should minimize campsite selection that results in new areas of soil and resource damage, as well as minimize the potential to dislodge wildlife from previously safe areas.

Uplands RMZ

East Side

Impacts would be similar to those described for Alternative A except that group size would be reduced to no more than 6 and no ATV use would be authorized (which would minimize the total number of vehicles using the area for commercial purposes in this remote portion of the project area). Spatial and temporal restrictions would be imposed, which would provide protection to raptors, bighorn sheep, and other breeding wildlife species, as well as speed restrictions in Houserock Valley chisel-toothed kangaroo rat habitat, to prevent direct mortality of this species. Thus, the disturbance effects described in Section 4.2.1.9 of this EA should not occur in the areas where these restrictions are implemented. In addition, total number of vehicles that could be authorized would be substantially less than Alternative A (approximately 300 total vehicles per year versus up to 800), so the presence of vehicles associated with commercial use would be less frequent, reducing the risk of disturbance to wildlife.

West Side

Impacts would be similar to those described for Alternative A except that group size and potential number of ATVs authorized would be reduced.

The proposed group size of 10 would still fall within the “low impact” category. In addition, as with Alternative A, use restrictions (spatial and temporal) would be imposed, which would provide protection to raptors, bighorn sheep, and other breeding wildlife species in these localized areas, and total number of vehicles that could be authorized would be half of that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance to wildlife.

Cedar Mountain/Ferry Swale

Impacts would be similar to those described for Alternative A except that group size and potential number of ATVs authorized would be reduced. As with Alternative A, use restrictions (spatial and temporal) would be imposed, which would provide protection to raptors, bighorn sheep, and other breeding wildlife species and total number of vehicles that could be authorized would be almost half of that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance to wildlife.

Coyote Buttes RMZ

Impacts would be the similar to those described for Alternative A in that group size and total number of vehicles per tour would not change. However, total number of available permits would be half that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less. This would result in less potential for encounters between vehicles/people and wildlife, reducing the risk of disturbance and/or mortality to wildlife.

Paria Canyon RMZ

Impacts would be the similar to those described for Alternative A in that group size and total number of vehicles per tour would not change. However, total number of available permits would be half that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance and mortality to wildlife.

Cliffs and Rims RMZ

Impacts would be the similar to those described for Alternative A in that group size would not change and total number of vehicles per tour would not appreciably change (total ATVs per tour would be reduced by one in Alternative C). Total number of available permits would be less than half that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance and mortality to wildlife.

Vermilion Cliffs RMZ

Impacts would be similar to those described for Alternative A in that group size would not change and total number of OHVs (i.e., 4-wheel-drive vehicles) per tour would not change. No ATVs would be authorized in Alternative C due to the proximity of this RMZ to private land (which would reduce total number of

vehicles and the risk of associated conflicts with private property). While total number of available permits would be substantially less than that proposed under Alternative A (resulting in less vehicles associated with commercial use and reduced risk of disturbance and mortality to wildlife) the proximity of this RMZ to Highway 89A and developed private land means that frequent human presence and activity already occurs. Thus, little additional impacts to wildlife should occur in this RMZ.

4.2.3.10 Wildlife – Threatened and Endangered Species

House Rock RMZ

As described in Chapter 3 of this EA, humans can disturb wildlife in a number of ways (including vehicle noise and the mere presence of humans), potentially resulting in reduced productivity, direct mortality, and/or harassment. Impacts under this alternative would be similar to those described for Alternative A in that group size would be the same (no more than 12) so authorized activities would still be considered “low impact” (Pagel 1991). Since wildlife (including threatened and endangered species) can be disturbed by the mere presence of vehicles/people, impacts still have the potential to occur. However, this alternative would authorize substantially less overall use than Alternative A (approximately 1,800 total vehicles per year versus up to 25,000), so the presence of vehicles associated with commercial use would be less frequent, reducing the risk of disturbance to Mexican spotted owls and California condors. In addition, measures to minimize the potential for microtrash and minimize harassment of condors (as listed in Section 2.3.3 of this EA) would be included in all SRPs issued. Disturbance should also be mitigated by providing training (including leave no trace, tread lightly, and nightly clean-up of campsites) to SRP holders and their guides.

Uplands RMZ

East Side

Impacts would be similar to those described for Alternative A except that group size would be reduced to no more than 6 and no ATV use would be authorized (which would minimize the total number of vehicles using the area for commercial purposes in this remote portion of the project area). As with Alternative A, use restrictions (spatial and temporal) would be imposed, which would provide protection to nesting spotted owls and condors. Thus, the disturbance effects described in Section 4.2.1.10 of this EA should not occur in the areas where these restrictions are implemented. In addition, total number of vehicles that could be authorized would be substantially less than Alternative A (approximately 300 total vehicles per year versus up to 800), so the presence of vehicles associated with commercial use would be less frequent, reducing the risk of disturbance. Disturbance to Mexican spotted owls and California condors would also be minimized through implementation of permit stipulations and by providing training to SRP holders and their guides.

West Side

Impacts would be similar to those described for Alternative A except that group size and potential number of ATVs authorized would be reduced. The proposed group size of 10 would still fall within the “low impact” category. In addition, as with Alternative A, use restrictions (spatial and temporal) would be imposed, which would provide protection to raptors, bighorn sheep, and other wildlife species during to the critical breeding season. Total number of vehicles that could be authorized in this alternative would be half of that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance to wildlife. Impacts to wildlife species could still occur if users participated in actions that would cause disruption to animals during foraging or other “routing” activities, This potential for disturbance would be minimized through implementation of permit stipulations and by providing training to SRP holders and their guides in order to educate them on impacts recreation can have and caution them.

Cedar Mountain/Ferry Swale

Impacts would be similar to those described for Alternative A except that group size and potential number of ATVs authorized would be reduced. As with Alternative A, use restrictions (spatial and temporal) would be imposed, which would provide protection to raptors, bighorn sheep, and other breeding wildlife species and total number of vehicles that could be authorized would be almost half of that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance to wildlife.

Coyote Buttes RMZ

Impacts would be the similar to those described for Alternative A in that group size and total number of vehicles per tour would not change. However, total number of available permits would be half that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance to wildlife.

Paria Canyon RMZ

Impacts would be the similar to those described for Alternative A in that group size and total number of vehicles per tour would not change. However, total number of available permits would be half that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance and mortality to wildlife.

Cliffs and Rims RMZ

Impacts would be the similar to those described for Alternative A in that group size would not change and total number of vehicles per tour would not appreciably change (total ATVs per tour would be reduced by one in Alternative C). Total number of available permits would be less than half that proposed

under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance and mortality to wildlife.

Vermilion Cliffs RMZ

Impacts would be similar to those described for Alternative A in that group size would not change and total number of OHVs (i.e., 4-wheel-drive vehicles) per tour would not change. No ATVs would be authorized in Alternative C due to the proximity of this RMZ to private land (which would reduce total number of vehicles and the risk of associated conflicts with private property). While total number of available permits would be substantially less than that proposed under Alternative A (resulting in less vehicles associated with commercial use and reduced risk of disturbance and mortality to wildlife) the proximity of this RMZ to Highway 89A and developed private land means that frequent human presence and activity already occurs. Thus, little additional impacts to wildlife should occur in this RMZ.

4.2.4 Alternative D

4.2.4.1 Air Quality

House Rock RMZ

The nature of the potential impacts would be the creation of fugitive dust as vehicles travel along BLM Road 1065. Minor to moderate impacts may result from the physical presence of vehicles on BLM Road 1065. Under this alternative, the group size would decrease from 12 to 10 people per group, the number of SRPs that could be issued would be 12 (based upon the LAC and a Needs Analysis), and the total number of vehicles that could occur over the course of a year would be no more than approximately 1,000 (much less than any of the other alternatives). The total amount of fugitive dust that could be created under this alternative would vary depending on the type of soil, the amount of moisture in the soil, the amount of wind, and the number of participants. The duration of the impact would be repetitive short-term and localized events with up to ½ mile per each vehicle pass, dependent on the amount of fugitive dust and the direction and speed of the localized winds. It is expected that two OHV would pass any point along the route within 5 minutes, while 12 ATVs could take as long as 20 minutes depending on topography, vegetative cover, experience of the rider and the amount of fugitive dust in the air.

Uplands RMZ

East Side

Under this alternative, no commercial use would be permitted in this portion of the RMZ, which would result in no impacts to air quality.

West Side

Impacts to air quality could occur under this alternative due to the creation of fugitive dust from vehicles traveling on authorized routes. The duration and intensity of these potential impacts would be influenced by the sandy

nature of roads in this area (which have a low potential for producing dust) and the number of potential vehicles on these routes. Under this alternative, the group size would decrease from 25 to 6 people per group, the number of SRPs that could be issued would be 8 (based upon the LAC and a Needs Analysis), and the total number of commercial vehicles could be up to 300 a year. The amount of fugitive dust created would vary depending on the type of soil, the amount of moisture in the soil, the amount of wind, and the number of participants. The duration of the impact would be repetitive short-term and localized events with up to 300-600 feet per each vehicle pass, dependent on the amount of fugitive dust and tight corners, limited routes, "bottleneck" conditions entering and exiting the Paria Plateau and the thick vegetation along designated routes. It is expected that up to 2 OHV would pass any point along the route within 5-10 minutes, while 8 ATVs could take as long as an 1/2 hour to pass depending on topography, vegetative cover, experience of the rider and the amount of fugitive dust in the air. However, since this RMZ generally has sandy surfaces that have a low potential for producing fugitive dust, impacts are expected to be negligible.

Cedar Mountain/Ferry Swale

Impacts to air quality could occur under this alternative due to the creation of fugitive dust from vehicles traveling on authorized routes. The duration and intensity of these impacts would be influenced by the number of potential vehicles on these routes. The group size would be no more than 10, the number of SRPs that could be issued would be 10 (based upon the LAC and a Needs Analysis), including the potential for 3-5 large group events a year, and the total number of commercial vehicles could be up to 100 a year (excluding the vehicles associated with large events). The amount of fugitive dust created would vary depending on soil type (more possible in silty soils and minimal in sandy soils), the amount of moisture in the soil, the amount of wind, and the number of participants. The duration of the impact would be repetitive short-term and localized, depending on the amount of fugitive dust and tight corners and the limited roads. It is expected that up to 4 OHVs would pass any point along the route within 5-10 minutes, while 12 ATVs could take 15-20 minutes to pass depending on topography, vegetative cover, experience of the rider and the amount of fugitive dust in the air.

Coyote Buttes RMZ

The types of impacts would be the similar to those described for Alternative A in that group size and total number of 4-wheel-drive vehicles per tour would not change. However, no ATV SRPs would be authorized to access the permit area under this alternative and total number of available permits would be less than one-third of that proposed under Alternative A, so the presence of vehicles associated with commercial use would be much less. This would result in less

potential for creation of fugitive dust. Thus, impacts to air quality would be negligible under this alternative.

Paria Canyon RMZ

Impacts would be the similar to those described for Alternative A in that group size and total number of vehicles per tour (for shuttles) would not change. However, no ATV SRPs would be authorized to access the permit area under this alternative and total number of available permits would be half that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, resulting in less potential for creation of fugitive dust. Thus, impacts to air quality would be negligible under this alternative.

Cliffs and Rims RMZ

Impacts would be the similar to those described for Alternative A in that group size would not change and total number of 4-wheel-drive vehicles per tour would not change. However, no ATV SRPs would be authorized under this alternative and total number of available permits would be one-third of that proposed under Alternative A, resulting in less potential for creation of fugitive dust. Thus, impacts to air quality would be negligible under this alternative.

Vermilion Cliffs RMZ

The types of impacts would be similar to those described for Alternative C except that group size, number of vehicles per SRP, and total number of SRPs potentially available would be half. In addition, no ATVs would be authorized in Alternative D due to the proximity of this RMZ to private land (which would reduce total number of vehicles and the potential for creation of fugitive dust). The proximity of this RMZ to Highway 89A and developed private land means that frequent human presence and activity already occurs. Thus, little additional impacts to air quality should occur in this RMZ.

4.2.4.2 Cultural Resources

Common to all RMZs

Impacts would be the same as those described for Alternative A.

4.2.4.3 Recreation

Potential conflicts would include minor short-term adverse effects to non-motorized activities such as hiking, backpacking, wilderness solitude and silence, OHV exploration or hunting. Contacts with other recreating public would be infrequent and transitory on the main routes and could potentially have minor impacts due to congestion at frequently visited recreation sites, overlooks and cultural points of interest and photographic opportunities in House Rock RMZ and Cedar Mountain/Ferry Swale.

Hikers and other recreational users would be indirectly affected by short-term, localized encounters on the main roads, but they would also have access to the primitive

experience outside of the main roads. Congestion on the main routes is unlikely to become a problem in relation to the small increase in the number of vehicles.

Recreation use in the permit areas under this alternative would increase only for current SPRs until the SPRs reached their maximum capacity of available permits within the permit areas. There would be minor impacts to recreation use along House Rock Valley BLM Road 1065 and within the Cedar Mountain/Ferry Swale area under this alternative due to the increase in users who become more familiar with the area through photographs, blogs, commercial SRP promotions and media outlets. This would contribute to minor impacts to the area.

4.2.4.4 Socioeconomics

Common to all RMZs

Under all alternatives, one of the primary factors influencing visitor use in the project area is continued external publications and photographs of the resource. Continued population growth, economic impacts from economic downturn that decreases the ability to travel long distances, and increased awareness of the resources in the project area would bring about increased recreation use, especially the Cedar Mountain/Ferry Swale area because of its proximity to local communities.

The proposed action would organize motorized commercial recreation opportunities while providing for the expectation of the recreation resource as well as to provide the potential for an economic stimulus to the local area by bringing participants into the area where they would purchase food, fuel, entertainment, goods, and lodging. There are currently enough businesses in the area to supply the level of demand for goods or services described above that would be created by the proposed action although the potential for growth under this proposed action may exceed the supply of goods and services.

House Rock RMZ

Decreasing the group size to 10 would have minimal economic impacts as the average group size currently is up to 12. Although the ability to provide ATV based trips in this area may benefit ATV based businesses economically, the opportunities may be limited under this alternative due to the small amount of permits potentially available.

Uplands RMZ

East Side

Under this alternative, no commercial use would be authorized for the area including the overlooks, White Knolls and the private in-holding known as Joes Tank. Although there is a lack of current commercial use of this area (only 2 of the 4 existing SRPs have current use which consists of one vehicle with an average group size of 4 traveling through the area 2-3

times a year), this alternative would not provide the opportunity for future businesses to obtain authorization to operate in this area.

West Side

Decreasing the maximum group size in this RMZ to 6 could result in impacts to businesses that provide these types of services (since the current group size limit is 25). This could result in commercial operators having to occasionally turn away groups larger than 6, which could affect the opportunity to generate income.

Cedar Mountain/ Ferry Swale

Decreasing the group size to 10 in this RMZ could result in impacts to businesses that provide these types of services (since the current group size limit is 25). This could result in commercial operators having to occasionally turn away groups larger than 6, which could affect the opportunity to generate income.

Coyote Buttes RMZ

Maintaining the number of authorized SRPs at the current level would not reduce the opportunity for businesses to provide motorized services into the project area (as there would be no change from current conditions) but it would also not expand opportunities for businesses to generate additional income. Local businesses may realize negligible to minor impacts as the number of available permits is determined by the first-come, first-served on-line process for Coyote Buttes South, for which there is direct competition between SRP holders and private users. If LAC determines a Coyote Buttes South lottery is needed, the likelihood of obtaining permits to access the area would decrease.

Coyote Buttes North permits are already limited; these permits are available through a lottery process in which there may be 1,000 or more people competing for the same permits, so the likelihood of obtaining Coyote Buttes North permit is small. The local economy may realize minor impacts to commercial enterprises wishing to focus on Coyote Buttes, but could be mitigated by the ability to visit areas similar known geological structures in GSENM, Coral Pink Sand Dunes and Snow Canyon State Parks within the region. Monies spent by private users and current SRPs would mitigate economic impacts.

Paria Canyon RMZ

Under this alternative, maintaining the number of authorized SRPs at the current level may have moderate economic impacts on commercial enterprises (since no new opportunities to generate additional income would be provided) but would result in no additional impacts to private users. The local economy may realize minor impacts to commercial enterprises wishing to focus on the Paria Canyon as the number of available permits is determined by the first-come, first-served on-line process for which there is direct competition from other SRPs and private users. If LAC determines a lottery is needed in this area, the likelihood of

obtaining permits to access the area would decrease. Impacts from this alternative could be mitigated by the ability to visit areas similar well known slot canyons in GSENM, Zion National Park, and Antelope Canyon as well as little known canyons within the region. Monies spent by private users and SRPs authorized through this process would mitigate economic impacts.

Cliffs and Rims RMZ

Under this alternative, no commercial use would be authorized with access from Uplands East but the rest of the area would be available for commercial use. Impacts would therefore be similar to those described for Alternative C since the maximum group size of 6 and total number of vehicles per year would not change. However, total number of permits would be half that available for Alternative C, which would not provide the opportunity for future businesses to obtain authorization to operate in this area.

Vermilion Cliffs RMZ

Opportunities for businesses that provide motorized services would be minimal in this RMZ under this alternative. Group size, number of permits available, and number of vehicles per year would be the lowest under this alternative. Thus, business opportunities would be limited in this RMZ.

4.2.4.5 Soil

Impacts would be the same as those described for Alternative A.

4.2.4.6 Soundscapes

Impacts to soundscapes from travel on designated roads by OHVs and ATVs would be localized.

House Rock RMZ

Under this alternative, it is expected that two vehicles would pass any point along the roads in this RMZ within 5-10 minutes depending on topography, vegetative cover, experience of the rider, traffic and the amount of fugitive dust in the air. ATVs would not be permitted under this alternative. Increased traffic under this alternative in the House Rock RMZ would have minimal impact the Arizona National Scenic Trail and wilderness that borders BLM Road 1065 (to include those areas contained with the Coyote Buttes RMZ).

Uplands RMZ

East Side

No commercial use would be permitted under this alternative which would result in no impacts to soundscapes.

West Side

Under this alternative, it is expected that one OHV would pass any point along the roads in this RMZ within 5 minutes as a result of challenging topography and soils, vegetative cover, experience of the rider, traffic, and the amount of fugitive dust in the air. ATVs would not be permitted under this alternative. This alternative may have minor impacts to soundscape but the BLM would monitor the conditions as necessary.

Cedar Mountain/Ferry Swale

Under this alternative, it is expected that four vehicles would pass any point along the roads in this RMZ within 10-20 minutes and 10 ATVs would take as long as 30 minutes to pass depending on topography, vegetative cover, experience of the rider, traffic and the amount of fugitive dust in the air. Increased traffic under this alternative would have minor impacts on soundscape.

Paria Canyon RMZ

Impacts to soundscape would be similar to those described for Alternative A in that group size would remain the same. However, the total number of permits available and total vehicles that could operate per year would be reduced, resulting in minimal noise being generated.

Cliffs and Rims RMZ

This alternative may have minor impacts to soundscape. Excluding the small portion of the RMZ that borders HWY 89A, all access points to this RMZ require motorized vehicles. Impacts to this RMZ are unknown at this point but could potentially have moderate to major impacts to the soundscape.

Vermilion Cliffs RMZ

Impacts would be similar to those described for Alternative A, except that number of SRPs, number of guests, and number of vehicles per year would be greatly reduced. This RMZ is in close proximity to Highway 89A and the communities of Cliff Dwellers and Vermilion Cliffs, so human activity (and associated noise) is already occurring. Impacts to soundscapes would therefore be minimal under this alternative.

4.2.4.7 Wilderness Characteristics

Uplands RMZ

East Side

Under this alternative, no commercial use would be permitted in this portion of the RMZ, which would result in no impacts to wilderness characteristics.

West Side

Impacts to wilderness characteristics could occur in this RMZ for the areas including White Pocket north to the wilderness boundary and east of Sand Hill Loop Road. Under this alternative, the group size would decrease from 25 to 6 people per group, the number of SRPs that could be issued would be 8 (based upon the LAC and a Needs Analysis), and the total number of commercial vehicles could be up to 300 a year. Recreation users have the ability to experience silence and solitude without the imprint of human activity excluding the parking lot area and the old sandy roadway with rare to non-existent disturbance. There would be minor impacts to wilderness characteristics due to the infrequent use of groups larger than 6 in this area.

The southern portion of Paria Plateau within this area currently sees little commercial use although local clubs and groups visit the overlooks. Establishing a maximum group size of 6 would ensure no large groups use this area and expectations of solitude and silence in this area of Uplands West would continue, although the proximity of Highway 89A and BLM Road 1065, the community of Marble Canyon and the Dominquez Escalante interpretive site increase the chance for noise and encounters with other people in this area. Thus, there would be negligible impacts to wilderness characteristics under this alternative.

4.2.4.8 Wilderness

As identified in section 3.3.1, the Coyote Buttes, Paria Canyon, and Cliffs and Rims RMZs contain designated wilderness; all the other RMZs provide access to designated wilderness. Much of the recreation use within VCNM involves motor vehicle accessing Paria Canyon-Vermilion Cliffs Wilderness. Activities within wilderness include hiking, backpacking, adventure exploration, scenic photography and viewing scenic overlooks. Many designated roads approach within several hundred yards of the wilderness area or form the wilderness boundary (within House Rock Valley along the southern boundary of the Vermilion Cliffs and along the northern end of the House Rock RMZ). No designated open routes occur within the wilderness.

Negligible impacts on wilderness values are expected to occur with the implementation of Alternative D. The number of permits and total vehicles that could be authorized would be the least under this alternative. Thus, the opportunities for primitive and unconfined recreation and solitude would be maintained; since motorized activities would stay on existing routes outside of wilderness, there would be no new impacts to naturalness related to increased vehicle traffic.

Only lands within close proximity to designated routes would be affected by motor vehicles. The number of users that would be affected is anticipated to be negligible because these areas are remote and the expectation of solitude is high. The impact from sights and sounds would be short-term and intermittent.

Managing the Cliffs and Rims RMZ outside of the Paria River corridor for the prescribed group size of six within this zone would benefit wilderness by reducing impacts on the resources and social settings and reducing probability of user-wildlife conflicts. The difficulty of managing the group size may occur as related to adjoining RMZ prescriptions that permit larger group sizes. Monitoring would therefore need to occur on a regular basis to verify stipulation compliance within this RMZ.

4.2.4.9 Wildlife

Common to All RMZs

Disturbance to wildlife would be mitigated by providing training (including leave no trace, tread lightly, and nightly clean-up of campsites) to SRP holders and their guides. This training should help reduce impacts on wildlife by explaining the impact recreationists can have on wildlife and cautioning them not to participate in disturbing behavior (such as approaching wildlife to view or photograph them, driving off established routes, and leaving trash).

House Rock RMZ

As described in Chapter 3 of this EA, humans can disturb wildlife in a number of ways (including vehicle noise and the mere presence of humans), potentially resulting in reduced productivity, direct mortality, and/or harassment. The types of impacts under this alternative would be similar to those described for Alternative A, but group size would be reduced from 12 to no more than 10 (authorized activities would still be considered “low impact”). Since wildlife can be disturbed by the mere presence of vehicles/people, impacts still have the potential to occur. However, this alternative would authorize substantially less overall use than Alternative A (approximately 1,000 total vehicles per year versus up to 25,000), so the presence of vehicles associated with commercial use would be less frequent, reducing the risk of disturbance to wildlife. In addition, focusing use in established dispersed campsites should minimize campsite selection that results in new areas of soil and resource damage, as well as minimize the potential to dislodge wildlife from previously safe areas.

Uplands RMZ

East Side

Under this alternative, no commercial use would be permitted in this portion of the RMZ, which would result in no impacts to wildlife

West Side

The types of impacts would be similar to those described for Alternative A except that group size, potential number of SRPs, and total number of vehicles authorized would be greatly reduced. The proposed group size of 6 would still fall within the “low impact” category. In addition, as with Alternative A, use restrictions (spatial and temporal) would be imposed, which would provide protection to raptors, bighorn sheep, and other

wildlife species. Total number of vehicles that could be authorized would be one-quarter that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance to wildlife.

Cedar Mountain/Ferry Swale

The types of impacts would be similar to those described for Alternative A except that group size and potential number of ATVs authorized would be greatly reduced. The proposed group size of 10 would still fall within the “low impact” category. As with Alternative A, use restrictions (spatial and temporal) would be imposed, which would provide protection to raptors, bighorn sheep, and other wildlife species. Total number of vehicles that could be authorized would be less than one-third of that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance to wildlife.

Coyote Buttes RMZ

The types of impacts would be the similar to those described for Alternative A in that group size and total number of 4-wheel-drive vehicles per tour would not change. However, no ATV tours would be authorized under this alternative and total number of available permits would be less than one-third of that proposed under Alternative A, so the presence of vehicles associated with commercial use would be much less. This would result in less potential for encounters between vehicles/people and wildlife, reducing the risk of disturbance and/or mortality to wildlife.

Paria Canyon RMZ

Impacts would be the similar to those described for Alternative A in that group size and total number of vehicles per tour (for shuttles) would not change. However, total number of available permits would be half that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance and mortality to wildlife.

Cliffs and Rims RMZ

Impacts would be the similar to those described for Alternative A in that group size would not change and total number of 4-wheel-drive vehicles per tour would not change. However, no ATV tours would be authorized under this alternative, total number of available permits would be one-third of that proposed under Alternative A, and total number of guests would be less so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance and mortality to wildlife.

Vermilion Cliffs RMZ

The types of impacts would be similar to those described for Alternative C except that group size, number of vehicles per SRP, and total number of SRPs potentially available would be half. No ATVs would be authorized in Alternative D due to

the proximity of this RMZ to private land (which would reduce total number of vehicles and the risk of associated conflicts with private property). The proximity of this RMZ to Highway 89A and developed private land means that frequent human presence and activity already occurs. Thus, little additional impacts to wildlife should occur in this RMZ.

4.2.4.10 Wildlife-Threatened and Endangered Species

House Rock RMZ

As described in Chapter 3 of this EA, humans can disturb wildlife in a number of ways (including vehicle noise and the mere presence of humans), potentially resulting in reduced productivity, direct mortality, and/or harassment. Impacts under this alternative would be similar to those described for Alternative A in that group size would be the same (no more than 12) so authorized activities would still be considered “low impact” (Pagel 1991). Since wildlife (including threatened and endangered species) can be disturbed by the mere presence of vehicles/people, impacts still have the potential to occur. However, this alternative would authorize substantially less overall use than Alternative A (approximately 1,800 total vehicles per year versus up to 25,000), so the presence of vehicles associated with commercial use would be less frequent, reducing the risk of disturbance to Mexican spotted owls and California condors. In addition, measures to minimize the potential for microtrash and minimize harassment of condors (as listed in Section 2.3.3 of this EA) would be included in all SRPs issued. Disturbance should also be mitigated by providing training (including leave no trace, tread lightly, and nightly clean-up of campsites) to SRP holders and their guides.

Uplands RMZ

East Side

Impacts would be similar to those described for Alternative A except that group size would be reduced to no more than 6 and no ATV use would be authorized (which would minimize the total number of vehicles using the area for commercial purposes in this remote portion of the project area). As with Alternative A, use restrictions (spatial and temporal) would be imposed, which would provide protection to nesting spotted owls and condors. Thus, the disturbance effects described in Section 4.2.1.10 of this EA should not occur in the areas where these restrictions are implemented. In addition, total number of vehicles that could be authorized would be substantially less than Alternative A (approximately 300 total vehicles per year versus up to 800), so the presence of vehicles associated with commercial use would be less frequent, reducing the risk of disturbance. Disturbance to Mexican spotted owls and California condors would also be minimized through implementation of permit stipulations and by providing training to SRP holders and their guides.

West Side

Impacts would be similar to those described for Alternative A except that group size and potential number of ATVs authorized would be reduced. The proposed group size of 10 would still fall within the “low impact” category. In addition, as with Alternative A, use restrictions (spatial and temporal) would be imposed, which would provide protection to raptors, bighorn sheep, and other wildlife species during to the critical breeding season. Total number of vehicles that could be authorized in this alternative would be half of that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance to wildlife. Impacts to wildlife species could still occur if users participated in actions that would cause disruption to animals during foraging or other “routing” activities, This potential for disturbance would be minimized through implementation of permit stipulations and by providing training to SRP holders and their guides in order to educate them on impacts recreation can have and caution them.

Cedar Mountain/Ferry Swale

Impacts would be similar to those described for Alternative A except that group size and potential number of ATVs authorized would be reduced. As with Alternative A, use restrictions (spatial and temporal) would be imposed, which would provide protection to raptors, bighorn sheep, and other breeding wildlife species and total number of vehicles that could be authorized would be almost half of that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance to wildlife.

Coyote Buttes RMZ

Impacts would be the similar to those described for Alternative A in that group size and total number of vehicles per tour would not change. However, total number of available permits would be half that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance to wildlife.

Paria Canyon RMZ

Impacts would be the similar to those described for Alternative A in that group size and total number of vehicles per tour would not change. However, total number of available permits would be half that proposed under Alternative A, so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance and mortality to wildlife.

Cliffs and Rims RMZ

Impacts would be the similar to those described for Alternative A in that group size would not change and total number of vehicles per tour would not appreciably change (total ATVs per tour would be reduced by one in Alternative C). Total number of available permits would be less than half that proposed

under Alternative A, and total number of guests would be reduced so the presence of vehicles associated with commercial use would be less, reducing the risk of disturbance and mortality to wildlife.

Vermilion Cliffs RMZ

Impacts would be similar to those described for Alternative A in that group size would not change and total number of OHVs (i.e., 4-wheel-drive vehicles) per tour would not change. No ATVs would be authorized in Alternative C due to the proximity of this RMZ to private land (which would reduce total number of vehicles and the risk of associated conflicts with private property). While total number of available permits would be substantially less than that proposed under Alternative A (resulting in less vehicles associated with commercial use and reduced risk of disturbance and mortality to wildlife) the proximity of this RMZ to Highway 89A and developed private land means that frequent human presence and activity already occurs. Thus, little additional impacts to wildlife should occur in this RMZ.

4.3 Monitoring

Monitoring would include monitoring recreation impacts through recreation site surveys, customer satisfaction surveys, the AROLPS Paria Permits website and field monitoring. The use of seasonal employees and volunteers including site steward volunteers, as well as BPS project support, would be used to augment the inventory and monitoring of impacts.

“Limits of Acceptable Change (LAC) would be the primary framework used to clarify the identity” and monitor selected indicator sites over time to assess the condition and trend of various recreation settings. “Visitor satisfaction and preference surveys would be used to evaluate the success or failure achieving the objectives” of the necessity of the number of commercial permits to have meet or reach recreation goals. (VCNM RMP Appendix J)

As data is gathered and impact analyses are more accurately documented in relation to the implementation of the practices set forth in this EA, adaptive management principles would be implemented. Authorization of future activities would take new information into account, to protect wilderness and project area resources. If LAC inventory and monitoring detects adverse impacts on resources reviewed in this EA or recreation settings, the Recreation Opportunity Spectrum outlined in Appendix 3.H of the Final EIS (January 2007), approved activities could be suspended or modified utilizing the Needs Assessment so that the impacts can be avoided or removed.

LAC monitoring would include regular patrols of the permit areas, and occasional patrols of the project area, which would check visitor use, wilderness conditions, recreation use-related impacts, and user conflicts. Additionally, monitoring would include random visitor and scheduled vehicle counts. Monitoring would also include GPRA visitor surveys, traffic counters, and surveillance at popular recreation site locations, documentation of user conflicts, and photo documentation of specific site impacts related

to recreation activities. Monitoring would also include collection of data from visitor comments and complaints, the Paria/Coyote Buttes AROLPS database, visitor based analysis of public comments during recreation planning, NAU recreation impact surveys or information request calls or e-mails. Monitoring data would be used for adaptive management of visitor use as related to the Needs Analysis for commercial services. (Appendix 15, KFO RMP)

Dark Forest (Uplands West) may need to be one direction only due to the limited width of the primitive route to one lane in most locations due to tree density and growth, lack of pull offs etc.

4.4 Cumulative Impacts

“Cumulative impacts” are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions. This EA attempts to qualify and quantify the impacts to the environment that result from the incremental impact of the proposed action 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 alternatives would have a direct or indirect impact to noise as it relates to soundscape resources. In addition it has been determined that none of the alternatives would have any associated direct or indirect impact on forestry, or visual resources.

The resources described above may also currently be affected by other activities occurring within and adjacent to the project area including development of private land, rights-of-way, and various dispersed recreational activities. One of the factors that could influence the lands surrounding the project area is community growth. The communities of Page, Greenhaven, Cliff Dwellers, Vermilion Cliffs, and Marble Canyon, Arizona as well as Big Water and Church Wells, Utah have experienced growth in recent years. Future development (residences and commercial development) would result in increased demand for utility services and increased traffic and noise along the perimeter of the project area. Population growth would also likely increase the level of off-highway vehicle use within the project area itself, resulting in increased disturbance to wildlife, particularly ground dwelling species with low mobility, and loss of habitat. When added to the likely development of residential and commercial properties in the vicinity of the project area, cumulative impacts to vegetation and wildlife may begin to occur in localized areas. However, due to the large size of the project area, impacts from these actions would be moderated by the open and remote nature of the region.

The number and types of SRPs are likely to increase over than next 3-5 years until equilibrium has been reached in which the goals and objectives of the resource can be balanced with the demands for commercial use. If increases in activities addressed in the proposed action results in negative LAC, monitoring or resource damage, use patterns would be altered through adaptive management.

The majority of environmental effects associated with SRPs are specific to the activities permitted under each SRP. These include such effects as ground disturbance associated with established camps, overlooks, and popular sites within the area, increased use of designated routes and increased contact with other visitors. In addition, there are social issues and indicators that have a role with all users in the project area for both commercial SRPs and private users. These effects are considered and disclosed in individual analyses prepared for each permit. However, some resource values span large geographic areas and can be affected by groups of, or all of the proposed permitted activities. This cumulative effects analysis is prepared to disclose those cumulative effects and is intended to be considered and incorporated into future individual analysis for which they are identified.

The BLM could change Visitor Use Limits for commercial operators or make other changes where necessary to protect project area resources or recreation settings goals and desired future conditions without further NEPA compliance, by joint decision of the authorized officers.

To mitigate long-term impacts, known group campsites being monitored through the NAU recreation site survey reports, ground truthing and cultural inventories, have been placed on the project area maps and would be the only dispersed campsites authorized for commercial use within this EA. Group campsites not listed in this EA, can be reviewed and cleared if appropriate, upon a written request by an SRP holder. If a requested campsite is approved for commercial use, it will be added to the approved campsite list available for commercial use. If increased impacts, social trail formation, or satellite camps are noted during recreation site inventories, campsite clean-up, closing social trails or satellite camps or other mitigation methods, to include site hardening, would be reviewed to decrease the potential for sediment production and soil compaction. The higher concentration of use and dispersed camping increases the potential of impacts on the vegetation and soils as well as livestock recreationist conflicts to include hunters, photographers, and sightseeing and could result in several potential long-term, direct impacts.

Not supplying a selection of dispersed campsites that are designated for commercial use would have a minor adverse effect by increasing the possibility of recreationist-livestock conflicts, as well as having a greater impact on vegetative resources discussed in the vegetation section. There would also not be a method to determine commercial impacts to concentrated dispersed campsite use, nor review of specific potential resource impacts of continued use of specific dispersed campsites.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

The following tables list persons who contributed to preparation of this EA.

5.2 BLM Preparers/Reviewers

Name	Title	Responsible for the Following Program(s)
Ben Ott	Rangeland Management Specialist	Range
Bob Smith	Soil Scientist	Soils
Clay Stewart	Outdoor Recreation Planner	GSENM FO
Diana Hawks	Team Lead, Recreation/Wilderness/Archaeology	Recreation/ Wilderness/VRM/Wild and Scenic Rivers
Gloria Benson	ASDO Tribal Liaison	Native American Religious Concerns
Harry Barber	Kanab Field Manager	Project Oversight
John Herron	Archaeologist	Cultural Resources
John Jasper	Outdoor Recreation Planner	AZ Strip FO
John Sims	Supervisory Law Enforcement	Law Enforcement
Judy Culver	Outdoor Recreation Planner	EA prepared, Recreation Specialist
Karen (Kitti) Jensen	Team Lead, Wildlife	Wildlife/T&E Wildlife
Laurie Ford	Team Lead, Lands & Geological Sciences	Lands & Realty
Lee Hughes	Ecologist	Special Status Plants
Linda Price	VCNM Manager	Project Oversight, Standards & Guidelines
Lorraine Christian	Arizona Strip Field Office Manager	Project Oversight
Matthew Zweifel	GSENM Archeologist	GSENM Cultural Resources
Rene Berkhoudt	GSENM Monument Manager	Project Oversight
Richard Spotts	Environmental Coordinator	NEPA Compliance
Rody Cox	Geologist	Geology / Minerals
Sophia Fong	Law Enforcement Officer	VCNM
Tom Christinsian	Outdoor Recreation Planner	KFO
Whit Bunting	Team Lead, Rangeland Management	Range/Vegetation

5.3 Non-BLM Reviewers:

Susi MacVean	Arizona Game and Fish Department	Nongame Specialist
Christopher Hadley	Arizona Game and Fish Department	Wildlife Manager
Andi Rogers	Arizona Game and Fish Department	Habitat specialists
Sarah Reif	Arizona Game and Fish Department	Habitat specialists
LeAnn Skrzynski	Kaibab Paiute Tribe (KPT).	Environmental Program Director

5.3 Summary of Public Participation

During preparation of the EA, the public was notified of the proposed action by posting on the Arizona Internet Homepage on December 28, 2008. The BLM began the process of involving the public on December 10, 2008 by mailing scoping letters to special recreation permit holders and special interest organizations, Federal, state, and local government entities, and other potentially affected parties, requesting comments or issue concerns during a 30-day scoping period. A news release for this environmental assessment was published on December 19, 2008. Eighteen letters were received in response to project scoping. These letters are discussed in Section 5.2 addressing numerous concerns that are addressed below and issues considered but not addressed.

6.0 LITERATURE CITED, GLOSSARY AND ACRONYMS

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6.2 Glossary of Terms

Acceptable Performance: A permittee has generally operated in accordance with the terms and conditions established for the permit. This may include some minor deficiencies that need correction. If deficiencies persist after a reasonable time period following notification, they may result in a probationary rating.

Adaptive Management: A formal process for continually improving management policies and practices by learning from the outcomes of operational programs and new scientific information. Under adaptive management, plans and activities are treated as working hypotheses rather than final solutions to complex problems.

Allocation: The assignment of use between and rationed among competing users for a particular area of public lands or related waters. Allocation includes both direct and indirect methods.

Applicant: Any individual of legal age, a State or local Governmental entity, a partnership, corporation, association, or other business entity subject to the laws of any State or of the United States, which applies for a permit or lease.

Code of Federal Regulations: The codification of the general and permanent rules published by the Executive departments and agencies of the Federal Government for which there are 50 titles that represent broad subjects such as Part 8360-Visitor Services.

Commercial Photography: Any motion picture filming intended for sale or commercial broadcast, as well as any still photography which uses models or props that is intended for commercial sale or commercial broadcast. Use of a paid, professional photographer to document an event also renders the filming commercial.

Commercial Use: Recreational use of the public lands and related waters for business or financial gain. When any person, group, or organization makes or attempts to make a profit, receive money, amortize equipment, or obtain goods or services, as compensation from participants in recreational activities occurring on public lands, the use is considered commercial. An activity, service, or use is commercial if anyone collects a fee or receives other compensation that is not strictly a sharing of, or is in excess of, actual expenses incurred for the purposes of the activity, service or use. Commercial use is also characterized by situations where a duty of care or expectation of safety is owed participants as a result of compensation. It may also be characterized by public advertising for participants. Use by scientific, educational, and therapeutic institutions or non-profit organizations is considered commercial when the above criteria are met and subject to a permit when the above conditions exist. Non-profit status of any group or organization does not, in itself, determine whether an event or activity arranged by such a group or organization is noncommercial. Profit-making organizations are automatically classified as commercial, even if that part of their activity covered by the permit is not profit-making. (H-2930-1, Recreation Permit Administration pg 84)

Competitive Use: Any organized, sanctioned, or structured use, event, or activity on public land in which two or more contestants compete and any of the following elements apply:

- (1) Participants register, enter, or complete an application for the event; or
- (2) A predetermined course or area is designated.

It also means one or more individuals contesting an established record such as speed or endurance.

Desired Use Level: The amount and type of recreational use an area can accommodate without altering either the environment or the user's experience beyond the degree of change deemed acceptable by the management objectives for the area; can also be called the maximum allowable use level. Desired use levels are developed through the use of "Limits of Acceptable Change" or a "Recreation Opportunity Spectrum" analysis.

Event: A single, structured, organized, consolidated or scheduled meeting or occurrence for recreational use of public land and water resources; may be composed of several related activities.

Financial Gain: Occurs when an individual or entity receives or attempts to receive money, donations, gratuities, or gifts, amortizes equipment, or barter for goods or services.

Historical Use: The average of the highest two use seasons in the preceding five-year period.

Limits of Acceptable Change: The amount of human-caused change to biological, physical, or social components which are tolerable within an acceptable level without degrading the recreational experience.

Noncommercial Use: A recreational activity on public land or related waters where actual expenses are shared equally among all members or participants. Any person, group, or organization seeking to qualify as noncommercial must establish to the satisfaction of BLM that no financial or business gain will be derived from the proposed use. Fund raising, for any purpose, renders an activity a commercial use.

Off Highway Vehicle (a.k.a. off-road vehicle): Any motorized vehicle capable of or designed for travel on or immediately over land, water or other natural terrain excluding: any non-amphibious registered motorboat; any military, fire, emergency or law enforcement vehicle while being used for emergency purposes.

Operating Plan: An applicant's/permittee's plan to conduct their activity or event on public lands or related waters in conjunction with a Special Recreation Permit. An operating plan will describe at a minimum how services will be delivered, how an event will be conducted, and describes measures that will be implemented to protect resources and provide for public health and safety.

Organized Group Activity or Event: A structured, ordered, consolidated, or scheduled event or occupation of public lands for the purpose of recreational use that is not commercial or competitive, and which BLM has determined needs a special recreation permit based on planning decisions, resource concerns, potential user conflicts, or public health and safety.

Paid Public Advertising: Any written, oral, or graphic statement or representation made by any person or representative on their behalf in connection with the solicitation of participants. It includes, but is not limited to, communication by cable and non-cable television systems, radio, computer media, Internet sites available to the general public, listing on public event calendars, printed brochures, newspapers, leaflets, flyers, circulars, billboards, banners, or signs.

Permit: An authorization, revocable by or at the discretion of BLM, to utilize public lands for a fixed period of time. A permit conveys no possessory interest in the land.

Permittee: An individual, group or organization who has fulfilled all the requirements for and has been awarded a permit.

Probationary Performance: The permittee has not operated in full accordance with the terms and conditions of the permit. Performance does not pose an immediate threat to the safety of guests or others, is not in violation of law and doesn't pose a threat of significant resource damage. Corrective action by the holder is mandatory and continued operation at this level of performance is unacceptable. Permits under probation are not transferable.

Public Use: Archaeological site allocation category to be applied to any cultural property found to be appropriate for use as an interpretive exhibit in place, or for related educational and recreational uses by members of the public. Because these sites are often eligible or potentially eligible to the National Register of Historic Places long term preservation is desirable. Allocation to various cultural resource use categories are usually made through the BLM land use planning system.

Recreation Management Zones (RMZ): Areas managed for distinctly different recreation products. Recreation products are comprised of recreation opportunities, the natural resource and community settings within which they occur, and the administrative and service environment created by all affecting recreation-tourism provides, within which recreation participation occurs.

Recreation Opportunity Spectrum (ROS): A tool for classifying recreation environments (existing and desired) along a continuum ranging from primitive, low-use, and inconspicuous administration to urban, high-use, and a highly visible administrative presence. This continuum is used to characterize recreation opportunities in terms of setting, activity and experience opportunities. Refer to BLM Manual Handbook 8320.

Special Recreation Permit: An authorization that allows specified recreational uses of the public lands and related waters. Special Recreation Permits are issued as a means to manage visitor use, protect natural and cultural resources, and as a mechanism to authorize commercial, competitive, and vending use; organized group activities and events; and individual or group use of special areas.

Suspension: To withdraw authority to operate a permitted activity for a specified period of time.

Termination: To revoke the authorization of use.

Trespass: Any use, occupancy, or development of the public lands or their resources without authorization from the United States if authorization is required, or exceeding such authorization, non-compliance, or causing unnecessary or undue degradation of the land or resources.

Unacceptable Performance: The permittee has not operated in accordance with the terms and conditions of the permit and cannot be allowed to continue. The level of performance is a threat to the safety of guests or others or involves a serious violation of law, significant resource damage, or major violation of administrative or financial obligations. Unacceptable performance may be grounds for permit termination and permits with unacceptable performance are not subject to transfer.

Unnecessary or Undue Degradation: Disturbance of land or interest in land greater than that which would normally result when the same or a similar activity is conducted in a prudent and proficient manner.

Violation Notice: (violation notice BLM form 9260-9) is a process permitted by law and serves to bring the violator before the court without the necessity of an officer immediately taking the arrested person before a magistrate. This method will be utilized only when sufficient probable cause exists that the violation occurred and that the subject apprehended is the violator. Authorization to issue violation notices is granted only to commissioned law enforcement officers.

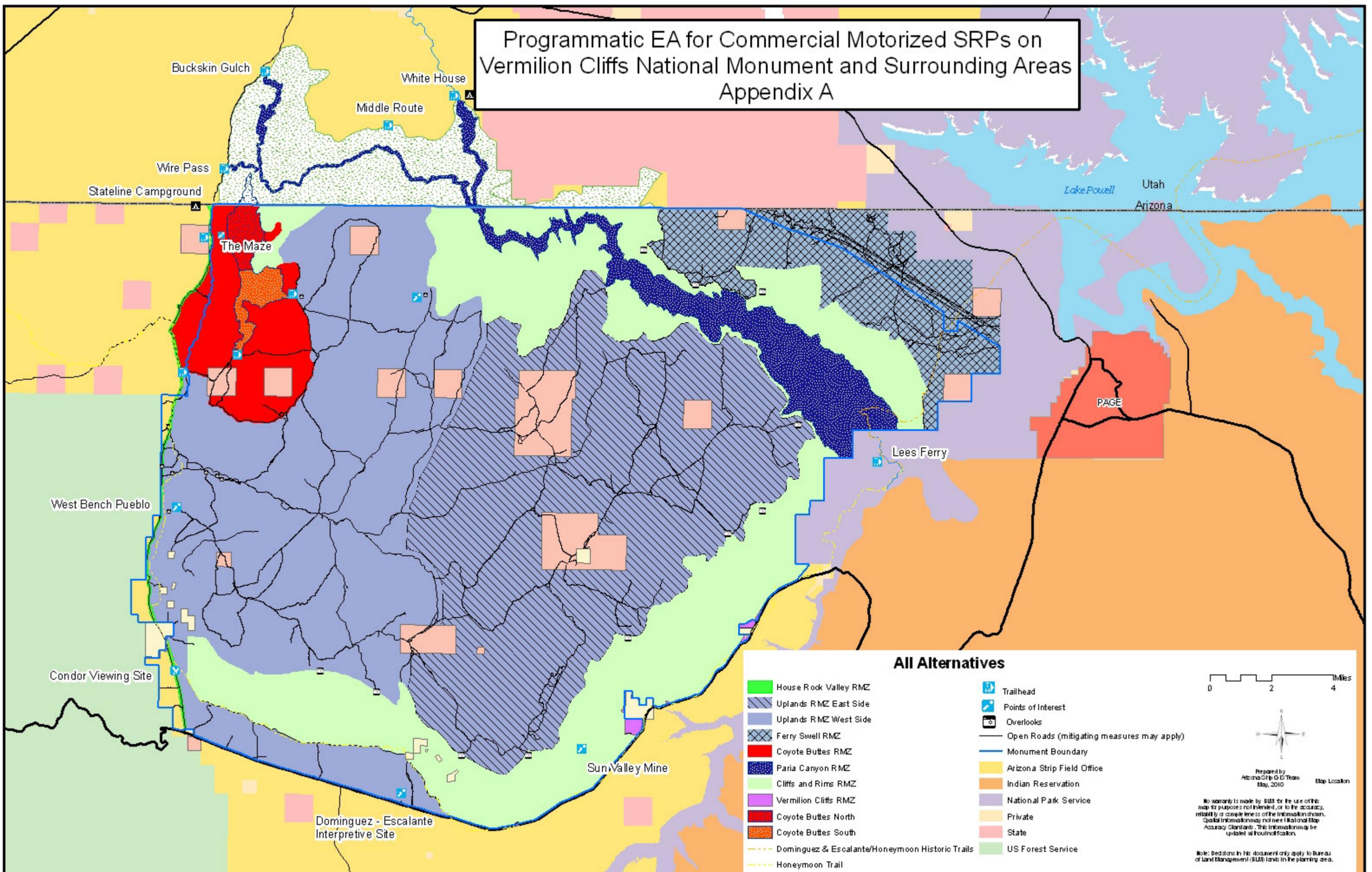
6.3 List of Acronyms Used in this EA

AGFD	Arizona Game and Fish Department
ASDO	Arizona Strip District Office
ATV	All Terrain Vehicle
BA	Biological Assessment
BBM	Benefits Based Analysis
BLM	Bureau of Land Management
BO	Biological Opinion
CEA	Cumulative Effects Area
CFR	Code of Federal Regulations
DFC	Desired Future Conditions
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act
GIS	Geographical Information System
GPRA	Government Performance and Results Act
GSENM	Grand Staircase-Escalante National Monument
KFO	Kanab Field Office
LAC	Limits of Acceptable Change
NAU	Northern Arizona University
NEPA	National Environmental Policy Act
NRA	National Recreation Area
OHV	Off-Highway Vehicle
RMA	Resource Management Area
RMP	Resource Management Plan
RMZ	Recreation Management Zone
ROD	Record of Decision
SRMA	Special Recreation Management Area
SRP	Special Recreation Permit
USFWS	US Fish and Wildlife Service
VCNM	Vermilion Cliffs National Monument
VRM	Visual Resource Management
WHA	Wildlife Habitat Area
WMP	Wilderness Management Plan

APPENDICES

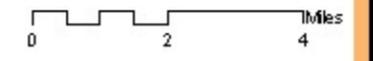
- Appendix A: RMZ Map
- Appendix B: Stipulations
- Appendix C: Needs Assessment

Programmatic EA for Commercial Motorized SRPs on Vermilion Cliffs National Monument and Surrounding Areas Appendix A



All Alternatives

- | | | | |
|---|---|---|--|
|  | House Rock Valley RMZ |  | Trailhead |
|  | Uplands RMZ East Side |  | Points of Interest |
|  | Uplands RMZ West Side |  | Overlooks |
|  | Ferry Swell RMZ |  | Open Roads (mitigating measures may apply) |
|  | Coyote Buttes RMZ |  | Monument Boundary |
|  | Paria Canyon RMZ |  | Arizona Strip Field Office |
|  | Cliffs and Rims RMZ |  | Indian Reservation |
|  | Vermilion Cliffs RMZ |  | National Park Service |
|  | Coyote Buttes North |  | Private |
|  | Coyote Buttes South |  | State |
|  | Dominguez & Escalante/Honeymoon Historic Trails |  | US Forest Service |
|  | Honeymoon Trail | | |



Prepared by
Arizona GIS Team
May, 2010

No warranty is made by BLM for the use of this map for purposes not intended, or to the accuracy, reliability or completeness of the information shown. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

Note: Decisions in this document only apply to Bureau of Land Management (BLM) lands in the planning area.

Appendix B:

SPECIAL RECREATION PERMIT STIPULATIONS

Environmental Assessment DOI-BLM-AZ-A020-2010-0001-EA

Failure to comply with the following stipulations can result in permit revocation

1. The permittee shall comply with all Federal, State, and local laws, ordinances, regulations, orders, postings, or written requirements applicable to the area or operations covered by the Special Recreation Permit (SRP). The permittee shall ensure that all persons operating under the authorization have obtained all required Federal, State, and local licenses or registrations. The permittee shall make every reasonable effort to ensure compliance with these requirements by all agents of the permittee and by all clients, customers, participants, or spectators under the permittee's supervision.
2. A Special Recreation Permit authorizes special uses of the public lands and should circumstances warrant, the permit may be modified by the BLM at any time, including modification of the amount of use. The authorized officer may suspend or terminate an SRP if necessary to protect public resources, health, safety, the environment, or noncompliance with permit stipulations. Actions by the BLM to suspend or terminate a SRP are appealable.
3. No value shall be assigned to or claimed for the permit, or for the occupancy or use of Federal lands granted thereupon. The permit privileges are not to be considered property on which the permittee shall be entitled to earn or receive any return, income, price or compensation. The use of a permit as collateral is not recognized by BLM.
4. Unless expressly stated, the SRP does not create an exclusive right of use of an area by the permittee. The permittee shall not interfere with other valid uses of the Federal land by other users. The United States reserves the right to use any part of the area for any purpose.
5. The permittee or permittee's representative may not assign, contract, or sublease any portion of the permit authorization or interest therein, directly or indirectly, voluntarily or involuntarily. However, the authorized officer may approve contracting of equipment or services in advance, if necessary to supplement a permittee's operations. Such contracting should not constitute more than half the required equipment or services for any one trip and the permittee must retain operational control of the permitted activity. If equipment or services are contracted, the permittee shall continue to be responsible for compliance with all stipulations and conditions of the permit.
6. All advertising and representations made to the public and the authorized officer must be accurate. Although the addresses and telephone numbers of the BLM may be included in advertising materials, official agency symbols may not be used. The permittee shall not use advertising that attempts to portray or represent the activities as being conducted by the BLM. The permittee may not portray or represent the permit fee as a special Federal user's tax. The permittee must furnish the authorized officer with any current brochure and price list if requested by the authorized officer.
7. The permittee must assume responsibility for inspecting the permitted area for any existing or new hazardous conditions, e.g., trail and route conditions, landslides, rocks,

avalanches, changing water or weather conditions, falling limbs or trees, submerged objects, hazardous wildlife, or other hazards that present risks for which the permittee is responsible.

8. The permittee cannot, unless specifically authorized, erect, construct, or place any building, structure, or other fixture on public lands. Upon leaving the public lands, the lands must be restored as nearly as possible to pre-existing conditions.
9. The permittee must present or display a copy of the Special Recreation Permit to an authorized officer's representative, or law enforcement personnel upon request. If required, the permittee must also display a copy of the permit or other identification tag on equipment, especially full sized vehicles and ATVs, used during the period of authorized use.
10. The authorized officer, or other duly authorized representative of the BLM, may examine any of the records or other documents related to the permit, the permittee or the permittee's operator, employee, or agent for up to 3 years after expiration of the permit.
11. The permittee must submit a Post-Use Report to the authorized officer by December 1 for every year the permit is in effect. If the post use report is not received by the established deadline, the permit will be suspended and/or fines assessed.
12. The permittee shall notify the authorized officer of any accident which occurs while involved in activities authorized by this permit which results in: death, personal injury requiring hospitalization or emergency evacuation, or in property damage greater than \$2,500. Reports must be submitted to BLM within 48 hours in the case of death or injury, and within 10 days in accidents involving property damage.
13. Any filming/photography of permitted activities that takes place with the express intent to sell the product back to the guided client(s) as souvenirs or training videos, etc. would be subject to a vending permit being included as part of the Special Recreation Permit. A separate Land Use Permit would be required for other commercial filming on public lands, defined in IM No. 2004-73 as, "The use of motion picture, videotaping, sound recording, or other moving image or audio recording equipment on public lands that involves the advertisement of a product or service, the creation of a product for sale, or the use of actors, models, sets, or props, but not including activities associated with broadcasts for news programs. For purposes of this definition, creation of a product for sale includes a film, videotape, television broadcast, or documentary of participants in commercial sporting or recreation event created for the purpose of generating income." Vending and commercial filming is not permitted in the Paria Canyon-Vermilion Cliffs Wilderness.
14. The permittee is at all times responsible for the actions of himself, his employees, and guests in connection with the authorized operations, and shall not cause a public disturbance or engage in activities which create a hazard or nuisance.
15. Collection of prehistoric or historic artifacts is prohibited on Federal Lands and is prosecutable under the Archaeological Resources Protection Act. (Historic artifacts are those more than 50 years old). Disturbance, defacement, or excavation of prehistoric and historic sites is also prohibited. Disturbance of human graves of natives is a violation of the Native American Graves Protection and Repatriation Act.
16. Food, water, and/or equipment caches will not be allowed unless prior approval is obtained from BLM's authorized officer. Location of proposed caches must be

identified in the permittee's approved operating plan.

17. Harassment of livestock, wildlife, or destruction of private and public improvements such as wildlife catchments, fences and gates is prohibited. Gates will be left open or closed, as they are found.
18. "Leave No Trace" principles must be followed. (See enclosed reference materials).
19. Permittee is responsible for the proper cleanup of all vehicle fluid (including, but not limited to, fuel, motor oil, hydraulic fluid, gear oil, and coolants), vehicle parts, etc., prior to submission of the Post-Use Report and prior to the release of any required posted bond.
20. California condors are highly susceptible to the effects of micro-trash. Micro-trash includes small and easily ingestible materials such as bottle caps, broken glass, cigarette butts, small plastic bits, lead bullets, and bullet casings, even food materials. The campsite/lunch site would be cleaned up at the end of each day of use (e.g., trash removed, scrap materials picked up) to minimize the likelihood of condors visiting the site.
21. Permittee shall limit vehicle traffic to the designated routes contained within the Special Recreation Permit (SRP). No cross-country travel is permitted.
22. The permittee will practice proper precautions for noxious weed spread. Therefore all machinery (street legal motorized vehicles, non-street legal all terrain vehicles, etc) that has been used outside the Arizona Strip must be cleaned prior to use on the Arizona Strip in order to prevent the possible introduction and spread of noxious weeds.
23. All motor vehicle use will comply with applicable off-highway vehicle regulations.

OVERNIGHT CAMPING STIPULATIONS:

24. All proposed campsites outside of the Paria Canyon overnight permit area need to be identified through GPS 1 month before intended use to provide the BLM time for clearance and consideration for approval of use.
25. All camps will be prohibited within one-quarter mile of a natural water hole or man-made watering facility containing water in such a place that wildlife or domestic stock will be denied access to the only reasonable available water. Assuming compliance with AGFD regulation 17-308, all camps will be located at least 200 feet from water holes, live water sources, or man-made facilities, or farther if specified by the local office, up to ¼ mile from such features.
26. All camps will be located at least 200 feet from any known archaeological sites, including prehistoric camps, rock shelters, caves, and historic buildings.
27. All refuse must be carried out of the area and disposed of in a county approved disposal site. Burying garbage is prohibited.
28. The permittee may use only dead and down wood for campfires (unless otherwise directed). Cutting or removing any live vegetation or standing dead vegetation is prohibited.
29. The permittee must use existing campfire circles when they exist, rather than construct new ones. If no existing fire circles, sites should be selected that can be "naturalized" at departure.

SPECIAL STIPULATIONS THAT APPLY TO THE VERMILION CLIFFS NATIONAL MONUMENT:

30. Within Vermilion Cliffs National Monument, collection of Monument resources, objects, rocks, petrified wood, fossils, plants, parts of plants, fish, insects, or other invertebrate animals, and other items is prohibited. Recreational collection of animals and animal parts in ecologically non-sensitive areas is allowed, if in compliance with Arizona state statutes and AZGF regulations. This SRP does not give authorization to appropriate, injure, destroy, or remove any feature of this monument, or to locate or settle upon any of the lands thereof.

SPECIAL STIPULATIONS THAT APPLY TO THE PARIA CANYON-VERMILION CLIFFS WILDERNESS:

31. A human waste bag will be provided for each customer at overnight camps in Paria Canyon. All bags must be packed out of the wilderness area and properly disposed of in a trash receptacle.
32. The group size is limited to a maximum of ten individuals in Paria Canyon, Wire Pass, White house and Buckskin Gulch.
33. No permits are reserved for commercial use. If the permittee chooses to obtain a permit in advance, they must obtain a permit for both themselves and their clients and pay for the fees in advance. Individual Special Recreation Permits are not refundable. The group size is limited to a maximum of ten individuals in Paria Canyon, Wire Pass, White house and Buckskin Gulch.
34. Campfires are prohibited.

Appendix C

Needs Assessment Analysis

Vermilion Cliffs National Monument (VCNM) is responsible for managing nearly 300,000 acres of land that was designated a national monument in 2000 by Presidential proclamation including 92,000 acres of wilderness that was designated by Congress in 1984. VCNM co-manages the Paria Canyon-Vermilion Cliffs Wilderness (PCVCW) with the Kanab Field Office (KFO) and Grand Staircase-Escalante National Monument (GSENM). The project area for this needs assessment encompasses VCNM, the Ferry Swale portion of the Arizona Strip Field Office, and the PCVCW within Arizona and Utah. Ferry Swale is divided into two management offices, the Arizona Strip Field Office and Vermilion Cliffs National Monument. In order to provide cohesive management practices, the entire area of Ferry Swale is addressed in this document.

As managers of the land and its resources, the BLM has a responsibility to sustain the nation's resources. With this responsibility come the questions of, at what point does continued recreation use cause the experiences that are being pursued to be diminished, and at what point will recreation use cause unacceptable effects on natural and social resource settings? This document attempts to address the determination of the upper limits of appropriate recreation use throughout the project area with the understanding that final determinations of the needs assessment and allocation of use if necessary to protect resources will be determined through adaptive management utilizing Limits of Acceptable Change (LAC).

LAC will be “used to clarify the identity of other indicators, inventory the indicators, evaluate the data and set standards for the indicators, and monitor selected indicator sites over time to assess the condition and trend of various recreation settings” (BLM 2008c) as a tool to determine the need for commercial services. Recreation Site Surveys, in use since 1995, in conjunction with LAC, will be the second tool utilized to determine the carrying capacity of commercial services. Visitor satisfaction and preference surveys will also continue to be used as tools to evaluate the success or failure of achieving land use plan objectives and the issuance of current and future commercial permits necessary to meet or reach recreation goals, as identified in the RMPs and within the project area utilizing adaptive management practices to obtain these goals

Decisions made via Needs Assessments (Whittaker, et al 2010)

Needs assessments are the analyses that support the decision on the role of the ("need") for commercial services and the amount of use to be allocated to the commercial sector. These assessments establish a framework that will help project managers evaluate proposals for new or additional” [commercial] use. In defining the amount of use to be allocated to commercial use, a specific amount or range of commercial use may be set or, if more flexibility is desired, a clear set of criteria can be developed for evaluating additional use). Allocation of use is a tool utilized if LAC and site surveys determine the need for such allocations.

Needs assessments also support the decision on whether or not to issue a new permit or additional use to an existing Special Recreation Permit (SRP) and if so, what stipulations would be required in the permit.

DETERMINATION OF NEED (DOI 2010b)

The basis for permitting commercial recreation services on public lands is the determination of need for those services. Public need is identified by using the land and resource management planning process and several other avenues: market demand and trends in recreation activities; commercial services needed to meet agency objectives and management goals; identification of the public need for private sector uses, and authorizing SRPs only where there is a demonstrated public need.

Market-generated demand or applications for conducting commercial services, by themselves, does not constitute need. The identification of need should be substantiated by agency analysis. Need is also not defined as the desire of commercial SRPs to create or expand their areas of operation or to provide unique experiences for their current clientele.

Outfitting and guiding permits may be issued when one or both of the following occurs:

1. A public need is identified through the planning process, requests for commercial services from the private sector, or complaints that commercial services are not available. For instance, in 2009 there were comments/concerns from the public that shuttle services were not available for Paria Canyon shuttles due to SRPs being booked on the dates shuttles were needed. This constitutes a need for more shuttle services.
2. An increase or new allocation of permits or commercial use levels as determined by LAC and site surveys.

There are three separate steps in developing a framework for assessing the "public need" and allocation for commercial services or evaluating an individual application for new or additional use. These steps are:

1. Public need for commercial services - identification of the types of commercial services that would help meet agency objectives.
2. Capacity - estimate of total number of people who can use an area during defined time period based on resource and setting capability (i.e. meeting management desired conditions and standards).
3. Allocation - division of total capacity estimate among difference sectors of the public (e.g., commercial outfitted and institutional outfitted and organized groups requiring SRPs).

Because of the unique characteristics of PCVCW, land use planning designations, goals and objectives for commercial services have been developed specifically for the project area. These goals and objectives which are found in the Grand Staircase-Escalante National Monument Management Plan (MP) (BLM 2000), Vermilion Cliffs National Monument Resource Management Plan (RMP) (BLM 2008c) and the Kanab Field Office RMP (BLM 2008b) to include:

“Through the development of Recreation Area Management Plans for Special Recreation Management Areas, BLM will integrate and constrain all the traditional recreation-related programs and initiatives (e.g. OHVs and transportation, rivers and trails, permits and fees,

concessions management, accessibility, interpretation, facility management, VRM, etc) to address only those essential functional actions required to achieve planned outcomes.” (BLM 2008c) Wilderness and monument designations provide a setting favorable for many types of commercial recreation activities. Section 4(d) (2) of the 1964 Wilderness Act must be addressed for further considerations for commercial use that allows for commercial services such as those provided by packers, outfitters, and guides that may be provided within wilderness areas to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas. As a result of the majority of current and proposed SRPs primarily focusing activities within wilderness and wilderness characteristic areas that require motorized vehicle access, wilderness considerations are addressed in this document.

Vermilion Cliffs National Monument RMP:

Desired Future Conditions (DFC)

Management Actions (MA)

Recreation and Visitor Services/Interpretation & Environmental Education (RR)

Wilderness Management (WM)

Wilderness Management

- DFC- WM01: The first and dominant goal is to provide for the long term protection and preservation of the area’s wilderness character under a principle of non-degradation. The areas’ natural condition, opportunities for solitude, opportunities for primitive and unconfined types of recreation, and any ecological, geological, or other features of scientific, educational, scenic, or historic value present will be managed so that they will remain unimpaired.
- DFC-WM-02: Will be to manage the wilderness areas for the use and enjoyment of visitors in a manner that leaves the areas unimpaired for future use and enjoyment as wilderness. The wilderness resource will be dominant in all management decisions where a choice must be made between the preservation of wilderness character and visitor use.
- DFC-WM-03: The third goal is to manage the area using the minimum tool, equipment and/or structure necessary to accomplish the objective successfully, safely, and economically.
- MA-WM-01: (which states in part): The Minimum Requirement Decision Guide will be used by the BLM in all decisions, giving greatest weight to accomplishing objectives via natural processes and non-mechanized/non motorized means.
- DFC- RR-07: In the Primitive TMA, high quality recreation opportunities associated more with primitive recreation experience opportunities and non-motorized uses such as camping, sightseeing, hiking, horseback riding and hunting will be maintained/enhanced, provided they will be compatible with the protection and enhancement of sensitive resource values and Monument objects, where appropriate.
- DFC-RR-17: Paria Resource Management Zone (RMZ) will be managed for improved outdoor knowledge, skills, and self-confidence; greater sense of independence.
- MA-RR-31: (which states in part): “Commercial services within designated wilderness shall meet guidelines for commercial activities in wilderness”.
- MA-RR-25: Commercial use of horses and pack stock will continue to be prohibited in Paria Canyon upstream from Bush Head Canyon.

- MA-RR-28:
 - The current special area permit and fee requirements for Paria Canyon, Buckskin Gulch, Wire Pass, and Coyote Buttes will continue, subject to adaptive management decisions deemed necessary through monitoring and evaluation of resource and social conditions.
 - Commercial SRPs will be considered on a case-by-case basis in Coyote Buttes North. A limit may be established as conditions dictate.
- MA-RR-30: No competitive events are authorized in designated wilderness.
- Recreation Use Outside Designated Wilderness:
 - MA-RR-10: “Visitor limits, supplemental rules, or restrictions will be based on LAC”.
 - MA-RR-26: Visitor limits, regulations, or restrictions can be instituted and/or adjusted when monitoring of resource and social conditions indicate a trend toward unacceptable resource and social changes brought about by such use.
 - MA-RR-27: SRP application packages (application, operating plan, maps, etc.) will be considered for authorization on a case-by-case basis upon receipt of application. (See 43 CFR 2930 for requirements).
 - MA-RR-29: No motorized speed events are authorized in the Monument.
 - MA-RR-31:
 - Commercial, competitive, organized group/event, and special area permits may be authorized when such uses accomplish or are compatible with management objectives and other plan provisions.
 - Recreation activities requiring use authorization may be limited in listed species and other sensitive habitats (See Special Status Species and Vegetation Management decisions).

Arizona Strip FO RMP.

- DFC-RR-01: Recreation and visitor services will be managed to provide varying levels of both:
 - Structured recreation opportunities that offer a range of specific benefits, activities, and experiences within outdoor settings (SRMAs; and/or
 - Dispersed, unstructured recreation opportunities that focus only on visitor health and safety, user conflict, and resource protection issues.
- MA-RR-08: A Limits of Acceptable Change (LAC) framework will be used to establish acceptable resource and social and managerial settings and conditions using appropriate indicators and standards.
- MA-RR-26: Motorized speed events will only be authorized in the Motorized Speed Event Area in the St. George Basin...

Grand Staircase-Escalante National Monument MP.

Recreation Allocations, Notice of Modification (ALLO)
Outfitter and Guide Operations (OG)

- ALLO-1: The Monument will use the following indicators to determine when and where visitor allocations need to be made: (1) resource damage (e.g., proliferation of campsites, human waste problems, social trailing or vandalism to historical, archaeological, paleontological sites, or destruction of biological soil crusts), (2) conflicts with T&E species and/or (3) the number of social encounters become unacceptable.

- ALLO-2: Inventories, surveys, and studies will establish baseline data for Monument resources. These data will be used to set up an ongoing monitoring program and to prioritize areas that require more restrictive management. This will be done as part of the adaptive management framework.
- OG-1: Outfitter and guide operations will be allowed throughout the Monument in compliance with the constraints of the zones and other Plan provisions.

Kanab Field Office RMP.

- REC 22: Management responses to unacceptable resource and/or social conditions will range from least restrictive methods (e.g., information and education) to most restrictive (e.g., visitor limits, supplemental rules, or restrictions). Where feasible, the least restrictive methods will be the first priority.
- REC-37:
Issue SRPs after evaluation of the various factors including the following:
 - Use conforms to the recreation goals and objectives outlines in the RMP
 - Nature of proposed event or activity (i.e., commercial versus competitive)
 - Size (acreage) and sensitivity of land and resources affected (ACEC, WSA, Wilderness)
 - Compatibility with other uses, activities, and visitors in that area
 - Proposed number of participants and group size
 - Associated vehicle and equipment
 - Time (daily, seasonally) and duration of proposed us
 - Potential social impacts (crowding, group encounters, conflicting activities, and/or experiences)
 - Specific resources impacted (e.g., wildlife, cultural, paleontology, visual, riparian, soil, air and water)
 - Rehabilitation and monitoring needs and feasibility
 - Support needs (people, equipment, supplies, vehicles)
 - Safety issues

Other objectives and goals dealing with wilderness or areas defined for management of wilderness characteristic include:

- In areas managed to maintain wilderness characteristics, the BLM will manage commercial operations to protect solitude attributes... “when the sights, sounds, and evidence of other people are rare or infrequent and where visitors can be isolated, alone or secluded from others”. (BLM 2003)
- In areas managed to maintain wilderness characteristics, the BLM will manage commercial operations to protect natural attributes, “lands and resources exhibit a high degree of naturalness when affected primarily by the forces of nature and where the imprint of human activity is substantially unnoticeable”. (BLM 2003)

- Management directions and monitoring in the Paria Canyon-Vermilion Cliffs Wilderness will be aimed at preservation, to the exclusion of visitor use if necessary. (BLM 2006)
 - Manage outfitter-guide operations in the same manner as other visitors. Permit camping only in sites specified in “SRP” permits. Keep outfitter-guide activities harmonious with activities of non-guided visitors. (BLM 1987)
 - Commercial groups will be considered on a lower priority basis for use. In the event that carrying capacity limitations are imposed, commercial privileges may be reduced in extent or disallowed in their entirety. (BLM 1972)
- Additional objectives for recreation permits are;
 - Establish a permit and fee program that supports the emphasis on resource-dependent recreation opportunities (or “niches”), while responding to demonstrated needs for recreation programs and facility development which protect resource values and public health and safety. (BLM 2006)
 - Establish a permit and fee program that provides needed public services; satisfies recreation demand within allowable use levels; minimizes user conflicts; and protects and enhances public lands, recreation opportunities, and sustainable healthy ecosystems. This includes managing recreation programs and facilities in a manner that protect the resources, the public and their investment, and that also fosters pride of public ownership. (BLM 2006)

Guidance for SRPs contained within the draft Resource and Visitor Services (R&VS) Program BLM Recreation Planning Manual (BLM 2010a) includes:

Identify stewardship management action and allowable use decisions necessary to address:

- Visitor health and safety,
- Use and user conflicts,
- Type of recreation permits and activities that would and would not be permitted, and
- Recreation impacts on cultural and natural resources.
- Recognizing the BLM is not the sole source provider of recreation opportunities, coordinate with other recreation providers within the region. Planning efforts are coordinated with other suppliers of resource-dependent recreation to identify gaps in recreation services and to ensure complimentary rather than competitive management efforts. To the extent possible, land use plans should be consistent with State Comprehensive Outdoor Recreation Plans (SCORP's) and other applicable Federal, State, and local plans.

Administrative implementation decisions include these four categories:

- **Management.** Recreation management actions, such as commitment of resources, services to be offered to visitors, and/or the development and provision of facilities (e.g., developed recreation sites, trails, concessions).
- **Administration.** Regulatory actions including the implementation of allocation systems, permits, fees, use restrictions, partnership agreements, as well as business plans or fiscal accountability systems, and data management protocols.

- **Information and Education.** Information and education actions including maps or brochures, websites, outreach efforts, events, interpretation, environmental education, signing; and other visitor information delivery services.
- **Monitoring.** Monitoring of recreation resources and human use including: visitor use and use patterns; recreation caused resource effects or impacts; visitor satisfaction; and effectiveness or attainment of outcomes-focused management objectives, recreation setting characteristics, standards and indicators.

CRITERIA FOR DETERMINING NEED

The following criteria will be used in determining the need for continued or additional commercial services in the project area.

1. **Skills and Equipment** -- What skills and equipment are needed within the project area by the public to experience the area? Are specialized skills, equipment, or knowledge to responsibly visit the area needed for certain locations such as remote areas, driving conditions, etc., needed? Are unique skills, such that the use of a commercial service is almost a prerequisite if the public is to have reasonable opportunities to participate, needed?
2. **Knowledge** – Does having the availability of knowledgeable commercial services improve the ability of the public to enjoy the recreation opportunities in a manner that reduces resource damage and user conflicts?
3. **Safety** – Are commercial services skills, equipment or knowledge needed to maintain a reasonable level of safety for the public? Are there areas where potential resource or safety concerns suggest that visitation by commercial users (whose use can potentially be managed fairly closely by the agency) would aid in the management of the area?
4. **Education** – Will commercial services experience and background provide information, interpretation, and education for project area resources, conditions, Leave No Trace and Tread Lightly techniques, and management of public lands?
5. **Demand/Utilization** – While demand is not the overriding criterion for issuance of a permit, it is an important consideration in determining the need for commercial services. The extent to which current services are being used/offered is an indicator of needed services. Is there public demand from the public wishing to visit the project area for the types of services being offered? Has the demand been met by current SRPs?
6. **Compatibility** – Will a commercial operation be compatible with existing general-public and/or institutional use of an area? Are these activities appropriate given existing laws, regulations, and desired setting/RCS classification (from the RMPs)?

Does the activity conform with the RMPs? Is the use appropriate for the site or area? Would the proposed activity conform with recreation opportunity/experience/benefits the BLM is managing for in the area proposed? Would it alter the managerial, natural or social setting of the area's attributes table? If the answer is no to any of these questions, then the SRP should be declined or further recreation planning would need to occur. (BLM 2006)

7. **Feasibility of Offering Services Elsewhere** - The extent, to which the proposed service can be offered on private land or, in the case of Wilderness, in areas outside designated Wilderness, is a consideration for the need of a commercial service. Permit only those used authorized by Wilderness legislation, which cannot be reasonably met on non-wilderness lands. Are there alternate areas off the monuments or wilderness within the region that are available to conduct these types of activities?

8. **Contribution to rural economies** – The sustainability of rural economies is dependent on creating a diverse economic base. Small businesses such as outfitting and guiding can contribute to a local economic base. (DOI 2010b) What role does a particular outfitting or guiding service contribute to the local economy?

**Decision Tree for Special Recreation Permitting
Matrix for Determining Need for Commercial SRPs**

Criteria	Permit More Likely	Permit Less Likely	Deny as proposed
Is the use appropriate to the site/Recreation Management Zone (RMZ)?	Yes, RMZ prescriptions are very conducive to the proposed use, provided for in planning	Site/RMZ is appropriate for group size, activity and duration, not specifically provided for in plan.	No, RMZ prescriptions not appropriate for use as proposed. Does not conform with recreation planning goals, recreation settings
Capacity of BLM to issue, manage and monitor the proposed activity?	The BLM can devote adequate resources and personal for the enforcement of the proposed activity throughout the duration of the permit per BLM H 2930-1. Issuance of permit will not affect workload measures.	The BLM have relatively little resources or personal to devote to enforcement of the proposed activity and can only provide partial enforcement and will impact BLM workload measures.	No resources or personal to devote to enforcement of the proposed activity. The BLM will need to cancel or alter workloads measures to monitor the permit.
Would the activity proposed alter managerial, natural or social settings?	No changes would occur to managerial, natural or social settings.	Minor changes would occur to managerial, natural or social settings that would benefit these settings.	Yes, managerial, natural, or social settings would be changed that would provide negative benefits to these settings.
What type and extent of monitoring would be required for the proposed activities?	No site location pre- or post-permit oversight activities required	Site location pre- or post-permit activities require less than 2 days of BLM oversight.	Long term monitoring of one or more resources required.
Does the activity further recreation program goals and objectives?	Yes	Yes	No
Does the activity provide diversity of services “niches”?	The proposed activity is unique or is not offered by services in the area.	The proposed activity is offered by several services in the area.	The proposed activity is offered by numerous services and is the primary use of the area.
Are there similar resources for which the activity could be done outside the monument, or the wilderness?	No	Yes, but the area is not known as well	Yes
Conflict with other users?	None	Short term impacts	Long term impacts

Health and Safety Concerns?	None	Concerns for participants or other public land users.	Unmitigated, high risk to human health and safety. Unreasonable risk especially to non-participants.
Wilderness, Wilderness Characteristics, Wildlife, Soil, Range, Cultural Resources affected	None or mitigation addressed in Programmatic EA	Concerns will need to be addressed, reviewed and analyzed. Site surveys are required.	Long term monitoring, extensive site or surveys by multiple specialties required.
Soundscapes, Air Quality affected	None or mitigation addressed in Programmatic EA	Short term impacts	Long term impacts
Competitive Event	No staging area needed	Staging area needed	More than 3 acres of staging area needed or requested within wilderness.
Motorized Speed Event, Wilderness Therapy or Residential Treatment program, Exclusive Use	N/A	N/A	Yes
Group demonstrations, ceremonies (non-native traditional use excluded) and other similar events in the project area excluding the Ferry Swale area of the Sand Hills RMZ.	N/A	N/A	Yes
In addition for Organized Group SRPs (BLM (2006))			
Bonding desirable to cover reclamation, damage to government property or resources?	None	Bonding desirable or required.	
Insurance desirable to protect the U.S. Government from claims by group participants or third parties?	No, liability exposure is negligible.	Insurance is desirable due to possible claims for personal injury or property damage.	

NEEDS ASSESSMENT BY ACTIVITY

This section has been developed to reflect the current types of commercial activities occurring in the project area, those activities that have been proposed in the area, or those activities that the BLM can reasonably anticipate to be proposed for future commercial use in the area. There may be activities not discussed in this EA that have not been created or requested in the future for which future NEPA analysis may be required.

Backpacking and Hiking – Spring and fall backpacking and hiking are skills that are relatively easy to master and do not require substantial time or talent to learn. There is limited “demonstrated need” for guided backpacking treks within Paria Canyon-Vermilion Cliffs Wilderness. There is a potential to develop niche cross-country treks, especially in the backcountry of the Paria Plateau where trails do not exist. Outfitters who provide environmental education, interpretive information, or access for special populations may fill a public need in this category. Organizations that provide for experiential learning experiences within a

backcountry or outdoor setting may fulfill a need for the public. Although a designated wilderness or national monument is not necessarily a requirement for these types of activities, a setting that provides risk, challenge and solitude are essential to allowing participants to experience conditions that affect their personal lives. The Criteria for Determining Need #8 in the document above, will have to be considered before activities are permitted within the wilderness.

Climbing and Canyoneering – Learning to navigate high-elevation technical routes is a skill that requires special knowledge that takes substantial time and talent to learn. Climbing/canyoneering also requires this expertise plus expensive, specialized equipment. There are no defined technical climbing routes in the project area. There are potential technical climbing areas within the Paria Canyon-Vermilion Cliffs Wilderness but these areas do not provide challenges or variation that does not exist outside of the wilderness within ½ days drive, within the Arizona Strip Field Office, GSENM, Zion National Park, GLCA and Snow Canyon State Park. Therefore no climbing or mountaineering permits will be available within the Paria Canyon-Vermilion Cliffs Wilderness.

Heritage Touring -- The Arizona Strip District FO and VCNM RMPs made the decision that only those cultural sites listed in the RMPs as Public Use Sites can be utilized for commercial opportunities. The project area has a small number of both prehistoric and historic sites listed as Public Use Sites that can provide limited opportunities for developing heritage tourism programs. Important local historical sites are located on private in-holdings and would require written authorization by the land owner to be included in the SRP application package presented to the BLM. Monitoring of the use of only those Public Use Sites listed in the RMPs may be difficult.

Institutional/Organizations-- The BLM has experienced a large increase in the numbers of organized groups (scientific, educational or organizational groups) who wish to conduct activities on public lands. These groups are typically universities, schools, clubs, religious organizations, camps, or special interest groups. Membership or affiliation with the group is required. In many instances these groups have been operating on the BLM for many years without obtaining any authorization to do so.

Both public and institutional outfitted/organized and guided groups are commercial if: 1) a duty of care or expectation of safety is owed the participants by service providers as a result of compensation and/or there is public advertising for participants; 2) college courses are offered for credit; 3) any person, organization, or group makes or attempts to make a profit, receive money, amortize equipment, or obtain goods or services, as compensation for recreational activities occurring on public lands; 4) Also, any group or organization that regularly uses the public lands, such as the Boy Scouts who backpack in the Paria Canyon 4-5 times a year. For those organizations or groups that do not fall under usual examples of commercial use, the BLM is able to make a determination as to whether such use should be authorized under an SRP should LAC monitoring indicate resource damage or conflicts with other users is occurring. The Decision Tree above will aid the BLM in determining if the organized group requires an SRP.

Mountain Biking –Northern Arizona is a limited destination for mountain bike enthusiasts from across the country. Mountain biking requires skill and knowledge in operating and negotiating the road network. Off road travel is not permitted for mountain biking and there are no trails within the project area for mountain biking. There are currently no mountain biking permits

issued in the project area. Mountain-biking opportunities are limited due to the sandy condition of the routes within the project area.

Overnight Stock Pack Trips - The expense of buying a horse and pack equipment for taking a trip into the backcountry is high. Also, to navigate a pack string through a backcountry setting requires skills that take a substantial amount of time to learn. Overnight pack trips that provide environmental education, interpretation, or access for special populations have potential. There are limited opportunities for pack trips, particularly on the VCNM. Commercial stock trips are prohibited upstream of Bush Head Canyon within the Paria Canyon permit area.

Service Oriented Trip Policy - If the primary purpose of the trip is to accomplish specific tasks, as described by the authorized officer, of previously identified resource management needs then a permit may not be required. Resource management needs will primarily consist of work that provides for improvement, maintenance, protection or monitoring of land management resources. To qualify for an exemption of the need for a special use permit, the work performed by the organization or group must constitute more than 70% of the time that the group spends on BLM lands while conducting services and activities. This percentage is based on the proportion of time of an eight- (8) hour workday. While engaged in these activities the groups will generally be covered under a volunteer/assistance or Memorandum of Understanding (MOU) agreement.

Special Populations – VCNM is not an ideal environment for special populations due to the remote location and lack of services provided within the project area -such as low income, inner-city youth, the physically and mentally disabled, and the elderly to experience a different setting from what they may be accustomed due to the remote location and lack of services provided within the project area. Many of these groups might not have the skills, experience, or ability to access the backcountry without commercial services.

Trail Rides – As with overnight pack trips, the expense of horse ownership is high, and there are special skills and abilities needed to participate in this activity. Opportunities for trail rides do not exist in the Coyote Buttes or Paria Canyon permit areas upstream of Bush Head Canyon. Permits within the Paria Canyon-Vermilion Cliffs Wilderness will be limited to 6 stock animals and one guide.

4WD Touring (Jeep Tours) – Guided tours offer those without 4-wheel-drive vehicles or experience driving 4-wheel drive vehicles in deep sands an opportunity to experience the high country on primitive roads. Special populations can also enjoy the backcountry in this manner. A portion of the public generally has access to 4-wheel-drive vehicles and the skills necessary to drive most of the primitive roads in the project area. The Sand Hills and Ferry Swale area primitive roads are seeing more heavily congested seasonal use each year, as the popularity of sport-utility vehicles increases. Commercial recreation opportunities for 4WD touring will be limited to Resource Management Zone attributes, with permits available primarily in areas that will not negatively impact users.

Wilderness Therapy and Residential Treatment - Continue to deny applications for Wilderness Therapy or Residential Treatment program SRPs within the state of Arizona. (BLM 2008d) Wilderness Therapy and Residential Treatment programs are currently not permitted within BLM lands administered in Arizona.

CRITERIA FOR DETERMINING CAPACITY

The preparation of this EA and the needs assessment analyzed in this document allows for carefully planned and controlled resource modifications and proactive resource management to allow for the enhancement of outdoor recreational opportunities as long as the intensity of use does not diminish monument objects and natural and cultural value established in the RMPs, wilderness management plan and the Paria Canyon/Coyote Buttes Resource Management Area (RMA) plan. Management decisions in relation to the carrying capacity of commercial SRPs within the project area must be based upon a formal cumulative impacts matrix and recreation site impact surveys to aid in the development of management decisions that will permit public enjoyment of the area by providing for the minimum necessary commercial SRPs within project area.

Future authorizations for motorized commercial SRPs will follow these 4 goals:

- 1) does not thwart the attainment of targeted experience and beneficial outcomes;
- 2) fits within recreation setting prescriptions;
- 3) are all complementary and balanced with each other;
- 4) and are limited to only those necessary to achieve the above goals. (BLM 2008c)

It is important to address capacity proactively before impacts become unacceptable, irreversible change occurs, or conflict and contentiousness develop among stakeholders. If possible, managers should prescribe which management actions they will employ if parts of the management prescription are violated, particularly if direct use limits are contemplated. Proactive decision-making is critical because many impacts are irreversible and because restrictions may be more readily accepted by existing users or stakeholders if they are prescribed before they need to be implemented. (Whittaker, et al 2010)

To proactively plan for the management and protection of the resources in the project area, capacity is defined as:

- “Capacity is the amount and type of use that is compatible with the management prescription for an area.
- A capacity is a number on a use level scale such as “trips per day entering a specific area or trailhead,” or “people authorized to enter Coyote Buttes North on a given date.” It has (1) units of use, (2) timing, and (3) location components.
- The basis for any capacity is a management prescription. This includes:
 - Management goals and objectives for all important uses and values, including desired recreation opportunities to be provided.
 - “Desired conditions” and the “mix” of resource uses and values to be managed for.
 - Standards that quantitatively define appropriate levels for goals, objectives, desired conditions, and/or indicators.
 - Planned management program and actions to meet goals and objectives, provide desired conditions, and avoid violating standards.
 - Budget and personnel resources that will be used to implement management actions.

Capacities are a fundamental planning and management tool in the recreation profession. Some of the multiple purposes and values to managers, the public, and the private sector include:

- a) help ensure that use levels do not degrade ecological, cultural, or experiential resources and values;
- b) provide clarity and predictability for concessionaires, local businesses, and communities;
- c) enable best-business practice of demand/supply analysis;
- d) improve the clarity and comparability of management alternatives in a planning process;
- e) help plan and design recreation and administrative facilities, infrastructure (sewer, water, electricity), transportation routes and systems, and other built environments;
- f) help allocate management resources across time and settings (e.g., money, personnel, equipment, monitoring tools);
- g) help plan and design recreation-related management programs and activities (e.g., the size and nature of the interpretation, law enforcement, maintenance programs);
- h) help assess public health and safety risks and planning potential management responses (particularly important for high-risk recreation such as mountain climbing, off-road sport biking, caving).
- i) enable allocation decisions between the general public and commercial recreation businesses (e.g., concessions, tour guides), or across uses and users within these sectors;
- j) help design potential reservation, timed-entry systems, or other use allocation systems;
- k) help assess when recreation demand may warrant an expansion of the current supply of public or private recreation facilities or opportunities.
- l) serve as a trigger for increased management attention or action;
- m) help justify the need for additional financial and personnel resources to implement management actions. ” (Whittaker, et al 2010)

Although it is common to speak of a single capacity for an area, many areas will have multiple capacities – for different types of uses, facilities, programs, sub-areas, times of year, or other managerially-relevant situations. “When the area’s desired use level, [as described in the RMPs,] has been reached, no additional permits will be issued.” (BLM 2006) Visitor limits, regulations, or restrictions may be instituted and/or adjusted when monitoring of resource and social conditions indicate a trend toward unacceptable resource and social changes brought about by such use. (BLM 2008c)

To aid in the determination of carrying capacity, the questions below will need to be answered (DOI 2010b):

Recreation

- Will commercial operations impact the ability of private users to obtain permits in the permit areas?
- Will the proposed action provide a balanced SRP program that is complementary with current SRP activities and fills a need or recreation niche?
- Will the approval of the SRP create a cumulative impact that will affect the recreation settings prescriptions for the specific area?
- Will the recreation setting prescriptions and the ability to manage recreation resources and protection of the important values as stated within each RMZ be impacted by focused commercial use of the area?
- Will the approval of the SRP require pre and post visits to the site?

Resource concerns

- Are there areas where private land, parking space or other access problems warrant discouraging regular, additional use?

- Are there areas where wildlife, fish, or plant species concern or other critical resource concern warrants discouraging human activity seasonal or year-round?
- Are there areas where the concentration of existing SRPs is causing problems between outfitters or between outfitted and non-outfitted publics?
- Are there areas where increased commercial use can potential affect LAC to include the sense of remoteness, solitude and silence?
- Are there areas where illegal activities are occurring that might be deterred with the regular presence of commercial SRPs?

Wilderness and designated Wilderness Characteristic areas

- Does the area allow visitors to be isolated, alone or secluded from others?
- Are sights, sounds and evidence of other people in area rare or infrequent?
- Does the area possess a landform that is of moderate to rugged relief that would provide some degree of screening from other people who might be in the area?
- Does the area possess adequate vegetation that would provide some degree of screening from other people who might be in the area?
- Does the size of the area contribute to creating opportunities for visitors to enjoy the area without frequent contact with others in the area?
- If vehicle routes are present, is the distance from such routes, existing vegetative cover and/or infrequent use of the route adequate to allow for solitude?

Management

- Does the BLM have the ability to issue, manage or monitor the proposed use, specific area or the associated recreation demand as a whole?
- Is the public need adequately served by commercial operations currently under permit?

CRITERIA FOR DETERMINING ALLOCATION NEEDS

Determination of the need to develop an allocations process for commercial services will be developed through a series of steps.

If LAC or public surveys determine resource impacts are beginning to occur “consideration will first be given to indirect visitor and resource management techniques for commercial SRPs such as controlling public land access, directional access, interpretive efforts and SRP training to promote environmental awareness and protection, providing extra protection for fragile resources such as seasonal or location restrictions, encouraging voluntary scheduling of commercial trips, or using other mitigating measures to resolve user conflicts.

When indirect management techniques are insufficient it may be necessary to use direct management methods such as allocating use among users or denying permits. Under these direct management methods, use opportunities are allotted and rationed among competing types of uses. This allocation consists of imposing limits on users who participate in similar types of recreation activities. These limits may affect:

- 1) the overall number of individuals who receive permits;
- 2) the number of groups or parties who receive permits;
- 3) the number of permitted individuals per group;
- 4) the number of permitted users by sector (e.g., commercial, competitive, or individual/group use); and
- 5) the duration of permit use.

The BLM's allocation goals are to maximize opportunities, experiences, and allowable uses within established objectives and to minimize resource impacts and user conflicts".(BLM 2006) Before allocation is considered, the BLM should terminate existing SRPs or institutional organizations that don't meet public need, as opportunities arise, in order to provide the opportunities that meet public need. This would include SRPs that fail to provide services on public lands do not comply with permit stipulations, fail to provide or adapt to stipulations utilized to minimize social and resource impacts or promote the unhealthy use of public lands.

The following criteria will be used in determining the need for the development of a commercial allocation process in the project area:

- 1) If indirect visitor and resource management techniques developed in the Programmatic EA and the RMP fails to manage niches and recreation resources in relation to commercial use and resource settings;
- 2) Administrative workload: Adjust the number of permits issued down if the number of SRPs cannot be administered in a quality manner to include field visits, compliance checks, or specific resource management concerns to prevent the need to cancel or alter workload measures to meet administrative needs of SRPs;
- 3) If similar types of recreation activities applications exceed RMZ prescriptions;
- 4) If competition between institutional and commercial services exceeds RMZ prescriptions;
- 5) If LAC or public surveys determine commercial use has exceeded RMZ prescriptions;
- 6) And the Needs Assessment does not mitigate the above issues and concerns,

Then a determination of the mix of commercial, institutional use will be developed using the public involvement process. If LAC determines all organized groups, not just those determined to be commercial require permits, than all organized groups would be included in the determination of allocation numbers. One of the key decisions is the mix or percentage that constitutes an allocation between commercial and institutional (semi-public) use, in the area. Allocation will be determined within compartment boundaries or types of use, commercial vs. institutional use. The mix of the two categories could also be determined within individual compartments, or could apply to the project area.

There are no magic formulas for determining the correct mix of uses. Traditionally, it has been a judgmental decision, often based on historic patterns. As the BLM takes a fresh look at the project areas objectives and needs, historical patterns may not be what the future holds. In areas where capacity is not a problem, these mixes will not become the issue. Where there is competition for a limited allocation, however, the question of who gets what piece of the pie becomes critical. (DOI 2010a)

Some considerations that could be used to determine the appropriate mix if allocations become necessary are:

- Availability of services and experiences at other locations, on both private and public lands (Is the service provided dependent on the resources available in the area?);
- Assure that the general public is not pushed out or adversely affected by a preponderance of commercial-use activities;

- Health and safety of the public;
- Wildlife and vegetation management considerations;
- Cultural resource considerations;
- Potential conflicts with other resource users and activities;
- Type of clientele involved (disabled, focused or general);
- BLM objectives and desired future conditions;
- Terrain, distances from access points, safety considerations;
- Traditional patterns of commercial and public use;
- Interpretation needs;
- Split allocation (even split of commercial vs. institutional use);
- Split allocation (by location, time of day/year/season);
- Based on historical use;
- Fixed percentage based on trends and anticipated future needs;
- Consider the potential for concessions for some or all of the project area;
- Yearly Applicant Pool process for temporary use (competitive, institutional, 1 time events) similar to as follows;
 - Applicants that have conducted activities on the BLM or who are interested in doing so, will be notified one year prior to implementation, that the BLM is moving towards a more detail oriented approach to temporary use.
 - The BLM would advertise for and notify potential applicants that applications will be accepted until December 31 of the year prior to operation. After this first year, the date may be moved back to earlier in the fall to allow more time for groups to plan and advertise their programs and allow more time for the BLM to manage the applications.
 - Then the BLM would establish a pool of visitor days available based on information as described in the RMZ attributes that identifies areas and use available for temporary use. This pool of use would be available through an application process that would be consolidated prior to the year that the use is anticipated. Applications would be evaluated and applicants notified to allow them time to schedule and advertise for the trips.
 - The BLM would review proposed uses. If capacity is available and there are no conflicts with other resources or existing permit holders; a temporary permit would be issued for a one year time period. Where there are more applicants than capacity available, an equitable system will be set up to determine to whom permits are issued.

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