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## 1.0 PURPOSE OF AND NEED FOR

### 1.1 INTRODUCTION

This environmental assessment (EA) has been prepared to analyze Dawson Geophysical Company's (Dawson) proposed Coyote Wash 3-D Geophysical Exploration Project (proposed project), and is a site-specific analysis of potential impacts that could result from the implementation of the Proposed Action or alternatives to the Proposed Action. The EA assists the Bureau of Land Management (BLM) in project planning and ensuring compliance with the *National Environmental Policy Act of 1969* (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 40 *Code of Federal Regulations* [C.F.R.] 1508.27). An EA provides analysis to determine whether to prepare an environmental impact statement (EIS) or issue a Finding of No Significant Impact (FONSI). A FONSI is a document that briefly presents the reasons why implementation of the Proposed Action would not result in "significant" environmental impacts (effects) beyond those already addressed in the *Final Environmental Impact Statement on the Book Cliffs Resource Management Plan* (RMP) (Book Cliffs RMP) (BLM 1984). 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.

A Decision Record (DR) may be signed for the EA to document the decision.

### 1.2 BACKGROUND

Dawson proposes to conduct a three-dimensional (3-D) geophysical survey encompassing approximately 80 mi<sup>2</sup> of BLM, State of Utah (State Institutional Trust Lands Administration [SITLA]), and private lands in Uintah County, Utah (Figure 1.1). The proposed project would occur in portions of Township 8 South–Township 10 South, Range 22 East–Range 24 East (T8S-T10S, R22E-R24E), and would use vibroseis buggies and shot holes to generate sound waves to be recorded with geophones in order to define subsurface geology and provide information to determine optimum locations for drilling natural gas wells. Sixty-three parallel source lines would cross the Coyote Wash 3-D Project Area (proposed project area) in a northeast-southwest direction, and vibroseis buggy stations or shot holes would be spaced at intervals of approximately 311 ft along the lines (Figure 1.2). Sixty-two parallel receiver lines would cross the proposed project area in a north/south direction, and receivers (geophones) would be

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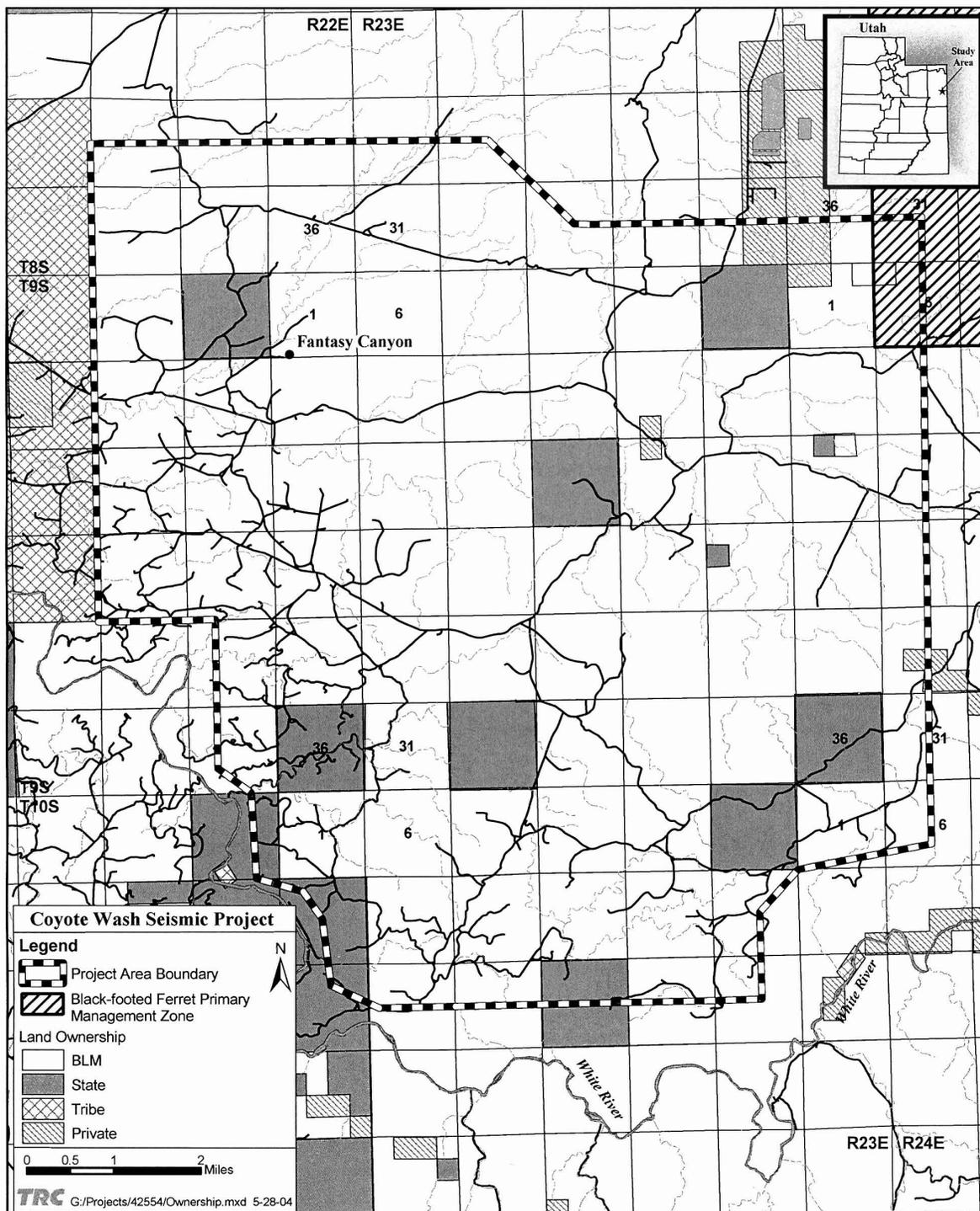


Figure 1.1 Project Location and Surface Ownership.

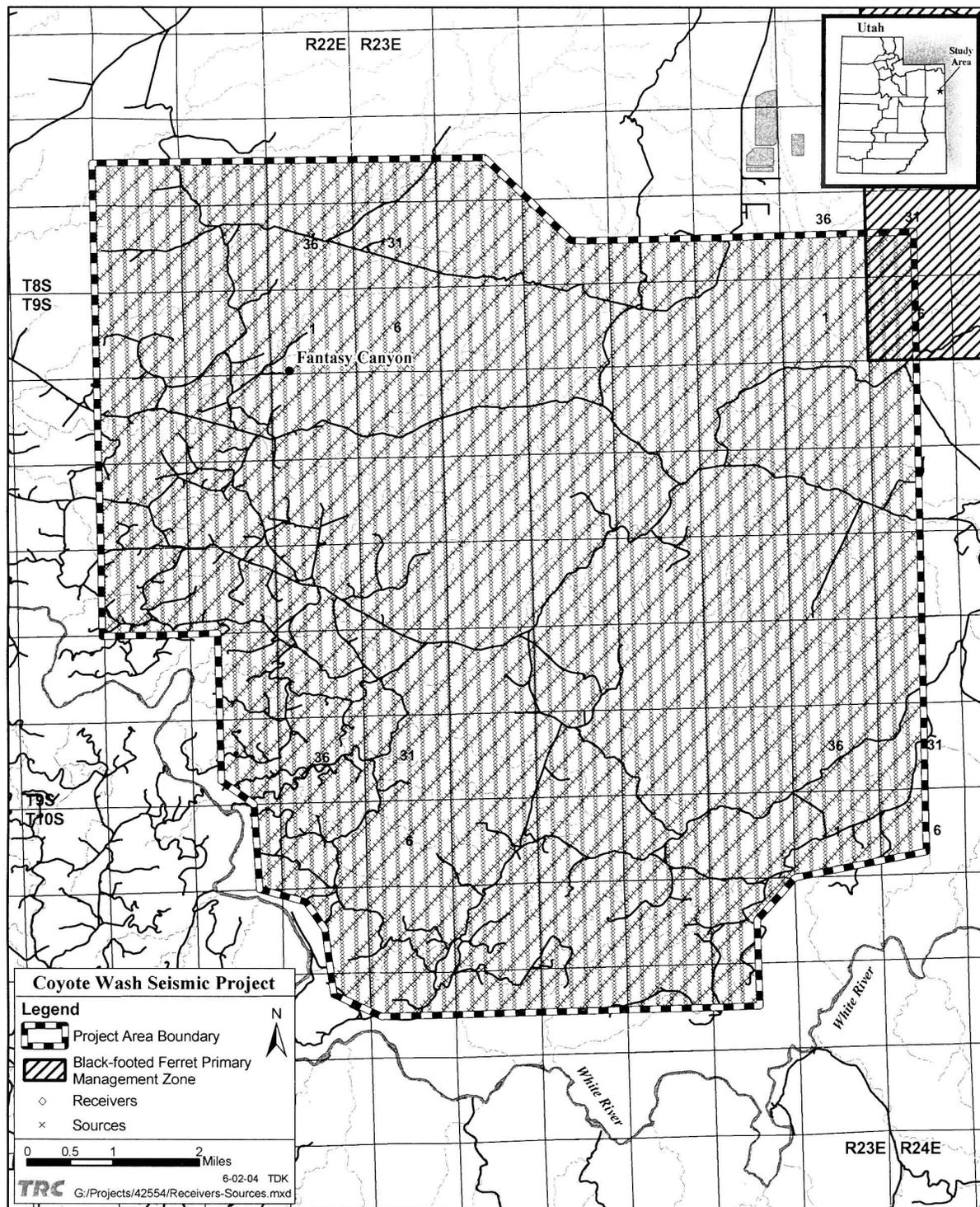


Figure 1.2 Location of Source Lines and Receiver Lines.

spaced at intervals of 220 ft along the lines to record reflected sound waves when the vibroseis buggies are operating or the shots are detonated. Dawson proposes to begin to drill shot holes about September 1, 2004, and complete the proposed project in approximately 2-3 months.

### **1.3 NEED FOR THE PROPOSED ACTION**

The Proposed Action is needed to provide high definition imaging of the subsurface geology in the proposed project area to aid in locating target zones for recovery of natural gas reserves. Such knowledge of subsurface geology is likely to reduce the need for exploratory wells by increasing the likelihood that those wells that are drilled will produce commercial quantities of natural gas. This would result in less surface disturbance because of fewer unproductive wells ("dry holes"), as well as reduced production costs. All federal lands within the proposed project area are currently under valid oil and gas leases. Data from the proposed project would be available to Dawson's two clients who will finance the exploration--EOG Resources, Inc. and Westport Resources Corporation.

### **1.4 PURPOSE OF THE PROPOSED ACTION**

BLM's purpose for considering this non-Bureau proposal is that private exploration and production from federal oil and gas leases is an integral part of BLM's oil and gas leasing program under authority of the *Mineral Leasing Act of 1920* and the *Mining and Minerals Policy Act of 1970*, as amended by the *Federal Land Policy and Management Act of 1976* and the *Federal Onshore Oil and Gas Leasing Reform Act of 1987*. The BLM's oil and gas leasing program encourages development of domestic oil and gas reserves and the reduction of U.S. dependence on foreign energy sources. BLM will consider approval of the proposed geophysical exploration conducted in a manner that avoids or reduces impacts on other resources and activities as identified in the Book Cliffs RMP.

### **1.5 CONFORMANCE WITH BLM LAND USE PLAN**

Federal lands in the proposed project area are under the jurisdiction of the BLM Vernal Field Office (VFO), and policies for development and land use decisions are contained in the Book Cliffs RMP (BLM 1984) and Record of Decision (ROD) (BLM 1985). The Proposed Action would conform to the Book Cliffs RMP because seismic exploration is a necessary part of gas and oil operations, and the Book Cliffs RMP states that gas and oil resources would be developed on lands deemed suitable for that under a scenario that gives adequate environmental protection. The ROD states "Oil and gas, tar sand, oil shale,

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and gilsonite would be leased while other resource values would be protected or mitigated." Although the proposed action is not specifically mentioned in the Book Cliffs RMP or ROD, the alternatives are consistent with the ROD's objectives, goals, and decisions as they relate to minerals (page 7); livestock (page 32); wildlife and wild horses (page 45); threatened, endangered, proposed, and candidate (TEPC) species (page 50); recreation (page 57); watershed (page 65); air quality (page 75); and cultural and paleontological resources (page 77).

The VFO is currently preparing a revised/updated RMP; however, until that new plan is approved, the VFO will operate under the 1985 ROD.

## **1.6 RELATIONSHIP TO STATUTES, REGULATIONS, AND OTHER PLANS**

This EA was prepared in accordance with NEPA and in compliance with all applicable regulations and laws passed subsequently, including Council of Environmental Quality (CEQ) regulations (40 C.F.R., Parts 1500-1508), U.S. Department of the Interior (USDI) requirements (*Department Manual 516, Environmental Quality*), and guidelines listed in BLM *NEPA Handbook, H-1790-1* (BLM 1988).

The proposed project would be consistent with the *Uintah County Plan for Management of the Book Cliffs Resource Area* (Uintah County Commissioners 1998), which states that "Uintah County's economy is based upon extractive mineral industries and would continue to be in the foreseeable future. The County supports maintaining and increasing renewable resource values, but the vital importance of the minerals industry should be give the highest priority possible. Utilizing Best Management Practices has demonstrated that the minerals industry and renewable resources can thrive at the same time; however, unwarranted overprotection of renewable resources at the expense of the minerals industry is contrary to the *Uintah County Plan*." The proposed project would also be consistent with other federal, state, and local laws and regulations, and Dawson would procure any required permits or easements (Table 1.1).

BLM has sent copies of this EA to the Northern Ute, Hopi, Shoshone-Bannock, Ely Shoshone, Southern Ute, Ute Mountain Ute, Navajo Nation, Duckwater Shoshone, and Shoshone Tribes with regard to Native American trust policies and Native American religious concerns. The impact of the proposed project on all components of the Rangeland Health Standards and Guidelines is evaluated in this EA. Conditions and stipulations applied to the proposal would ensure that achievement of these standards would not be affected in the watersheds as a whole.

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Table 1.1 Major Federal, State, and Local Permits and Approvals for the Coyote Wash 3-D Seismic Exploration Project.

Agency	Permit, Approval, or Action
Bureau of Land Management (BLM)	Compliance with BLM Handbook H-3150-1, <i>Onshore Oil and Gas Geophysical Exploration</i> Antiquities and cultural resource permits on BLM-managed land
U.S Bureau of Alcohol, Tobacco, and Firearms	Proper storage of explosives and proper securing loaded shotholes
U.S. Army Corps of Engineers (COE)	Section 404 permits for placement of dredged or fill material in area waters and adjacent wetlands
U.S. Fish and Wildlife Service (USFWS)	Coordination, consultation, and impact review on federally listed threatened, endangered, proposed, and candidate (TEPC) species
Utah Division of Wildlife Resources	Coordination on impacts to wildlife and state-sensitive species
Utah Department of Transportation	Conformance with applicable size and weight limits for trucks
Utah State Historic Preservation Office	Consultation for cultural resource inventory, evaluation, and mitigation
Utah School and Institutional Trust Lands Administration	Right-of-way easements on state sections
Utah Division of Oil, Gas, and Mining	Permits for seismic exploration on state surface
Ute Tribe	Permission to use access road across Ute Tribal Lands.

Dawson is bonded nationwide on BLM lands.

In September 2001, Veritas DGC Land, Inc. conducted seismic exploration along a 2-mi line in Sections 8 and 9, T12S, R22E. The project was analyzed in the *Environmental Assessment for a 2-Mile Seismic Line, Sections 8 and 9, Township 12 South, Range 22 East, Uintah County, Utah, by Veritas DGC Land, Inc., EA No. UT-080-2001-475* (Veritas 2-Mile EA). The BLM VFO issued a *Decision Record and Finding of No Significant Impact* on August 21, 2001 (BLM 2001a). Veritas DGC Land, Inc. also conducted seismic exploration along numerous lines traversing a major portion of the Book Cliffs in a project that was analyzed in the *Environmental Assessment for 2-D (two-dimensional) Seismic Exploration by Veritas DGC Land, Inc., Uintah County, Utah, UT-080-2002-21* (Veritas EA). A *Decision Record and Finding of No Significant Impact* for that project was issued on October 4, 2002 (BLM 2002a). WesternGeco conducted seismic exploration in late 2002 in a 30.9-mi<sup>2</sup> area analyzed in the *Decision Record, Finding of No Significant Impact, and Environmental Assessment for the*

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*WesternGeco Horse Point 3-D Seismic Exploration, Uintah and Grand Counties, Utah, EA No. UT-080-2002-219* (Horse Point EA), issued November 9, 2002 (BLM 2002b). Trace Energy Services, Inc. conducted seismic exploration in late 2003 in a 23.3-mi<sup>2</sup> area analyzed in the *Decision Record, Finding of No Significant Impact, and Environmental Assessment for the Trace Energy Service Inc.'s Moon Ridge 3-D Seismic Exploration Project, Uintah and Grand Counties, Utah, EA No. UT-080-2003-0256* (Moon Ridge EA), issued September 3, 2003 (BLM 2003n). These four projects took place within the Book Cliffs Resource Area and used some of the same techniques (shot-holes and recording lines) as proposed by Dawson in this document. The Veritas EA included several lines that traversed portions of the proposed project area. The Veritas 2-Mile EA and the Veritas EA were for 2-D projects, whereas the Horse Point EA, Moon Ridge EA, and Dawson's proposed project are 3-D projects. The primary difference between 2-D and 3-D projects is that in 3-D projects the source lines and receiver lines are separate lines, whereas in 2-D projects both the source and recording lines occur along a common line. This EA is tiered to the four aforementioned EAs, which are incorporated by reference. Complete copies of these four documents are available on BLM VFO's web site at <<http://www.blm.gov/utah/vernal>>.

## **1.7 IDENTIFICATION OF ISSUES**

### **1.7.1 Introduction**

Potential issues were identified for the Proposed Action based on internal issue identification by BLM resource specialists and from public comments on previous projects in the Book Cliffs. Appendix A summarizes the issues and identifies those that have been dismissed because they are not present, or if present, would clearly not be affected. Appendix A also identifies those resources that would potentially be affected and are evaluated in detail in this EA. Issue identification for the Proposed Action utilized an interdisciplinary process and was completed on April 30, 2004. Public notice of the project was posted on the BLM Electronic Notification Bulletin Board for public comment on May 21, 2004. Issues identified include those natural resources, resource values, natural processes and other components of the human environment having the potential to be affected directly, indirectly or cumulatively by the Proposed Action. Those resources and associated resource issues are summarized in the following sections.

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### **1.7.2 Critical Elements of the Human Environment**

Of the 14 critical elements of the human environment (BLM 1988, 1999a), nine do not occur in the proposed project area or would not be affected by project activities (see Appendix A). They include areas of critical environmental concern (ACECs), environmental justice, prime or unique farmlands, hazardous or solid wastes, wilderness, wetlands/riparian areas, air quality, wild and scenic rivers, invasive non-native species, and water quality. The remaining five critical elements of the human environment are analyzed in detail in Chapter 4.0 of this EA. They include threatened, endangered, proposed, and candidate (TEPC) species; cultural/historic resources; floodplains; and Native American religious concerns.

#### **1.7.2.1 Cultural Resources**

***Issue 1. Direct impacts to cultural sites.***

#### **1.7.2.2 Native American Religious Concerns**

***Issue 1. Impacts to Native American religious concerns.***

#### **1.7.2.3 Threatened, Endangered, Proposed, and Candidate (TEPC) Species and Special Status (SS) Species**

***Issue 1. Impacts to TEPC and SS plants and their habitat.***

***Issue 2. Impacts to TEPC and SS animals and their habitat.***

#### **1.7.2.4 Floodplains**

***Issue 1. Impacts to floodplain functions.***

***Issue 2. Impacts to banks of Coyote Wash.***

### **1.7.3 Other Resource Issues**

Other resources identified for consideration as potentially affected by the proposed project include visual resources, wildlife, recreation, fire hazards, soils, paleontology, lands having wilderness characteristics,

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and vegetation. Fire hazards and visual resources were excluded from detailed analysis (see Appendix A). Other resource issues analyzed in detail in Chapter 4.0 of this EA include the following.

1.7.3.1 Paleontological Resources

***Issue 1. Disturbance/destruction of significant paleontological materials.***

1.7.3.2 Soils

***Issue 1. Increased wind and water erosion.***

***Issue 2. Lack of reclamation success.***

***Issue 3. Impacts to biological soil crusts.***

1.7.3.3 Vegetation

***Issue 1. Direct impacts to native vegetation.***

1.7.3.4 Wildlife Resources

***Issue 1. Impacts to pronghorn, prairie dogs, raptors, and migratory birds.***

1.7.3.5 Recreation

***Issue 1. Reductions in recreation opportunity and experience.***

***Issue 2. Impacts to Fantasy Canyon.***

1.7.3.6 Lands Having Wilderness Characteristics

***Issue 1. Impacts to wilderness characteristics.***

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**1.8 SUMMARY**

This chapter has presented the purpose and need for the proposed project, as well as relevant issues (i.e., those elements that could be affected by the implementation of the proposed project). Alternative A (the Proposed Action) and Alternative B (the No Action Alternative) are described in Chapter 2.0. The existing environment in the proposed project area is presented in Chapter 3.0, and potential impacts to that environment resulting from the implementation of each of the alternatives are analyzed in Chapter 4.0 for each of the identified issues.

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