United States Department of the Interior

BUREAU OF LAND MANAGEMENT

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In Reply Refer To:
8342 (330) P

February 8, 2008

TO: Challis Travel Management Plan Interested Publics List

Dear Reader:

Attached for your review is a preliminary release of the predecisional Challis Comprehensive Travel Management Plan (TMP) environmental assessment (EA). This document analyzes the present management of the Challis Field Office's (CFO) roads and trails network, as well as two alternative management strategies and the environmental impacts of each.

This plan represents more than a year and a half of work by BLM specialists and our partners since the release of the Challis Travel Map in June 2006. The team took into account the many comments that we received from you and other individuals and organizations since the map's release. All of these comments have been considered in preparing this preliminary document.

You are invited and encouraged to read and comment on this EA. The document is also posted on the BLM's website: *www.blm.gov/id*, under the "Challis Field Office" link, and a hard copy is available for viewing at the BLM Challis Field Office and BLM Idaho Falls District Office. Comments will be accepted through close of business March 14, 2008. You may submit comments to the Challis Field Office during a **30-day public review period (ending March 14, 2008)** by writing to the Challis TMP Team at the address above, or by email at *challistravel@blm.gov*. The team will review your comments and use them to finalize the EA. Following the release of the EA, the Challis Field Manager will issue a final decision based on your comments and the environmental analysis.

In addition to this document, the CFO intends to develop a final map and guide to travel management based on the Field Manager's decision. These tools will be part of an ongoing education and enforcement program, in partnership with other federal and state natural resource agencies, to encourage appropriate access to your public lands and to protect natural resources for everyone to enjoy.

An executive summary is attached to this letter for your convenience. We appreciate your continued interest in this process.

Sincerely,

David O. Howell
Project Team Lead
Challis Travel Management Plan

EXECUTIVE SUMMARY

The Challis Resource Management Plan (RMP), completed and signed in 1999, mandated that the Challis Field Office (CFO) create a comprehensive travel management plan for its roads and trails network. The CFO published a map of the roads and trails on public lands in 2006, following an extensive inventory. After gathering public feedback on the map and suggestions for the CFO staff to consider, the BLM offers this environmental assessment (EA) as its analysis of present management and alternatives.

The present roads and trails network in the Challis Field Office totals about 2,530 miles, and includes a wide variety of development: everything from paved county roads and state highways to single-track and two-track trails. The EA considers only those roads and trails for which BLM has jurisdictional or maintenance responsibility. Each of the alternatives considers changes identified by the public and BLM staff; requirements of the Challis RMP and other federal laws, regulations and policies; and minimum techniques for constructing or closing routes. Any future route-specific changes would require site-specific analysis, as required by the National Environmental Policy Act (NEPA).

Three alternatives were developed for consideration:

- Alternative 1 describes the current management situation. All methods of motorized travel would be allowed only on existing roads and trails with no specific route designations. Under this alternative, about 97.4% of the present roads would be "designated" as open.

- Alternative 2 utilizes the 2006 CFO Travel Map as the basis for designating a system of roads and trails, and addresses route-specific recommendations or requests from members of the public, other agencies, and BLM staff. Under this alternative, about 95% of routes identified as legal, existing routes in the 2006 CFO Travel Map would be "designated" as open. Motorized travel would be allowed only on these designated roads and trails. Those routes to public lands that are blocked by private lands and that do not have an easement for public access would be closed. Likewise, "spur roads" accessing *only* private lands would be closed, unless a right-of-way (ROW) is sought by the private landowner and granted by BLM. This alternative also recommends route specific changes and criteria for making future decisions on the roads and trails network, based on public comments. Some of the specific proposals in Alternative 2 would require the CFO to amend its RMP.

- Alternative 3 examines routes at a landscape level, as recommended by the BLM's Resource Advisory Council, by dividing some of the field office into distinct Travel Management Areas (TMAs). TMAs are conspicuous units with broad-scale resource concerns (Areas of Critical Environmental Concern, Wilderness Study Areas, crucial wildlife winter range, etc.) where a rational approach is taken to achieve resource programs objectives. Using the BLM's Natural Resource Recreation Setting Matrix as a guide, desired settings for those units would be identified to guide current and future transportation decisions based on the identified resource concern. Under this alternative, about 88% of routes identified as authorized, existing routes in the 2006 CFO Travel Map would be "designated" as open. Within the TMA boundaries, redundant and parallel

routes would be reduced in an attempt to minimize impacts to natural and cultural resources. Like Alternative 2, this alternative recommends route specific changes and criteria for making future decisions on the roads and trails network, based on public comments and resource considerations found within the TMA boundaries.

The environmental impacts of these alternatives are discussed and disclosed in detail in this analysis. Throughout this process, the CFO has met with, and considered requests from, various federal, state, and local government agencies, as well as private organizations, interest groups and members of the public. More than 70 people participated in two rounds of local public meetings in four communities, and the information has been continually available since the start of the process on the BLM's Idaho website: www.blm.gov/id.

ENVIRONMENTAL ASSESSMENT

Challis Field Office Travel Management and Transportation Plan
ID-330-2006-EA-2403

List of Figures

Figures 1-20 referenced in text are provided in PDF format on enclosed CD.
Figure 21 is in document text.

List of Tables

INTRODUCTION

Background:

Comprehensive Travel Management Planning has become one of the top priorities for federal land management agencies over the past decade. Increasing population throughout the western United States, shifts in demographics (age and mobility, amount of available leisure time, proximity of population centers to public lands, etc.) and technological advances in various motorized and mechanized methods of transportation (size, power, stability, and ease of control) have out-paced conventional agency transportation planning. Whereas many public lands have traditionally been open to cross country traffic without restriction, these new pressures have necessitated a national level change from passive to active transportation management.

Locally, the Challis Field Office (CFO) has been in the process of making this change since the implementation of the Challis Resource Management Plan (RMP) and Record of Decision (ROD) in July 1999. Prior to that time, the CFO area, like many Bureau of Land Management (BLM)-administered lands, was generally open to cross country motorized travel. The RMP took the first step toward active management by limiting most motorized travel to the roads, ways, and trails in existence as of the ROD's signing date. There were some exceptions and expanded limitations to the "limited to existing" classification such as in Wilderness Study Areas (WSAs), Areas of Critical Environmental Concern (ACECs) and Research Natural Areas (RNAs), which are described in detail in the RMP (BLM 1999 pp. 7-17, 69-70; see Figures 2 and 3 for locations of CFO WSAs, ACECs, and RNAs). At present, generally speaking, travel is limited to existing roads, ways, and trails.

Between 2002 and 2005, the CFO acquired funding to complete an inventory of existing roads, ways, and trails through aerial photo analysis, ground verification, and route attribution (determining the development level and usage of any particular route). CFO staff and contract employees analyzed and verified, to the extent possible, the roads, ways, and trails in existence in 1999 when the ROD was signed, and those in existence in WSAs when they were last inventoried in 1976. In 2006 the CFO published a Travel Map in the *Federal Register* and made it available locally. This marked the end of the first phase of the Travel Management Planning process for the CFO.

The RMP guidance went one step further and recognized that the network of inherited roads, ways, and trails was not necessarily the most appropriate transportation system in the long term. Therefore, it directed an Interdisciplinary Team to:

"…[D]evelop a transportation plan for the Resource Area[1] *…to identify (a) roads or trails which are extraneous and could be closed; (b) roads needing improvement to meet public safety, recreation, resource and program management, public access, and commodity production needs; (c) guidance for maintenance; (d) miles of roads or trails which may need to be constructed; and (e) other transportation management guidance which may be necessary* (RMP, p. 62).

[1] The term "Resource Area" was used prior to 2000, and the term Field Office has been used since that time to describe BLM administrative units. Throughout this document, these terms may be used synonymously.

In the fall of 2006, a BLM Resource Advisory Council (RAC) subgroup hosted three public meetings in Challis, May and Mackay to gather input on how the BLM should proceed with the Travel Management Planning process. About 50 people attended the meetings, providing comments and observations. Among the recommendations were: 1) divide the CFO into definable and prioritized units, 2) do not close any roads (or at least give careful consideration and provide a rationale before doing so), and 3) emphasize the use of "preferred routes" rather than engaging in extensive route rehabilitation. At the meetings, members of the public also gave feedback on specific routes that they wanted to see open, many of which included loop trails that crossed BLM and U.S. Forest Service (USFS) administrative boundaries.

In November 2006, the BLM followed up by hosting four more public meetings in Challis, Clayton, May, and Mackay to look at a "Focus Area" approach to travel planning. All secondary roads were taken off of the maps and the public was asked "what recreational activities they wanted, where they liked to do it, why the activity was is important to their experiences, and how they would like to access the area." The BLM took this information and developed the analysis that is described in this document. About 20 people attended the BLM public meetings. These seven meetings together constituted the major public scoping meetings.

Type of Action:
The action is the development of a Comprehensive Travel Management Plan (TMP) for the entire CFO area.

Purpose of and Need for Action:
The purpose of the TMP is to identify an appropriate system of roads and trails in the CFO area, as per guidance in the Challis RMP, and to establish criteria for considering future changes to the roads and trails system. The need is to develop a system of roads and trails that complies with the agency's national direction in light of increasing Off Highway Vehicle (OHV) use and demand. Development of this plan would meet the RMP's Transportation Goal to "provide an adequate road and trail system on the Challis Resource Area's public lands to (a) satisfy the public need for recreation, commodity production, access, and safety, and (b) facilitate the management of BLM resources and programs" (RMP, pg. 62)..

Location of Action:
The action is located across the entire CFO area, which is located in central Idaho's Custer and Lemhi Counties. The Lost River Range crosses through the center of the field office area, with the Sawtooth Mountains to the west, the Frank Church River of No Return Wilderness to the northwest, the Lemhi Mountain range to the east, and the eastern Snake River Plain to the south. The total surface area of BLM public lands is approximately 792,567 acres (Figure 1).

Conformance With Applicable Land Use Plan: The action is subject to, and in conformance with, the Challis RMP and ROD. For specific applicable decision numbers from the Challis RMP, see Attachment 1.

Relationship to Statutes, Regulations or Other Plans:

Clean Water Act: Section 303(d) requires states to identify stream reaches that exhibit impaired water quality. The Idaho Department of Environmental Quality (IDEQ) identifies streams with impaired water through its Integrated 303(d)/305(b) Report. Subsequent to 303(d) listing of a stream reach, IDEQ reviews stream conditions and determines whether a Total Maximum Daily Load (TMDL) pollutant allocation is appropriate for each stream reach listed. Subbasin reviews and TMDL load allocations have been completed by IDEQ for the subbasins of the Challis Field Office.

Endangered Species Act (ESA) of 1973, Section 7, as amended, outlines the procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat. Section 7(a)(2) states that each federal agency shall, in consultation with the Secretary, insure that any action they authorize, fund, carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of their habitats.

The National Marine Fisheries Service (NMFS) and the National Oceanic and Atmospheric Administration (NOAA) have designated the upper Salmon River and its tributaries, to the first natural fish migration barrier, as critical habitat for Snake River spring/summer chinook salmon (*Oncorhynchus tshawytscha*) (USDC NMFS and NOAA 1993) and Snake River steelhead trout (*Oncorhynchus mykiss*) (USDC NMFS and NOAA 2005).

In 1995, the BLM adopted the *Interim Strategy for Managing Anadromous Fish-Producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California*, commonly referred to as PACFISH (USFS/BLM 1995a). PACFISH provides Riparian Management Objectives and Standards and Guidelines for managing riparian resources.

Also, in 1995, the BLM implemented the *Bull Trout Habitat Conservation Strategy* known as INFISH (USFS/BLM 1995b). INFISH is virtually identical to PACFISH except that it applies to land management activities that influence bull trout habitats rather than anadromous fisheries habitats.

The General Mining Laws of the United States provide for the disposal of locatable minerals such as gold and silver from public land (30 USC 21-54). *The General Leasing Laws* provide for the disposal of leaseable minerals such as oil, coal and phosphate (30 USC 71 *et seq*). *The Materials Act of 1947* provides for disposal of salable minerals (43 USC 601 *et seq*). None of the alternatives would prohibit travel as authorized by these laws. The only plausible impact to mineral resources would be under Alternative 2 or Alternative 3, under which certain routes could be physically closed (e.g., blocked, obliterated, rehabilitated, etc.), and such routes could become necessary in the future for mineral actions. However, such routes could be physically re-opened with minimal effort. Consequently, impacts to mineral resources are not discussed further in this Environmental Assessment.

Upper Salmon River Recreation Area Management Plan (USSRAMP): The USSRAMP (USDI-BLM 1986) sets the recreation management direction for the Upper Salmon River Special Recreation Management Area (SRMA). In 1999, upon completion of the Challis RMP, the

designated SRMA corridor, which consisted of one quarter mile on each side of the Salmon River, was widened and also expanded to include lands along the East Fork Salmon River. Objectives of the USRRAMP have been expanded to include the newly designated corridor.

BLM Interim Management Policy and Guidelines for Lands under Wilderness Review (IMP), H-8550-1 (USDI-BLM 1995): There are seven WSAs in the CFO area, and as such all actions in these areas must comply with the IMP, which directs that the preservation of wilderness values within the WSA is paramount and should be the primary consideration when evaluating any proposed action or use that may impair (conflict with or be adverse to) those wilderness values. Generally, a use or activity is considered to be non-impairing if it is temporary – that is, a use that does not create surface disturbance (requiring reclamation such as re-contouring, replacing topsoil, and/or restoration of native plant cover), or involve permanent placement of facilities (a facility that cannot be removed at time of designation). Actions that clearly benefit a WSA's wilderness values (roadlessness, naturalness, solitude, primitive and unconfined recreation, size, and supplemental values) through restoration, protection, or maintenance of these values may be allowed, if carried out in a manner which is least disturbing to the site.

Idaho Sage Grouse Conservation Strategy: In December 2007, the Challis Sage-grouse Local Working Group (CSGLWG) completed a conservation plan specific to Custer and Lemhi Counties. This document presents conservation measures to address risks associated with habitat fragmentation attributed to OHV activities (CSGLWG 2007). The CSGLWG plan will work in concert with the 2006 statewide comprehensive strategy issued by the Idaho Department of Fish and Game (ISAC 2006).

BLM Land Use Planning Handbook (H-1601-1), Appendix C. The planning handbook not only provides general guidance for RMP processes, but also for what decisions are in the realm of implementation-level planning.

Section 106 of the National Historic Preservation Act of 1966 (NHPA), with implementing regulations in 36 CFR 800, requires agencies to identify and consider the effects of their actions on historic properties prior to project implementation.

The *Fort Bridger Treaty of 1868* (15 Stat. 673) specifically reserves the right of the Shoshone-Bannock Tribes to hunt, fish, and gather natural resources located on unoccupied federal lands. BLM has a Federal trust responsibility to honor treaty rights and to make land management decisions that take treaty rights, treaty resources and other tribal interests into consideration. Part of the Federal trust responsibility entails conducting government-to-government consultation with Indian groups when a project has the potential to impact the exercise of treaty reserved rights.

PROPOSED ACTION AND ALTERNATIVES

Criteria and Actions Common to All Alternatives:

1. Correction of mapping errors on the 2006 CFO Travel Map: Despite efforts by contracted personnel to ground-truth 100% of the existing routes within the CFO area, some mistakes were identified on the map by the public and BLM staff. Examples of these mistakes include ditches or stream washes shown as roads; roads marked as "no-access" where legal public access does, in fact, exist; and motorized single track trails existing on the ground but not included on the map. The correction of these errors would not change the situation as it currently exists on the ground.

2. Existing RMP travel limitations: Unless explicitly stated in the alternative description, all transportation limitations and restrictions in the Challis RMP, as outlined in Attachment 1, would remain in effect.

3. Cross country travel by non-motorized methods: While some trails may be designated exclusively for non-motorized use, cross country use by non-motorized methods would be authorized unless site specific monitoring determined that resource degradation was occurring, at which time mitigation measures would be considered and initiated. Cross-country mechanized transport would not be authorized within WSAs, as per BLM Handbook 8550-1, Interim Management Policy for Lands Under Wilderness Review (IMP).

4. Method of route designation display: Unless a route is signed or mapped as open, it is closed.

5. Routes identified as Restricted Access in ACECs and WSAs on the 2006 CFO Travel Map: These routes were either identified for closure in the RMP (in the case of the ACECs) or are unauthorized (in the case of the WSAs). In either case, these routes would be formally closed in every alternative.

6. Methods of route closure: A variety of closure methods would be available, depending on site specific circumstances. In general, the minimum closure techniques that support resource needs would be used. Methods of closure might include one or more of the following: signing, with natural rehabilitation; obscuring the road entrance; blocking the road entrance; scarifying and seeding or planting the road surface.

7. Appropriate and applicable project-related clearances and consultation processes (such as NHPA Section 106 cultural resources survey, mitigation and consultation) would be completed prior to any undertaking, including any ground-disturbing activities, re-routes, new routes, physical route closures, etc.

8. Compliance with BLM Road and Trails Terminology Report (Salt, 2006): Route nomenclature would be consistent with current BLM guidance, utilizing the terms "road," formerly called a two-wheel drive road; "primitive road," formerly called four-wheel drive road and four-wheel drive technical road; and "trail," formerly called all-terrain

vehicle (ATV) route or restricted access. This language would replace the nomenclature used in the 2006 CFO Travel Map.

9. New routes would be constructed with minimum tool techniques appropriate to the scale of the project (i.e., ATV trails would primarily be constructed using a TrailCat or similar mechanical method, and motorcycle trails would be primarily constructed using hand tools). Maintenance and construction efforts for all routes would result in disturbance footprints beyond the final tread width, but would be limited to the minimum disturbance necessary to reasonably carry out these actions.

10. Where designation changes are proposed to restrict use to certain use types (such as ATV, motorcycle, pedestrian), minimum techniques required to achieve resource goals would be used. Methods of restriction might include one or more of the following: signage, engineered physical restrictions such as bollards or boulders, or natural reclamation down to the prescribed width, or other appropriate methods.

11. Any future route-specific changes would require a site-specific NEPA analysis.

See attached chart in Attachment 3 for a graphical depiction of all three alternative actions.

Description of Alternative 1:
This alternative would be a continuation of present management under existing conditions as presented in the 2006 BLM Challis Field Office Travel Map, with the exception of those items listed under Common to All Alternatives. All methods of motorized travel would be allowed only on existing roads and trails with no specific route designations (Figures 2 and 3).

Description of Alternative 2:
This alternative utilizes the 2006 CFO Travel Map as the basis for designating a system of roads and trails, and addresses route-specific recommendations or requests from members of the public, other agencies, and BLM staff. Under this alternative, about 94% of routes identified as authorized, existing routes in the 2006 CFO Travel Map would be "designated" as open. Motorized travel would be allowed only on these designated roads and trails. This alternative would retain travel restrictions in the RMP, including seasonal closures (Figures 4 and 5).

General Principles and Criteria in current and future route determination and selection:

1. Designate a system of routes within the CFO area, including the designation of specific uses on specific routes when appropriate.
2. Identify maintenance intensities for designated routes as High, Moderate, or Low.
3. Close routes blocked by private lands unless an easement is granted for public access.
4. Close spur roads whose sole purpose is to access private lands, unless a right-of-way (ROW) is sought by the private landowner and granted by BLM.
5. Attempt to match adjoining USFS routes in both numbering system and designated use.
6. Design any new roads for sustainability and with respect for setting (Physical, Administrative, and Social).
7. Provide for quality recreation opportunities to a variety of users.

8. Consider "Community Trail"-based SRMAs around the towns of Challis and Mackay. Though the designation of an SRMA is outside the scope of this document and would require an RMP amendment at some point in the future, the value of community based trail systems around the towns of Mackay and Challis was repeatedly discussed through the course of this process, (i.e., public meetings, BLM interdisciplinary team meetings) and several trail segments that lend themselves to such a designation are being analyzed under this alternative.
9. New roads built on upland slopes would be designed to reduce the potential for increased upland soil movement. Proposed road construction and maintenance activities would be reviewed by appropriate staff specialists and be executed according to appropriate guidance. Such specifications include slope stability, grade, gradient, water bars, leaving and /or re-establishing vegetation, and following and fitting to the natural terrain as closely as possible (Idaho Transportation Department 2005). Design specifications for road maintenance are intended to eliminate increased sedimentation**.**

Route Specific Changes:

1. **French Creek (**T 11 N, R 17 E, Sec 29): This proposal is to construct approximately ¾ of a mile of ATV trail around a private in-holding. This re-routed trail would then connect into an existing one-mile segment of trail limited to vehicles less than 50" in width on BLM, then onto USFS-administered lands managed by the Sawtooth National Recreation Area (SNRA). The connecting trail on the SNRA is currently managed for single track motorcycle use. One goal of this proposal would be to provide a more defined legal access for hunters wishing to access the area from the north off of Highway 75 using both motorized and non-motorized means (Figure 6).

2. **North Fork of Birch Creek** (Blue Mountain area to USFS Road 052) - (T 13 N, R 18 E, Secs 11, 12, 14, 23): This trail currently exists as a motorcycle trail which connects the Challis area to the Keystone Mine/Bayhorse area. This proposal would provide a key ATV connector between the town of Challis and the Bayhorse mining area and townsite, which is being developed as a state park by the Idaho Department of Parks and Recreation (IDPR). Proposed re-routes of the existing trail around steep and challenging segments would allow ATV users of all skill levels to access the Bayhorse area from Challis without having to travel along mixed use roads such as Garden Creek and Highway 75 (Figure 7).

3. **Birch Creek** (T 13 N, R 18 E, Secs 23, 24, 26): There is evidence of a road no longer in use at the top of the Birch Creek drainage where it is accessed from the Keystone Mine area. However, evidence of any existing trail has been lost over a large portion of the drainage due to minimal modern use. This alternative would re-develop a motorcycle trail in this drainage to connect the Keystone area to the main Birch Creek road and the trail discussed in #2 above. This would provide a loop opportunity for motorcycle riders either from Challis or from the Bayhorse area, with at least this part of the loop providing a single track trail experience (Figure 8).

4. **Malm Gulch Area** (T 12 N, R 19 E, Secs 9, 21, 22, 27, 28, 33, 34): Most of this area, an ACEC, was closed by the RMP to motorized use, with the exception of 1.7 miles of road

leading up the drainage from Highway 75. The existing (administratively closed) road continues past this point and eventually connects back into Spar Canyon Road and the Germer Peak area. This proposal would require an RMP amendment and would open an un-maintained ATV route through the Malm Gulch ACEC. This would provide motorized connectivity and a loop opportunity between Highway 75, Spar Canyon Road, and the Germer Peak area. In order to alleviate one of the issues associated with motorized use in this area (Decision #4, RMP page 14-hazard of erosion), ATV use would be directed into the bottom of the wash in the lower Malm Gulch area rather than on the road, which is subject to highly erosive thunderstorm related flood events. This action would require a resource management plan amendment (Figure 9).

5. **Bear Creek** (Morgan Creek drainage) (T 16 N, R 18 E, Sec 13): This section of primitive road was inadvertently left off of the 2006 BLM Challis Field Office Travel Map (and as such, is shown as being open to motorized use under Alternative 1). This road begins on USFS-administered land as it crosses Morgan Creek in an area affected by periodic beaver activity. It then crosses BLM land for approximately 1 mile, then re-enters USFS land. The USFS has rehabilitated the portion of the road above BLM-administered lands. This alternative would keep the BLM-managed portion of this route closed to motorized use (Figure 10).

6. **Challis to Land of the Yankee Fork (LOYF) Interpretive Center** (T 13 N, R 19 E, Secs 4, 5, 9; T 14 N, R 19 E, Sec 32): This proposal is to develop and designate approximately two miles of non-motorized trail along the foothills between U.S. Highway 93 and the Challis Non-Municipal Waste Site. Conversion of existing primitive roads to non-motorized trail would account for most of the proposed trail between the Golf Course and the access road to the waste site. New construction would be required for the majority of the proposed trail between the waste site and the Interpretive Center. This trail would provide a new opportunity for residents and visitors of the Challis Area to utilize a trail segment close to town, without having to walk or bicycle on a mixed use road (Figure 11).

7. **Challis Golf Course Area** (T 14 N, R 19 E, Secs 31, 32; T 13 N, R 19 E, Secs 6, 7): This proposal is to develop a single-track mountain bike trail off of the golf course area and into foothills to the West. This would require designation of existing primitive roads as non-motorized mountain bike trails as well as construction of new single track trail connections. This trail would provide a new opportunity for residents and visitors of the Challis area to utilize a non-motorized trail system close to town, without having to ride on mixed use roads (Figure 12).

8. **Keystone Road as it leaves Bayhorse townsite** (T 12 N, R 18 E, Secs 2, 3; T 13 N, R 18 E, Sec 35): Under this proposal, approximately 1.5 miles of the existing primitive road as it leaves the Bayhorse townsite to the north would be converted to a designated ATV trail. This section of primitive road is particularly steep and narrow as it leaves the townsite and provides very few safe opportunities for full sized vehicles to pass one another. Methods of restriction might include one or more of the following: signage,

engineered physical restrictions such as bollards or boulders, or natural reclamation down to the prescribed width, or other appropriate methods (Figure 13).

9. **Blaze Canyon Area** (T 7 N, R 24 E, Sec 18, 19, 29, 30; T 7 N, R 23 E, Sec 13): Under this alternative, approximately two miles of primitive road from the Lost River Access trailhead parking area up to the Windy Devil repeater would be converted to designated ATV trail. Approximately 1.5 additional miles of primitive road from Blaze Canyon to a point of overlook over Black Daisy Canyon would also be converted to a designated ATV trail (T 7 N, R 24 E, Sec 18; T 7 N, R 23 E, Sec 13). This conversion would be accomplished first with signage, and mapping designations. If deemed necessary, routes would be restricted as per the guidance under "Common to All Alternatives." Designation of these route segments as ATV trail would complement the ATV trail system on the Mackay Mine Hill (Figure 14).

Description of Alternative 3:
This alternative would address travel and transportation at a landscape level, similar to that which was suggested by the BLM's RAC, by dividing portions of the CFO area into Travel Management Areas (TMAs) (Figure 15). TMAs are conspicuous units with broad-scale resource concerns (ACECs, WSAs, wildlife crucial winter range, etc.) where a rational approach is taken to achieve resource programs objectives. Using the BLM's Natural Resource Recreation Setting Matrix (see Attachment 5) as a guide, desired settings for those units would be identified to guide current and future transportation decisions based on the identified resource concern. Under this alternative, about 88% of routes identified as authorized, existing routes in the 2006 CFO Travel Map would be "designated" as open (Figures 16 and 17).

The following criteria would be immediately applied under this alternative in specific locations (ACECs, greater sage-grouse leks, etc.), and would be used as a tool for future transportation related guidance.

General Principles and Criteria in current and future route determination and selection:

1. Designate a system of routes within the CFO area, including the designation of specific uses on specific routes when appropriate.
2. Identify maintenance intensities for designated routes as High, Moderate, or Low
3. Close routes blocked by private lands unless an easement for public access is granted.
4. Close spur roads whose sole purpose is to access private lands, unless a right-of-way (ROW) is sought by the private landowner and granted by BLM.
5. Attempt to match adjoining USFS routes in both numbering system and designated use.
6. Design any new roads for sustainability and with respect for setting (Physical, Administrative, and Social).
7. Provide for quality recreation opportunities to a variety of users.
8. Design and designate a system of roads which can be more easily communicated to users. Consideration should be given to close redundant routes where applicable, identify a primary route accessing major drainages (Figure 18), and identify appropriate maintenance intensities, thus aiding navigation.
9. Consider methods to reduce fragmentation of wildlife habitat, as specified by applicable guidance.

10. Reduce impacts to riparian areas and wetlands using potential and known impacts to natural and cultural resources as part of the decision-making process.
11. Reduce parallel and redundant routes using potential and known impacts to natural and cultural resources as part of the decision-making process.
12. Consider conservation measures for OHV disturbance as identified in the CSGLWG Conservation Plan (CSGLWG 2007).
13. Provide for a non-motorized hunting experience within the WSAs and Donkey Hills ACEC through a seasonal motorized closure from October 1 to December 31, inclusive.
14. Eliminate cross country travel for game retrieval. This option would require a plan amendment.
15. New roads built on upland slopes would be designed to reduce the potential for increased upland soil movement. Proposed road construction and maintenance activities would be reviewed by appropriate staff specialists and be executed according to appropriate construction guidelines and methods. Idaho Transportation Department Best Management Practices (BMPs) would be utilized for road maintenance activities to minimize sedimentation (Idaho Transportation Department 2005**).**

Route Specific Changes:

1. **French Creek**- (T 11 N, R 17 E, Sec 29): This proposal is to construct approximately ¾ of a mile of single track motorcycle trail around a private in-holding. This re-routed trail would then connect into an existing one-mile segment of trail limited to vehicles less than 50" in width on BLM, then onto USFS-administered lands managed by the Sawtooth National Recreation Area (SNRA). The connecting trail on the SNRA is currently managed for single track motorcycle use. One goal of this proposal would be to provide a more defined legal access for hunters wishing to access the area from the north off of Highway 75 using both motorized and non-motorized means (Figure 19).

2. **Bear Creek** (Morgan Creek drainage) (T 16 N, R 18 E, Sec 13): Same as proposed in Alternative 2 (Figure 10).

3. **Keystone Road as it leaves Bayhorse townsite** (T 12 N, R 18 E, Secs 2, 3; T 13 N, R 18 E, Sec 35): Same as proposed in Alternative 2 (Figure 13).

4. **Blaze Canyon Area** (T 7 N, R 24 E, sec 18, 19, 29, 30; T 7 N, R 23 E, Sec 13): Same as proposed in Alternative 2 (Figure 14).

5. **Challis Day Use Site:** Designate approximately 16 acres of the gravel pit adjacent to Challis Bridge Day Use Site as "open" to cross country travel for use as a skill development area. This option would require a plan amendment. Access to the site would be controlled through boundary fencing with one point of access and egress from the Challis Bridge Access Road. The area would be bounded by the Challis Bridge Day Use Area access road to the northwest, Highway 93 to the southwest, an irrigation ditch to the southeast, and the cottonwood gallery to the north/northeast (Figure 20).

<u>Alternatives Considered but not Analyzed in Detail</u>:

- BLM considered a public-suggested alternative to close all routes in the travel management planning area to motorized vehicle use, or to close all routes except for the mainline BLM system roads. This alternative would not meet the variety of access needs that have been identified, and would not be consistent with the Transportation management objective in the RMP to "provide an adequate road and trail system on the Challis Resource Area's [Field Office's] public lands to (a) satisfy the public need for recreation, commodity production, access, and safety, and (b) facilitate management of BLM resources and programs." (RMP, pg 62) This alternative would not fulfill the purpose and need for the travel management plan, therefore no further analysis of this alternative is necessary.

- BLM staff considered an alternative that would create "Recreation Focus Areas" across the CFO area. These Focus Areas were designed to provide a wide range of potential management options for recreational use of roads and trails by managing recreation based settings. However, it was determined that this approach amounted to creating Land Use Plan Level allocations not discussed in the RMP, so it was decided not to analyze this further. However, BLM recognizes the key role the agency plays in providing community based trails around the towns of Mackay and Challis, and elements of this approach have been retained in the criteria under Alternative 2.

- The BLM's RAC suggested that rather than closing any existing routes, the BLM create a "preferred route" system by simply signing the routes where future vehicle use is preferred. Such a system would be difficult to manage and communicate to the public. The BLM recognizes that funding will not be available to sign every route throughout the CFO, thus the BLM will have to continue to prioritize which routes should be signed and which should remain unsigned. Additionally, BLM already has authority to place signs as the agency deems appropriate under an existing categorical exclusion, therefore no formal "preferred route" signing system need be analyzed.

The BLM staff also considered four route specific suggestions which will not be further analyzed. These routes include:

1. Relocating the Wickiup Trail: This trailhead cannot be relocated onto BLM because to do so would require construction of a new permanent trail in the Boulder Creek WSA.
2. Developing the Big Lake Creek trail for motorized use: Because this trail begins on a section of land deeded to the State of Idaho, traverses BLM-administered lands for only ¼ mile, and ends with the predominant use on USFS-administered lands, it was decided that the BLM is not in a position to make determinations on this segment of trail without further discussion with other agencies.
3. Route between Broken Wagon area and Spar Canyon area: A connecting route was requested here. However, to develop this connection would require construction of a new permanent road or trail in the Corral-Horse Basin WSA, and therefore was not considered further.
4. Route between Corral Creek area and Lake Creek area: A connecting route was requested here. However, to develop this connection would require construction of a new permanent road or trail in the Jerry Peak WSA, and therefore was not considered further.

AFFECTED ENVIRONMENT

General Setting: The CFO area is located in east central Idaho and encompasses approximately 792,567 acres of public land. Lands managed by the CFO typically adjoin National Forest system lands at the upper elevation boundary, and private land or other BLM Field Offices at the lower elevation boundary.

Elevations vary from 4,600 feet at Hat Creek to 10,010 feet at the top of Jerry Peak. General climatic characteristics are abundant sunshine, low humidity, and high evaporation. Annual precipitation in the Challis area varies from about 7.5 inches at Challis, Idaho (elevation 5,200 feet) to 25 inches at the southern end of the CFO Area near Jerry Peak (elevation 10,010 feet). Precipitation in the Challis area occurs primarily in the spring and fall as rain. April, May, and June are the three wettest months (37% of the average annual precipitation) while January, February, and March are the three driest months (16% of the average annual precipitation). These figures vary with elevation, but indicate general precipitation trends for the CFO area. Summer thunderstorm activity is moderate; however, some storms exhibit high intensity rainfall combined with moderate duration. Summer thunderstorms typically occur over small, sub-watershed-sized areas, and erosion is generally limited spatially; however, sometimes downstream impacts such as debris flow deposition and flooding occur.

The CFO is in the Northern Rockies physiographic province, but the landscape expression is that of Basin and Range topography. Major rivers draining the area are the Salmon River and its tributary the Pahsimeroi River, and the Big Lost and Little Lost Rivers. These rivers are perennial within the field office area. There are a number of tributary streams that are perennial, but a majority of tributary streams are either intermittent or ephemeral. Loss of surface flows to groundwater is very common, generally due to the permeability of coarse alluvial soils in stream channels and alluvial and glacial deposits. Additionally, dewatering of streams, due to agricultural use of water, is not uncommon. Along the tributary stream channels riparian vegetation is commonly narrow and often discontinuous. There are numerous springs, generally of small volume, in the headwaters of tributary drainages. Riparian vegetation around these springs varies in extent and vigor.

The transportation system in the CFO area is comprised of several county roads, one state and one federal highway, and about 2,450 miles of BLM-administered roads and trails. It is the BLM administered system that this document addresses. The BLM transportation system is divided into three main categories; roads, primitive roads, and trails:

- *Roads* are defined as “linear routes which are declared a road by the owner, managed for use by low clearance vehicles having four or more wheels, and maintained for regular and continuous use.”
- *Primitive Roads* are defined as “linear routes managed for use by four-wheel drive or high-clearance vehicles. These routes do not normally meet any BLM road design standards.” Primitive Roads account for the majority of the transportation system in the CFO area.

- *Trails* are defined as "linear routes managed for human-powered, stock, or OHV forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles" (Salt et al. 2006).

Maintenance intensities on these routes are categorized as either low, moderate, or high. Most routes administered by the CFO fall under the categories of low and moderate maintenance intensities.

The BLM has utilized vehicle counters to gather traffic data throughout the CFO area since 2003. The counters have all been located on relatively well maintained routes open either seasonally or for year round use. None of the counters have been placed on user-created primitive two-track roads. Therefore, the data collected would be expected to reflect traffic volumes greater than what would be anticipated on the majority primitive roads in the CFO area. The average number of vehicles per day recorded since 2003 on each road is as follows:

Table 15. Vehicles per day on selected CFO roads

Location	Type of Route	General Use/Description	Vehicles/Day
Leaton Gulch	Primitive Road	Well maintained, 2-wheel drive, seasonal	6.98
Sage Creek	Primitive Road	Well maintained, 2-wheel drive, seasonal	6.74
Dry Gulch	Primitive Road	Well maintained, 2-wheel drive, seasonal	9.53
Burma Road	Primitive Road	Well maintained, 2-wheel drive, seasonal	10.3
W. Pashimeroi Road	Road	Well maintained, 2-wheel drive, seasonal	7.3
Bartlett Point Road	Road	Well maintained, 2-wheel drive, year round, accesses private residences	12.3
Access Road to BLM horse Corrals	Road	Well maintained, 2-wheel drive, year round, accesses private residences	57.8
Double Springs Pass	Road	Well maintained, 2-wheel drive, seasonal	16.4

In general, the average number of vehicles traveling these roads spike during the fall hunting season (September, October, and November), and substantially drop off during the winter months and spring months (December, January, February, March, and April).

The proposed action and alternatives considered the issue of "Availability of Access, Need to Reserve Access," or the public's ability to enter and traverse public lands. Nothing in the alternatives limits access to the public for commodity use, access to private lands (as long as rights of way are sought and granted), or the many other varied uses found on public lands. The RMP discusses and lists several locations where easements may be required (BLM 1999, Attachment 22), and there may be others; these would be considered on a case-by-case basis as the need arises. The alternatives that recommend reducing routes are done for reasons of protection of wildlife or other natural/cultural resources and are not expected to affect general access to any area. Other concerns about access are recreational in nature, and are further discussed in the recreation section.

Table 2. Critical, Other Elements of the Human Environment

CRITICAL ELEMENTS OF THE HUMAN ENVIRONMENT			OTHER IMPORTANT ELEMENTS OF THE HUMAN ENVIRONMENT		
The following elements of the human environment are subject to requirements specified in treaty, statute, regulation, or executive order, and must be considered in all environmental assessments			**The elements of the environment listed below are not included on the "critical elements" list, but are important to consider in assessing all impacts of the proposal(s).**		
All the following elements have been analyzed. Elements denoted by an "X" in the *not affected* column are not affected by the proposed action or alternatives and will receive no further consideration.					
Elements	**Not Affected**	**Affected**	Elements	**Not Affected**	**Affected**
Air Quality	X		Paleontological Resources	X	
Areas of Critical Environmental Concern		X	Indian Trust Resources	X	
Cultural Resources		X	Wildlife		X
Environmental Justice (EO 12989) (minority and low-income populations)	X		Availability of Access/Need to Reserve Access	X	
Farm Lands (prime or unique)	X		Recreation Use, Existing and Potential		X
Floodplains	X		Existing and Potential Land Uses	X	
Invasive, Non-native Species		X	Vegetation types, communities; vegetative permits and sales; Rangeland resources		X
Migratory Birds		X	Fisheries		X
Native American Religious Concerns	X		Forest Resources	X	
Threatened/Endangered Plants; Sensitive Plants		X	Soils		X
Threatened/Endangered Fish; Sensitive Fish		X	Wild Horse and Burro Designated Herd Management Areas		X
Threatened/Endangered Animals; Sensitive Animals		X	Visual Resources		X
Tribal Treaty Rights		X	Economic & Social Values		X
Wastes, Hazardous or Solid	X		Mineral Resources	X	
Water Quality – Surface		X			
Wetlands/Riparian Zones (including uplands)		X			
Wilderness		X			
Wild & Scenic Rivers	X				

Affected Resources/Values:

Areas of Critical Environmental Concern and Research Natural Areas:
The RMP designated 14 Areas of Critical Environmental Concern (ACEC) in the CFO, totaling 88,206 acres, in order to highlight the following resources for management and protection: unique plant communities, petrified trees, fragile soils, crucial bighorn sheep or elk habitat, geological areas of interest, unique riparian areas, fisheries habitat, roadless, primitive and scenic values, and unique cultural resources. Ten of the ACECs are also Research Natural Areas (RNAs). The RMP provides transportation related guidance for many of these ACECs:

- Antelope Flat ACEC/RNA: Limit motorized vehicle use to existing roads and vehicle ways.

- Birch Creek ACEC: Motorized vehicle use would be prohibited during the winter/spring period between December 16 and April 30, inclusive, and limited to existing roads, vehicle ways, and trails between May 1 and December 15, inclusive.
- Cronk's Canyon ACEC/RNA: Limit motorized vehicle use to existing roads and vehicle ways.
- Donkey Hills ACEC: Prohibit motorized vehicle use in the Donkey Hills ACEC during the winter/spring period between December 16 and April 30, inclusive, and limited to existing roads, vehicle ways, and trails between May 1 and December 15, inclusive. Accommodate access to private lands in the ACEC.
- Dry Gulch ACEC/RNA: Limit motorized vehicle use to the existing boundary roads.
- East Fork Salmon River Bench ACEC/RNA: Close the ACEC/Research Natural Area (RNA) to motorized vehicle use.
- Herd Creek Watershed ACEC/RNA: Designate the existing trail below Herd Lake and road above Herd Lake "closed" to motorized vehicle use; maintain these routes as trails for non-motorized use only. Limit motorized vehicle use in the remainder of the Herd Creek Watershed ACEC/RNA to existing roads and vehicle ways.
- Lone Bird ACEC: Retain the existing road closure and physically close the existing road from the NE ¼, NE ¼ Section 13, T 12 N, R 19 E to the NW ¼, SE ¼ Section 19, T 12 N, R 20 E to prevent unauthorized use. The remainder of the ACEC would also be signed and closed to motorized vehicle use.
- Malm Gulch/Germer Basin ACEC/RNA: Reduce the hazard of erosion, limit motorized vehicle use in the ACEC to the existing roads from Highway 75 to the point of closure in the NW ¼ of Section 28, T 12 N, R 19 E.
- Peck's Canyon ACEC/RNA: Limit motorized vehicle use to existing roads and vehicle ways
- Pennal Gulch ACEC: Limit motorized vehicle use to existing road.
- Sand Hollow ACEC/RNA: Continue to close the Sand Hollow watershed to livestock grazing and motorized vehicle use.
- Summit Creek ACEC/RNA: Limit motorized vehicle use in the Summit Creek ACEC/RNA to the Howe-May road, the area south of the existing campground road, and the access route to Barney Hot Springs.
- Thousand Springs ACEC/RNA: Limit motorized vehicle travel to existing (and newly constructed, if applicable) roads, vehicle ways, trails, and parking areas.

Cultural Resources:

Cultural resources are sites, buildings, districts, structures, and objects that contain evidence of past human activities. The National Historic Preservation Act (NHPA) of 1966 (as amended) established the federal government's policy and programs on historic preservation, including the establishment of the National Register of Historic Places (National Register). Cultural resources that are listed or eligible for listing on the National Register are called historic properties. Historic properties can reflect many kinds of significance, including architecture, history, archaeology, engineering, and culture. Section 106 of the NHPA requires federal agencies to take into account the effects of undertakings on all historic properties. The Idaho State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP) are the state and federal agencies responsible for overseeing the management and preservation of cultural resources in compliance with the NHPA.

Approximately 792,567 surface acres comprise the CFO area, and of this an estimated 74,600 acres (9.5%) of this area have been assessed for cultural resources using a variety of research methods. Approximately 12,500 acres (1.5%) of the CFO have been intensively examined for the presence of cultural resources. These inventories have served to identify numerous cultural resources located throughout the CFO area, many of which have subsequently been determined eligible for listing on the National Register by the BLM archaeologist in consultation with the Idaho SHPO.

There are almost 500 known, recorded cultural resource sites that represent a variety of types and chronological periods located within the CFO area. Known cultural resources represent a wide variety of prehistoric and historic land uses, including travel, camping, hunting, fishing, mining, ranching and settlement. Prehistoric site types include open camps, stone tool procurement areas, manufacture and processing sites, and isolated artifacts and features. Historic sites types include railroad grades, adits, homesteads, town sites, and cabins. Roads and trails may sometimes date to prehistoric times, and can also be found eligible for listing on the National Register. Archaeological sites found in the Challis Field Office area document an almost continuous human occupation from at least 11,000 years ago to the present.

Economic and Social Values:
The population of Custer and Lemhi Counties has remained relatively stable, if slightly declining, since 1990[2]. However, population growth in the state of Idaho has increased 13.3% in the period between 2000 and 2006, placing it in the top five of the fastest-growing states in the nation[3]. The growth of urban population centers in Idaho, coupled with technological advances in transportation equipment, has fueled a surge in recreational road and trail riding since the early 1990s. In addition, travel methods associated with uses traditionally permitted on public lands have changed. One example of this is in livestock operations, where traditional horse and rider herding has, in some cases, given way to selective ATV and motorcycle use. At present there are no local dealerships within the CFO area that cater to ATV, bicycle and motorcycle users, and limited options for service and repair.

Fisheries/Threatened/Endangered/Sensitive Fish:
Water availability, connectivity with larger, more open systems, temperature, and sediment level is an indicator of the status of salmonid habitat on BLM CFO-administered lands. Where these conditions exist, in-stream fish habitat consists of boulders, cobbles, gravels, and pools while in-stream fine sediments are generally below levels that would threaten salmonid egg to adult survival. Also, water temperatures consistently meet State of Idaho standards for cold water biota and spawning salmonids and meet the PACFISH/INFISH (USFS/BLM 1995a, USFS/BLM 1995b) standards for the migration, rearing, and spawning of salmonids.

The U.S. Fish and Wildlife Service's (USFWS) 90-Day Species List (File # 1002.0000, 2007-SL-0688) and the NMFS/NOAA (USDC NMFS and NOAA 1993, USDC NMFS and NOAA

[2] County Census data available at: http://labor.idaho.gov/dnn/idcl/StatisticsResearch/Census/tabid/754/Default.aspx
[3] State Census comparison data located at http://factfinder.census.gov/servlet/GCTTable?_bm=y&-geo_id=01000US&-_box_head_nbr=GCT-T1-R&-ds_name=PEP_2006_EST&-format=US-9S

2005) identified the following fish species and/or Designated Critical Habitat under the ESA for the CFO:

- Threatened: bull trout (*Salvelinus confluentus*), steelhead trout (*Oncorhynchus mykiss*), spring/summer chinook salmon (*Oncorhynchus tshawytscha*)
- Endangered: sockeye salmon (*Oncorhynchus nerka*)
- Designated Critical Habitat for steelhead trout, spring/summer chinook salmon and sockeye salmon; upper Salmon River and its tributaries up to a natural barrier to upstream fish migration.

Sockeye salmon use the main stem of the Salmon River as a migration corridor to spawning and rearing habitats in the upper Salmon River near Stanley, Idaho. The NMFS has designated the Salmon River main stem as critical habitat for sockeye salmon recovery.

Spring/Summer chinook salmon, steelhead trout, and bull trout use the Salmon River main stem and many of its larger tributaries as migration, spawning, and rearing habitat. All waters that drain in to the Salmon River, except for those which are located above a natural migration barrier, have been listed by the NMFS as critical habitats for chinook salmon and steelhead recovery. Bull trout also occur in smaller tributaries to the Pahsimeroi and Salmon Rivers.

Westslope cutthroat trout (*Oncorhynchus clarki lewisi*), a State of Idaho and BLM species of concern, are present in the main stem of the Salmon River and many of its tributaries, including the Pahsimeroi River.

Invasive, Non-native Species:
There are 15 Idaho State designated noxious weeds known to occur within the CFO boundaries (Table 3) and numerous invasive species that have not been designated as noxious. The CFO has mapped over 550 locations of approximately 1500 acres of noxious weeds. Infestations are generally less than 5 acres, with the largest mapped at 175 acres. In general, road corridors are the main areas of infestation, but some populations also occur well away from roads. Roads are the major conduit for the spread of non-native invasive plants into natural areas particularly semi-arid and arid lands (Gelbard and, Belnap 2003 and references within, BLM 1999). Generally, invasive plants are at highest densities near road edges and decrease in density as distance from the road increases (Gelbard and Belnap, 2003 and references within).

The most extensive infestations of noxious weeds in the CFO are spotted knapweed (*Centaurea maculosa*) and leafy spurge (*Euphorbia esula),* aggressive invaders capable of dominating the landscape in a variety of habitats. Both of these have little value for wildlife or humans. Canada thistle (*Cirsium arvense*) is a prevalent invader in riparian areas of the CFO. The CFO began a cheatgrass inventory in 2005. So far, sites have been mostly less than one acre, with the largest identified site approximately 150 acres.

The CFO participates in three Cooperative Weed Management Areas (CWMAs): the Lost River, Custer and Lemhi CWMAs. BLM employs an integrated approach to weed management on public lands that includes: herbicide treatment, manual control, biological control, and restoration. Projects authorized by CFO are implemented with weed prevention measures in

mind; ground disturbance is minimal, reseeding is required, equipment used in implementation is washed and weed control is required.

Table 3. Designated invasive species ocurring within CFO boundary

Scientific Name	Common Name
Acroptilon repens	Russian knapweed
Berteroa incana	Hoary Alyssum
Cardaria draba	Hoary cress or whitetop
Carduus nutans	Musk thistle
Centaurea maculosa	Spotted knapweed
Centaurea diffusa	Diffuse knapweed
Chondrilla juncea	Rush skeletonweed
Cirsium arvense	Canada thistle
Conium maculatum	Poison hemlock
Convolvulus arvensis	Field bindweed
Cynoglossum officinale	Houndstongue
Euphorbia esula	Leafy spurge
Hyoscyamus niger	Black henbane
Linaria dalmatica	Dalmation toadflax
Linaria vulgaris	Yellow toadflax
Onopordum acanthium	Scotch Thistle

Recreation Use, Existing and Potential:
Recreation use in the CFO area is very diverse. Development levels range from dispersed use requiring no facilities to paved campgrounds with vault restrooms and R.V. hookups. Activities include hiking, fishing, boating, camping, backpacking, wild horse viewing, wildlife viewing, mountain biking, rock hounding, OHV riding, motorcycle riding, scenic driving, rock climbing, hunting, and photography. Most recreation activity is concentrated in developed recreation sites within the CFO's three SRMAs, but some recreation use also occurs within the Challis Extensive Recreation Management Area (ERMA), particularly during the fall hunting season. The SRMAs tend to provide developed recreation opportunities, while the ERMA provides the majority of more primitive recreation opportunities. Almost 790,000 acres are legally accessible to the public for various recreational pursuits. High quality natural and aesthetic values dominate the Field Office's viewsheds. Currently, ten outfitters have special recreation use permits to guide hunting, fishing, sightseeing, and river floating trips. The CFO also manages one competitive use permit for an annual mountain bike race.

The current transportation network is generally an inherited system of unplanned roads, ways, and trails. Many of these routes were created in support of a commodity (grazing, minerals, timber, etc.) resource by the passage of vehicles or constructed in the most direct manner possible to a specific location. Over time, the use of many of these routes has become recreational in nature, particularly as ATVs have become a favored method of transportation for many hunters.

Off-highway Vehicle (OHV) use in the CFO area is relatively light (as compared to more populated regions), though growing as fast or faster than anywhere else in the state of Idaho. Region 6 (east-central Idaho) leads the state in 1) adult participation in motorcycling, 2) youth participation in motorcycling, 3) adult participation in four wheel driving, and 4) youth

participation in four wheel driving. Region 6 ranks 2nd in the state (and above the state average) in 1) adult participation in riding ATVs, and 2) youth participation in riding ATVs (IDPR 2006). The predominant OHV use period and impacts occur during the fall hunting and spring antler hunting seasons. ATV registration numbers in Idaho are far outpacing motorcycle (trail bike) registrations (Cook 2007). Therefore, it can be anticipated that any proposed trails for ATV designation would receive more visitation than those proposed for motorcycle designation. Nonetheless, motorcycle registrations are not declining, so maintaining opportunities for single track motorized trail riding still must be considered. Motorcycle trail riding in the area has traditionally occurred on game or cattle trails rather than on recognized motorized routes. As land management agencies progress toward 'limited to existing' or 'limited to designated' routes, many of these single track opportunities have been lost regionally as well as locally.

Beyond specific activity level discussion, the existing recreational environment can also be described by settings which lead to experiences and benefits (personal, community, and environmental). The BLM utilizes a Natural Resource Recreation Setting Matrix to describe existing and prescribed settings (*Attachment 5*). Setting classifications include Primitive, Back Country, Middle Country, Front Country, Rural, and Urban. These setting classifications are then described using Physical, Social, and Administrative criteria.

Physical setting (remoteness, naturalness, and facilities) can be easily quantified by utilizing Geographic Information System (GIS) technology to map proximity to various road types (4 wheel drive, improved gravel, highway, etc.). Social settings (number of contacts, group size, and evidence of use) can be quantified in GIS by mapping numbers of social contacts anticipated or observed in an area. Administrative settings (mechanized use, visitor service, and management controls) can be quantified in GIS by mapping proximity to various roads and trails as described by authorized use (non-motorized, four-wheel drive, two-wheel drive, highway traffic).

Table 4. Settings, Definitions, Classifications and percentage of the field office

Setting	Definition	Classification	Percentage
Physical	remoteness, naturalness, and facilities	Urban:	<1%
		Rural:	4.9%
		Front Country:	14.3%
		Middle Country:	63.7%
		Back Country:	17%
		Primitive:	0%
Social	number of contacts, group size, and evidence of use	Urban:	<1%
		Rural:	4.9%
		Front Country:	0%
		Middle Country:	0%
		Back Country:	14.3%
		Primitive:	80.7%
Administrative (Alternative 1)	mechanized use, visitor service, and management controls	Urban:	<1%
		Rural:	4.9%
		Front Country:	14.3%
		Middle Country:	60.7%
		Back Country:	12.3%
		Primitive:	7.7%
Administrative (Alternative 2)	mechanized use, visitor service, and management controls	Urban:	<1%
		Rural:	4.9%
		Front Country:	14.4%
		Middle Country:	59%
		Back Country:	13.8%
		Primitive:	7.9%
Administrative (Alternative 3)	mechanized use, visitor service, and management controls	Urban:	<1%
		Rural:	4.9%
		Front Country:	14.4%
		Middle Country:	58%
		Back Country:	14.3%
		Primitive:	8.4%

Soils:
The CFO travel planning area covers a large area and contains many different soil types. BLM uses soil surveys from the Natural Resources Conservation Service for purposes of analysis. Surveys are complete for the entire area and are available in a digital format that allows users to analyze data using GIS technologies.

Soils across the CFO area are derived from igneous, sedimentary, and metamorphic rocks, and from alluvial, colluvial, and glacial deposits. Igneous parent material is primarily fine-grained extrusive material and air-fall tuff generated from volcanic ash. Sedimentary parent material includes limestone, minor sandstone, and reworked volcanic materials. Metamorphic parent rocks include quartzite and fine-grained Precambrian slates. Soils generated from ash tuffs often are fairly easily eroded, especially under conditions of high intensity rainfall and sparse ground cover. These soils are generally found in the north and west-central portion of the field office area. Surface disturbances, such as road construction, on the Erosional Risk Soils identified in the RMP can be sources of accelerated erosion.

On gently rolling uplands (0-30 % slope), slightly altered bedrock is often more than 40 inches below the ground surface. On more rolling lands (20-50 % slope), the depth to bedrock is approximately 20 inches to 40 inches. On steep slopes (30-60 %), soil depths range from less than 10 inches to 20 inches, and overlie partly weathered bedrock. Rock outcrop is common on steeper slopes (>60 %) with little or no soil development. The vegetative productive capacity ranges from 100 pounds per acre on the rough, broken lands to 3,000 pounds per acre on wet meadows (BLM 1998).

Factors such as slope, precipitation, vegetative cover, presence of biological soil crust, soil type, and water runoff all affect the amount of erosion. Erosion is accelerated with manmade disturbances such as roads and trails. Most of the effects of routes on soils can be attributed to soil compaction resulting in impacts to water quality and hydrologic functions. As soil is subjected to pressure, the soil particles are pressed together into a denser mass, as air and gasses are pushed out of the soil. This compaction creates a soil that is less permeable to water and air infiltration and ultimately affects its ability to nourish plant roots and soil microbes. Soil compaction is exacerbated when soils are wet. Soil compaction also increases the amount of runoff that flows off the route into surrounding drainages, causing gullies and increased erosion. This results in routes spreading over larger areas as users seek smoother surfaces. This leads to increased impacts, as new soil is disturbed and larger materials get broken down by the mechanical action of feet, hooves, or wheels. The reader is also directed to the Water Quality and Hydrology section for further discussion of impacts related to soils.

Soil biological crusts are vulnerable to disturbances such as off-road vehicle. Recovery times are generally measured in decades or centuries (Belnap, 2003). These soil crusts increase infiltration rates, decrease wind erosion, increase the nutrient content of the soil, soil stability, and encourage seedling establishment. They act as a living mulch, retaining soil moisture and discouraging annual weed growth. Physical soil crusts frequently form on any bare soil except those with low levels of silts and clays. These crusts also protect against wind erosion, but provide few other benefits. Erosion rates from water are increased as these crusts decrease soil stability by destroying soil clumps and forming a crust over the soil surface, which inhibits seedling establishment. Mechanical action can break these crusts and provide short term benefit, but the physical crust will return without additional measures being taken to increase soil stability (BLM and USGS 2001).

In general, soils in the CFO area absorb nearly all precipitation, except during occasional high intensity thunderstorms or short-duration (1-2 days) spring snowmelt. In such cases, surface flow and sediment transportation into streams can be pronounced, particularly on very steep slopes (>60 %). Annually, most erosion (tons/acre) in the CFO area (rangeland) is gully erosion. However, local areas of bare soil (e.g., areas recently burned by wildfires, landslide scarps, construction sites, dirt-surface roads) on steep slopes (e.g., >35 %) also may experience meaningful amounts (exceedences of the soil loss tolerance factor) of wind erosion and splash, sheet and rill water erosion. The lands within the CFO have an erosion rate which falls within acceptable soil loss tolerance levels.

The Challis Proposed RMP and Final EIS summarized 17 soil groups for the CFO. Four of those soil groups were identified as sources of accelerated erosion or pose erosion risks due to

naturally occurring sparse vegetation, often compounded by steep topography when surface disturbing activities such as road/trail construction occurs. This analysis will focus on those four soil groups. The RMP Erosional Risk Soils comprise approximately 5.9% of the total soils on BLM Land within the CFO**.** Within these at risk groups the soils are clayey to loamy, and have variable slope, depth, and landform. The soils are derived from extrusive igneous rocks, lacustrine sediments, quartzite, plinthite, and slate. These soils have limited stability and are at risk of erosion if protective vegetative cover is not maintained, especially on steeper slopes. The rest of the soils in this group pose erosion risks due to naturally occurring sparse vegetation, often compounded by steep topography. These groups of soils have a moderate to severe hazard rating for erosion/ compaction. The hazard rating for compaction and erosion is variable, but is frequently severe on slopes greater than 35%. Most of these soils are slow to re-vegetate after disturbance due to the extremely limited amount precipitation.[4]

Table 5. Summary of Soils at risk of erosion in the CFO

Soil Series/ Soil Group Name	Elevation	Hazard Rating for Erosion / Compaction
8/Cryoborolls-Cryochrepts-Koffgo	6,000-10,000	moderate to severe, severe on slopes greater than 35%
10/Heathcoat-Escarlo	6,500-7,500	slight to moderate
11/Lag-Lug-Povey	6,000-9,300	slight to moderate
17/Milhi- Lacrol- Kehar	3,900-6,800	moderate to severe, severe on slopes greater than 35%

Threatened/Endangered Plants, Sensitive Plants:

There are no threatened or endangered plant species known to occur within the CFO area. The BLM manages populations and habitats of certain rare plant species designated as "sensitive" to ensure their protection from adverse management actions, as directed by Manual 6480- Special Status Species Management. Table 6 shows the BLM-designated sensitive plant species which are known or suspected to occur in the CFO area and their habitats (BLM 1998). Several of these species are found along or near road cuts, and can be affected by road cutting and filling activities. Sensitive species in the Challis FO are most likely to be threatened by invasive species, road maintenance, gravel pits and OHV use. There are 279 recorded sensitive plant occurrences in the CFO (Idaho Department of Fish and Game 2007), 77 of which occur within 200 feet of existing routes. Challis milkvetch, Lemhi milkvetch, and wavy-leaf thelopody are the major species that occur near existing routes.

[4] The official soil series descriptions from NRCS are available at: http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdname.cgi

Table 6. Special Status Plant Species Identified for the CFO

Scientific Name	Common Name	Habitat
Aster juncifolius	Rush aster	Calcareous wetlands with *Carex aquatilis, C. nebrascensis, C. simulata, C. utriculata*.
Astragalus amblytropis	Challis milkvetch	Steep erosive slopes, little vegetated, south facing, dry.
Astragalus aquilonius	Lemhi milkvetch	Gentle slopes near Challis; also on steep erosive slopes and washes; generally south facing; dry.
Astragalus diversifolius	meadow milkvetch	Alkaline wet meadows
Boutelua gracilis	blue gramma	Open sagebrush communities.
Carex livida	Pale Sedge	Saturated organic soils in peatlands and swampy woods.
Eatonella nivia	White eatonella	Dry sandy or volcanic, mid-elevation desert.
Epipactis gigantea	Giant helleborine	Springside, thermal springs.
Eriogonum capistratum var.*welshii*	Welsh's buckwheat	Alluvial fans of the Big Lost River valley.
Lomatogonium rotatum	Marsh felwort	Spring-fed calcareous headwaters system.
Oxytropis besseyi var. *salmonensis*	Challis crazyweed	Steep to more gentle slopes, generally south facing, or in washes. Usually dry, sparsely vegetated, open communities.
Primula alcalina	Alkali primrose	Spring-fed, calcareous headwater wetland system.
Salix candida	Hoary willow	Spring-fed, calcareous headwater wetland system.
Thelypodium repandum	Wavy leaf thelypody	Steep erosive slopes, little vegetated, south facing, dry.

Tribal Treaty Rights and Present Day American Indian Use:

The Challis Field Office area falls within the traditional occupation area of the Shoshone-Bannock Tribes. The Fort Bridger Treaty of 1868 (15 Stat. 673) specifically reserves the right of the Shoshone-Bannock Tribes to hunt, fish, and gather natural resources located on unoccupied federal lands. Today, members of the Shoshone-Bannock Tribes continue to exercise reserved treaty rights within the CFO area.

The BLM has a Federal trust responsibility to honor treaty rights and to make land management decisions that take treaty rights, treaty resources and other tribal interests into consideration. The CFO's trust responsibility is an undefined principle that does not include protection of tribal property or assets, as Federal courts have ruled that in order for a Federal agency to act as trustee of Indian property, that the agency would have to have a corpus or item placed into or entrusted to its protection. No such trustee relationship exists between the BLM-Challis Field Office and the Shoshone-Bannock Tribes. However, where potential impacts from a proposed project are identified, the BLM has a legal obligation to consult with affected tribes and address those impacts in planning documents and final decisions. Coordination and consultation with potentially affected tribes is an essential step in carrying out the BLM's Federal trust responsibility.

Consultation with the Shoshone-Bannock Tribes regarding the BLM-Challis Field Office Travel Management Plan is ongoing. To date, the BLM has received no response to invitations to the Tribes to participate in the Travel Management Planning process, and no specific treaty right or tribal concerns related to travel management planning or access-related activities have been

expressed by the Tribes. General concerns about maintaining access to all federally managed lands and addressing impacts of transportation activities on cultural resources were expressed by Chad Colter, Shoshone-Bannock tribal member and tribal fisheries director, during a 2006 Idaho Falls District Resource Advisory Committee meeting. Past correspondence from the Shoshone-Bannock Tribes regarding other travel-related projects has indicated specific concern about road densities, elk habitat fragmentation and OHV use to harass wildlife.

Vegetation Resources:
Vegetation on the CFO is divided into upland and riparian/wetland habitat or community types. The Challis Resource Area Final Environmental Impact Statement (BLM 1998) uses the "potential natural vegetation" classification of Kuchler (1964) and describes upland areas in the area as "western shrub and grassland." Both upland and wetland species lists and descriptions can be found in the Final EIS (BLM 1998 pg. 287). Wetland vegetation is discussed under the Riparian/Wetland section of this document. The upland communities on the CFO are primarily big sagebrush plant communities with compositional variation depending on moisture, soil gradients, and grazing use. Deciduous tree and shrub species including aspen, cottonwoods, willows and conifers including Douglas-fir, lodgepole pine, limber pine, whitebark pine are also found. The existing vegetation environment is dynamic, changing with disturbances and climate, the passing of time (succession), and grazing pressure from wild and domestic ungulates.

Roads in the CFO traverse a wide variety of plant community types. Eight general vegetation types have been summarized from the *Blaine, Custer, Lemhi Soil Survey* (SSURGO-GIS database 1986). The number of road (linear, primitive, road) and trail miles in each vegetation type, and density in each vegetation type is summarized in Table 7.

Table 7. Miles and density of existing road, by vegetation type

Existing Environment and Alternative 1	Linear Disturbance [miles]	Primitive Road [miles]	Road [miles]	Trail [miles]	Total [miles]	Area [sq miles]	Density [mi/sq mile]
Wyoming Big Sagebrush	29	958	122	45	1154	516	2.2
Mountain Big Sagebrush	33	237	12	16	298	222	1.3
Low Sagebrush	1	395	14	24	434	170	2.6
Chicken Sage	0	50	13	0	63	19	3.3
Salt Desert Shrub	2	309	49	19	379	139	2.7
Mountain Mahogany	6	42	11	13	72	102	0.7
Forest	8	18	2	5	33	55	0.6
Riparian	1	6	6	4	17	4	4.3
Total	**80**	**2015**	**229**	**126**	**2450**	**1227**	**2.0**

There are 2,450 miles of roads and trails on CFO lands that displace vegetation (preclude vegetation from occupying the same location); this is an average density of 2 miles/square mile of area. Wyoming sagebrush is the predominant vegetation type that 1,154 miles of road traverse and has density of 2.2 miles/sq. mile. Riparian areas have the highest density of roads at approximately 4 miles/sq. mile of riparian area. Forest and mountain mahogany areas have the

lowest density of less than one mile per sq. mile (Table 7). Roads and trails, in addition to displacing vegetation, change soil infiltration characteristics on the roads and adjacent to roads.

Roads and trails are also utilized to facilitate various types of land treatments, such as prescribed burning or weed treatments that are designed to improve vegetation conditions.

Livestock grazing is authorized on 97.3 % of CFO lands and occurs on 64 allotments. Existing roads that serve grazing improvements (fences, watering troughs and pipelines) traverse mostly sagebrush steppe plant communities and are predominately two track (primitive) roads. Rangeland monitoring sites, also called study sites are accessed by roads.

Visual Resources:
Visual Resource Management (VRM) classes found within the CFO are divided into Class I (142,260 acres), II (557,665 acres), and III (92,641 acres). VRM classes are to be managed under the following objectives:

Class I	The Objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.
Class II	Provides for changes in the basic elements (form, line, color, texture) as a result of management activity. These changes should not be evident in the characteristic landscape.
Class III	Provides for visual contrasts caused by a management activity. Such contrasts may be evident but should remain subordinate to the existing characteristic landscape.

Visible human developments include roads, transmission lines, fences, structures, agricultural lands, community sites, and bare ground associated with land disturbing activities.

Water Quality:
The CFO area surface water bodies that exhibit probable excess pollutants were identified by IDEQ in the 1998 Clean Water Act "303(d) list" of water quality-limited streams and water bodies. Subsequently, IDEQ's 2002/2003 Integrated 303(d) / 305 (b) Report, which includes an update of 303(d) listed streams, was approved by the Environmental Protection Agency (EPA) in December 2005, and is synopsized for the CFO area in Table 8 (IDEQ 2002). IDEQ has completed Subbasin Assessments and TMDL documents on streams included in the 1998 303(d) list, as required by the Clean Water Act, for each subbasin within the CFO Area. In these documents, pollutant load allocations were set for selected streams. Table 8 identifies these streams. Note that the whole length of a stream may not be listed or have an assigned pollutant load allocation. Additional review by IDEQ of streams on the 2002/2003 303(d) list is anticipated, as well as changes, additions and some subtractions, to the 303(d) list.

Table 8. 303(d) listed streams in the Challis Field Office

Stream Name (subbasins in bold)	Clean Water Act 303(d) listed 2002/2003	303(d) Pollutant(s) Listed	TMDL Load Allocation(s)	TMDL Pollutant(s)	TMDL Implementation Plan Completed
Pahsimeroi River					
Pahsimeroi River	Yes	Nutrients, temperature	Yes	Sediment, temperature	Yes
Big Creek	Yes	Sediment, Nutrients	No		
Burnt Creek	Yes	"Unknown"	No		
Donkey Creek	Yes	"Unknown"	No		
Goldburg Creek	Yes	Pathogens	No		
Grouse Creek	Yes	"Unknown"	No		
Lawson Creek	Yes	"Unknown"	No		
Meadow Creek	Yes	"Unknown"	No		
NF Lawson Creek	Yes	"Unknown"	No		
SF Lawson Creek	Yes	"Unknown"	No		
Short Creek	Yes	"Unknown"	No		
Little Lost River					
Upper Little Lost River	Yes	"Unknown", temperature	Yes	Sediment, temperature	Yes (by USFO)
Squaw Creek	Yes	"Unknown", temperature	No		
Wet Creek	Yes	"Unknown",	No		
Upper Salmon River					
Salmon River	Yes	Sediment, temperature, pathogens, "unknown"	No		
Allison Creek	Yes	Sediment	No		
Big Lake Creek	Yes	"Unknown"	No		
Broken Wagon Creek	Yes	Nutrients, sediment	No		
Bruno Creek	Yes	"Unknown"	No		
Challis Creek	Yes	Nutrients	Yes	Sediment	No (CFO) Yes (USFS)
Corral Basin Creek	Yes	"Unknown"	No		
East Fork Salmon River	Yes	"Unknown"	No		
Garden Creek	Yes	Sediment, nutrients	No		
Kinnikinic Creek	Yes	"Unknown"	No		
Road Creek	Yes	"Unknown"	No		
Thompson Creek	Yes	Sediment, metals	No		
Squaw Creek	Yes	"Unknown"	No		
Big Lost River					
Big Lost River	Yes	Sediment, nutrients	Yes	Temperature	No
Thousand Springs Creek	No		Yes	Sediment	No

Stream Name (subbasins in bold)	Clean Water Act 303(d) listed 2002/2003	303(d) Pollutant(s) Listed	TMDL Load Allocation(s)	TMDL Pollutant(s)	TMDL Implementation Plan Completed
Twin Bridges Creek	Yes	Sediment, nutrients	Yes	Sediment	No
Willow Creek	Yes	"Unknown"	No		
Warm Springs Creek	Yes	"Unknown"	Yes	Temperature	No

Other monitoring relative to surface water quality in the CFO area includes IDEQ's Beneficial Use Reconnaissance Program (BURP) data, which are published in IDEQ's subbasin assessments. Subbasin assessments completed in the Challis area include: Little Lost River, Pahsimeroi River, Upper Salmon River, and the Big Lost River, and are available at: http://www.deq.state.id.us/water/data_reports/surface_water/tmdls/sba_tmdl_master_list.cfm

On the public lands of the CFO, many travel routes closely follow or cross through surface water such as streams, both perennial and discontinuous. Where roads closely parallel and/or cross stream channels, sediment can be introduced to the channel by road erosion and by tracking through the channel.

Wetlands/Riparian Zones:
Riparian vegetation is generally found in stream corridors, adjacent to springs, or in locations where groundwater closely approaches the land surface. For many portions of the CFO, the riparian stream corridor vegetation is discontinuous, and depends on the frequency and amount of water available. Many tributary streams exhibit intermittent surface water flows due to natural stream losses to the substrate and to irrigation diversion dewatering in lower elevations. Many springs are isolated from other surface waters, exhibiting runoff that experiences total loss to the substrate. Some locations have experienced riparian vegetation impacts from browsing, grazing, and resting by wildlife (mostly ungulate species) and livestock.

On BLM CFO-administered public land many travel routes closely follow or cross through riparian vegetation, both perennial and discontinuous. These routes include motorized routes, which, where fording stream channels, remove riparian vegetation and alter stream banks.

Monitoring of stream functionality has occurred on many CFO streams within grazing allotments using the "Proper Functioning Condition" (PFC) protocol (BLM 1993). PFC includes a riparian inventory of plant community types and hydrologic/stream channel dynamics.

A synopsis of riparian functionality monitoring to 2007 follows:

Table 9. Riparian Functionality Monitoring

2007 Riparian Condition - flowing water (miles)						
Proper Functioning Condition	Functioning at Risk upward trend	Functioning at Risk trend unknown	Functioning at Risk downward trend	Non-Functional	Unknown	Total
130	52	115	16	9	0	322
2007 Riparian Condition – Lakes, Springs and Seeps (acres)						

Proper Functioning Condition	Functioning at Risk upward trend	Functioning at Risk trend unknown	Functioning at Risk downward trend	Non-Functional	Unknown	Total
500	7	23	1	0	177	708

Wild Horse Designated Herd Management Areas (HMA):
The Challis Wild Horse HMA consists of 164,720 acres. The HMA is bordered on the north by the Salmon River, on the west by the East Fork Salmon River, on the south by the ridgeline between Herd Creek and Road Creek, and on the east by U.S. Highway 93 and the watershed boundary between the Salmon River drainage and the Lost River drainage. The southern end of the HMA occurs within the Corral-Horse Basin and Jerry Peak WSAs. The HMA also contains the following ACECs: Lone Bird, Germer Basin/Malm Gulch, Sand Basin, and East Fork Salmon River Bench. About 94% of the HMA is administered by BLM.

Wild horse numbers were set in the RMP at an appropriate management level of 185 animals. The herd is allowed to vary from185 to about 253 animals between gathers. Gathers are conducted every two to four years to remove excess animals.

There are 397 miles of routes within the HMA classified as follows: Primitive roads- 350 miles; roads- 36 miles; and trails- 11 miles. The major routes are Spar Canyon Road and Road Creek Road. Use of the primitive roads and trails occurs primarily during spring and fall, and major use can be tied to antler gathering in the spring and hunting seasons in the fall.

Different bands of horses may react differently to human presence, including vehicles. General observations indicate horses using the Antelope Flat area are somewhat tolerant of humans and vehicles and may stand and watch or move guardedly away without becoming alarmed. Horses occupying other areas are usually somewhat more sensitive to humans and vehicles. These animals are more likely to flee when approached.

Wilderness:
There are seven WSAs in the CFO: Jerry Peak, Jerry Peak West, Corral-Horse Basin, Boulder Creek, Borah Peak, Burnt Creek, and Goldberg. WSAs are managed so as to not impair their suitability for Congressional designation as wilderness. Generally this means no new surface disturbance which would require reclamation or permanent placement of structures is allowed, although existing developments may continue to be maintained. WSAs are managed according to the RMP and the IMP, and BLM pays careful and particular attention to proposals that could limit Congress' ability to designate areas as wilderness. The BLM, therefore, considers proposals in Wilderness Study Areas on a case-by-case basis to determine the potential impacts on wilderness characteristics. When appropriate, protective stipulations, relocations, or redesigns to reduce the effect on wilderness characteristics are considered.

Some lands under wilderness review may contain minor facilities that were found in the wilderness inventory process to be substantially unnoticeable. Examples include primitive vehicle routes (ways) and livestock developments. The IMP does not require such facilities to be removed or discontinued. Initial inventory maps did not depict or describe all of the individual

ways within the boundaries of the WSAs. Based on historic aerial photo analysis, 140 miles of ways were found to have existed in the WSAs managed by the CFO when they were inventoried in 1976. The most recent aerial photo set (2002) shows that 182 miles of ways are currently present within the WSAs. These additional 42 miles of ways represent incremental and unauthorized route extensions which have occurred since 1976.

Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds:
Special Status Terrestrial Species are divided into those covered by ESA, or those animals included on the Idaho-BLM Sensitive Species List. There are three terrestrial species associated with ESA: Canada lynx (*Lynx canadensis*; threatened), gray wolf (*Canis lupus*; nonessential, experimental), and yellow-billed cuckoo (*Coccyzus americanus*; candidate). No designated or proposed "critical habitat" for terrestrial species is present in the CFO.

There are nine Canada lynx Analysis Units (LAUs) comprising a total of approximately 5,500 acres of CFO-administered lands and a designated Canada lynx travel corridor, or linkage area which extends from the Sawtooth National Forest (White Knob Mountains) to the Salmon National Forest (Lemhi Range). All of the LAUs on BLM-administered lands are connected to LAUs on National Forest lands. Based on the Canada Lynx Conservation Assessment and Strategy (LCAS) (Ruediger et al. 2000), BLM-administered lands within the CFO do not provide primary lynx habitat since the forest vegetation is considered "dry site," which lacks adequate components for species reproduction and foraging. No recent lynx presence is on record in any LAU on BLM-administered lands or along the linkage corridor. The IDFG has conducted snow-track route surveys through the Salmon Region office since 2003, including a route initiated in 2004 that is closely associated with the CFO; an additional winter reconnaissance survey was conducted on the Challis National Forest near BLM-administered land. None of the surveyed routes have documented Canada lynx activities.

Four, possibly five, gray wolf packs are distributed across the CFO. These packs, and the "minimum number of wolves believed alive at the end of 2006," are: Buffalo Ridge (6), Morgan Creek (11), Copper Basin (7), Castle Peak (unknown), and the newly identified Pass Creek (6) (USFWS et al. 2007, Nadeau et al. 2007). In 2004, the Buffalo Ridge pack had a den located in the Squaw Creek drainage on BLM-administered land (Township 11N, Range 17E) (Jason Husseman, IDFG, per. comm. 2005). However, in 2005 the den location was moved north onto USFS-administered land. No other denning locations are known to exist on BLM-administered lands. All of the packs except the Pass Creek pack have been subject to reductions in numbers because of livestock depredations or as the result of suspected, unauthorized human-caused mortality (Mack and Holyan 2004, and USFWS et al. 2004, 2005, 2006, 2007).
Suitable habitat for the yellow-billed cuckoo is considered to be a "large block" (a minimum of 25 acres to upwards of 99 acres) of cottonwood canopy and a thick willow understory (USFWS 2001). A document by TREC, Inc. (Reynolds and Hinckley 2005) states that "nesting pairs require a minimum of approximately five acres of *prime* riparian habitat, which…consists of old growth cottonwoods, with a dense understory of willow or dogwood" (emphasis added). This type of habitat is not present in the CFO. The only acknowledged sightings of yellow-billed cuckoo in the CFO area were reported in 2000. Reynolds and Hinckley (2005) reviewed historic records of yellow-billed cuckoo sightings and reported on additional surveys conducted by the authors. The findings in Reynolds and Hinckley (2005) stated that the Challis area sightings

"were probably migrant, vagrant, or transient birds" since the sighting-habitat lacked the "preferred" vegetative composition. The same report, based on more than 100 years of historic records, states that the yellow-billed cuckoo has "never been particularly abundant in Idaho." The yellow-billed cuckoo is not considered further in this EA.

There are 23 terrestrial species on the BLM-Idaho Sensitive Species List (Table 10). Surveys specifically conducted to document the presence or absence of sensitive species have been limited. However, three species have received a relatively high level of attention, the bald eagle, the greater sage-grouse and the pygmy rabbit. Also, peregrine falcon nesting areas are monitored annually.

Table 10. BLM-Idaho Sensitive Species List

Common Name	Scientific Name	General Habitat
Upland		
Pygmy rabbit	*Brachylagus idahoensis*	Sagebrush-grassland
Townsend's big-eared bat	*Plecotus townsendii*	Sagebrush-grassland, caves/mine shafts
Greater sage-grouse	*Centrocercus urophasianus*	Sagebrush-grassland, wet meadows, riparian edges
Prairie falcon	*Falco mexicanus*	Sagebrush-grassland
Ferruginous hawk	*Buteo regalis*	Sagebrush-grassland
Loggerhead Shrike	*Lanius ludovicianus*	Sagebrush-grassland, riparian edges, mountain mahogany
Sage sparrow	*Amphispiza belli*	Sagebrush-grassland
Brewer's sparrow	*Spizella breweri*	Sagebrush-grassland, greasewood
Forest		
Fisher	*Martes pennanti*	Forest
Wolverine	*Gulo gulo luscus*	Mountain forest, scrub and meadows
Northern goshawk	*Accipiter gentiles*	Conifer forest, forest edges, aspen
Flammulated owl	*Otus flammeolus*	Conifer, forest-edge
Calliope hummingbird	*Stellula calliope*	Subalpine forest clearing, brushy edge and alpine meadow
Williamson's sapsucker	*Sphyrapicus thyroideus*	Open conifer forest
Olive-sided flycatcher	*Contopus borealis*	Conifer forest and adjacent riparian habitats
Hammond's flycatcher	*Empidonax hammondii*	Conifer, high elevation
Riparian		
Bald eagle	*Haliaeetus leucocephalus*	Cottonwood, riparian
Trumpeter swan	*Cygnus buccinator*	Marshes, lakes, rivers
Lewis' woodpecker	*Melanerpes lewis*	Cottonwood-riparian
Willow flycatcher	*Empidonax trailii*	Riparian
Common garter snake	*Thamnophis sirtalis*	Riparian
Western toad	*Bufo boreas* (northern Rocky Mtn group only	Riparian
All		
Peregrine falcon	*Falco peregrinus anatum*	All types

The bald eagle was officially removed from the Endangered Species List in 2007, but the bird remains a BLM Sensitive Species, subject to additional monitoring and protections under the Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act. In coordination with the federal delisting of the bald eagle, the USFWS provided G*uidelines* for the continued protection of bald eagles from human induced disturbances (USFWS 2007). The focus was on impacts to nesting sites, though disturbances to foraging activities are also "prohibited." The direction from the *Guidelines* in determining a proper protection buffer is to "follow the

recommendations for the most similar activity represented." In this case, the minimum distance for non-motorized activities appears to be 330 feet, and 660 feet for motorized.

There are five bald eagle nesting territories within the CFO; one was newly occupied in 2007, two were newly identified and occupied in 2006, one was established in 2004 and occupied in 2006, and one was found in 2005 but has not been considered "active" in 2005, 2006 or 2007. Three active nests produced six young in 2006 (Waterbury 2006[a]), and the new nest in 2007 fledged one young; IDFG has not reported other results for 2007.

Bald eagle activities also are observed along the Salmon River (main and East Fork) and the Pahsimeroi River during the late fall to early spring, but principally during the winter. These bald eagles generally utilize cottonwoods and cliffs immediately along the rivers although conifers may provide perch or roosting sites with additional thermal protection. The birds principally forage on fish and waterfowl but also feed on animals that are winter-killed or vehicle mortalities. Each year, a mid-winter bald eagle census is conducted within the CFO area along the main Salmon River, the East Fork Salmon River and the Pahsimeroi River; the 2008, 2007 and 2006 results were 134, 67 and 81 bald eagles, respectively.

The majority of the CFO is currently identified as "key" greater sage-grouse breeding habitat according to data provided by the IDFG. However, all seasonal habitats are present within the CFO and birds are observed year-round. Since 2000, nearly 40 greater sage-grouse strutting grounds (leks) have been identified around the CFO, often in close proximity to two-track roads. It is generally recognized that leks are most often present where primary sage-grouse nesting habitat also is present; therefore, given the number of leks around the CFO, the availability of suitable nesting habitat appears to be good. Many leks are monitored annually in the spring to record the bird numbers (generally males); the highest male count recorded at a single lek was 109 males in 2003 at a location in the Pahsimeroi Valley. Efforts are made each year to locate new leks. Studies or monitoring are on-going (by BLM and/or IDFG) to evaluate greater sage-grouse habitat or to investigate greater sage-grouse reproductive success or survival.

Evidence of pygmy rabbit activities has been documented in many areas of the CFO. Surveys have been more intensive in the Pahsimeroi Valley, Thousand Springs/Big Lost drainage, and some areas north of Willow Creek Summit and west of US Hwy 93 where more historic populations exist or where potential suitable habitat has been identified (Roberts 2001 and Waterbury 2006[b]). While most of the confirmed sightings have involved a single observation, a few have been relatively extensive. Efforts to identify new activity sites are on-going and it is likely that pygmy rabbits will be located in previously undocumented locations. Pygmy rabbits have highly specialized habitat requirements, and suitable habitats are often in relatively small "pockets" which can be easily impacted.

Four peregrine falcon territories in the CFO were monitored in 2006; one of these was newly identified and one was unoccupied for the second consecutive year. Three young of near fledging age were observed at each of the two "historic" territories; both of these territories had new eyries in 2006 (Waterbury 2006[c]), and both have very restricted accessibility. Monitoring of known territories occurs annually and searches for new, occupied territories is on-going in

conjunction with other fieldwork, or by IDFG as funding is available. The IDFG has not reported 2007 results.
The only other specifically targeted sensitive species surveying is for forest predators, i.e., fisher and wolverine, and this surveying is conducted as part of the IDFG snow-track efforts, which is not on BLM-administered lands. Neither of these species is documented on BLM-administered lands.

Eleven sensitive species birds, in addition to the three previously mentioned, have been documented in the CFO as part of a survey of selected riparian areas in the Pahsimeroi Valley (Roberts 1999), a survey of the Chilly Slough Wetland Conservation Area (Yeo 2002), and as identified in the U.S. Geological Survey, Breeding Bird Surveys for 2005 and 2006 (USGS 2006): trumpeter swan, prairie falcon, ferruginous hawk, northern goshawk, calliope hummingbird, Lewis' woodpecker, olive-sided flycatcher, willow flycatcher, Hammond's flycatcher, Brewer's sparrow and sage sparrow.

The Roberts (1999), Yeo (2002) and USGS (2006) reports tally nearly 140 migratory avian species that have been observed across the CFO area. While many of these species are strictly migrants, many are considered to utilize the diverse habitats within the CFO for reproduction. Svingen and Dumroese (1997) wrote that "134 bird species [have been] recorded at Chilly Slough." All of these reports are area-specific, and there are numerous habitat-types (including vegetation, terrain and elevation) and locations that are not accounted for in the surveys. Therefore, it is reasonable to conclude that more avian species could be present than are documented by these reports.

Nine osprey (*Pandion haliaetus*) platforms are monitored annually around the CFO; these platforms are on private lands but activities associated with BLM-administered parcels may influence nesting or foraging behaviors. In 2007, six of nine sites were occupied and a total of 14 young were fledged (Waterbury per. comm. 2007).

The CFO area includes habitats for five ungulate big game species: Rocky Mountain elk (*Cervus elaphus*), mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra americana*), Rocky Mountain bighorn sheep (*Ovis canadensis*), and moose (*Alces alces shirasi*). In cooperation with IDFG, the RMP identified winter range and designated "crucial" winter range for each of these big game species except for moose. The quantities of each type of winter range, for each species is listed in Table 11; in some cases the winter range incorporates crucial winter range so that the total of the winter ranges is not additive.

Table 11. Big Game Winter Habitats

Species	Winter Range (acres)	Crucial Winter Range (acres)
Rocky Mountain elk	250,865	54,740
Mule deer	251,557	137,453
Pronghorn Antelope	256,024	96,174
Rocky Mountain bighorn sheep	88,423	28,338

Additional considerations for big game habitats are specifically provided in three ACEC's: Birch Creek for bighorn sheep lambing, Cronk's Canyon for bighorn sheep, and Donkey Hills for elk calving. Motorized vehicle restrictions apply.

The avian studies previously mentioned also identified some birds that are considered year-long residents, i.e., dusky grouse (*Dendragapus obscurus*) (formerly blue grouse), chukar (*Alectoris chukar*), downy woodpecker (*Picoides pubescens*), hairy woodpecker (*P. villosus*) and pileated woodpecker (*Dryocopus pileatus*). As was noted previously, the number of species present likely exceeds what is currently documented.

Documentation on the diversity of terrestrial wildlife throughout the CFO is generally limited to incidental observations as few formal records are kept except for those species which might be harvested (trapped) under IDFG license or permit, or removed by Wildlife Services (USDA/Animal and Plant Health Inspection Service). The following Table lists a few of the terrestrial mammal species which could be present around the CFO and that have not been mentioned previously.

Table 12. Potential Mammals around the CFO

Common Name	Scientific Name	Common Name	Scientific Name
Mountain cottontail	*Sylvilagus nuttallii*	Deer mouse	*Peromyscus maniculatus*
Snowshoe hare	*Lepus americanus*	Meadow vole	*Microtus pennsylvanicus*
White-tailed jackrabbit	*Lepus townsendii*	Sagebrush vole	*Lemmiscus curtatus*
Black-tailed jackrabbit	*Lepus californicus*	Porcupine	*Erethison dorsatum*
Least chipmunk	*Tamias minimus*	Coyote	*Canis latrans*
Wyoming ground squirrel	*Spermophilus elegans*	Red fox	*Vulpes vulpes*
Red squirrel	*Tamiasciurus hudsonicus*	Black bear	*Ursus americanus*
Northern pocket gopher	*Thomomys talpoides*	Marten	*Martes americana*
Beaver	*Castor canadensis*	Stripped skunk	*Mephitis mephitis*
bobcat	*Felis rufus*	Mountain lion	*Felis concolor*

Among the Alternatives there are ten route specific areas where modifications to the existing status may occur, i.e., a revised designation, new construction, closure, etc. The known wildlife situations within these route specific areas are identified in the following discussion; because of the dynamic nature of wildlife it is likely that species may be present that are not discussed.

French Creek - The area of the proposed route connection, including the actual route, is in designated mule deer crucial winter range which extends up French Creek to the USFS boundary. Elk winter range also encompasses portions of French Creek but not the specific proposed route connection.

North Fork of Birch Creek - The proposed route is through mule deer and elk winter range (not designated crucial). However, the eastern point of the proposed route does connect to an existing road/trail which runs through designated mule deer crucial winter range; it would be necessary to traverse the existing route to either gain access to the proposed route, or to exit the proposed route headed east. The proposed route comes within <0.5 mile of designated bighorn sheep crucial winter range, and also borders the Birch Creek ACEC which was established for the protection of the bighorn sheep in the area. The terrain along the proposed route is steep and therefore is highly desirable for both bighorn sheep and elk use. The area around Bayhorse is within the Bayhorse-Kinnikick LAU.

Birch Creek - The proposed route is in bighorn sheep, mule deer and elk winter range, as well as the Birch Creek ACEC. There is a direct connection between the proposed route and designated crucial winter range for both bighorn sheep and mule deer to the east. The Birch Creek ACEC provides year-round habitats, including parturition for the bighorn sheep population; there is a winter season closure from December 16 through April 30, inclusive, but the ending of the closure precedes much of the lambing period. As identified with the North Fork of Birch Creek, the topography is an important consideration on habitat suitability, especially in providing escape areas for the bighorn sheep from predators; however, the proposed route is in the drainage rather than across any ridgelines so human travel would be "below" rather than "above" big game species. The BLM has been involved in bighorn sheep habitat improvements in the Birch Creek drainage. The west terminus of the proposed route connects with the Bayhorse-Kinnikick LAU.

Malm Gulch Area - This area is in mule deer winter range (not designated crucial). The nearby connected routes do not incorporate any other identified winter habitats. However, the IDFG greater sage-grouse map (2004) identifies this area as "key" greater sage-grouse habitat; the closest greater sage-grouse lek is approximately 2.5 miles to the eastern of the closest point to the Malm Gulch/Germer Basin ACEC/RNA.

Bear Creek - The area of the proposed closure is in bighorn sheep, elk and mule deer winter ranges (no designated crucial), and forms part of the Morgan Creek gray wolf pack territory.

Challis to LOYF Interpretative Center - The proposed route extends slightly into mule deer crucial winter range (approximately 400 feet) in T. 13 N., R. 19E., Section 5. The route through T. 13 N., R. 19E., Sections 4 and 9 extends along the eastside and at the foot of a ridgeline where bald and golden eagles are known to perch during the winter while feeding on carrion at the dead animal pit of the Challis waste transfer site which lies to the west of the ridge. The food source at the transfer site is "artificial" and the availability of carrion is unreliable, much like roadkill. The annual (January) mid-winter eagle survey documented the following number of eagles in association with the transfer site: 28, 12, 6 and 22 for 2005, 2006, 2007 and 2008, respectively. The proposed route is well below (rather than above) the perching locations.

Although not in identified elk winter range, the northeast facing slope (generally the NE1/2 of Section 4) is often utilized by foraging elk. The area of the proposed route lies between the Morgan Creek and the Buffalo Ridge gray wolf pack territories and it is possible that the elk, which are the primary prey of wolves, are foraging here because of the reduced pressure from wolves. Gray wolves have been observed in T. 13 N. R. 19E., Sections 4 (SW1/2) and 5, specifically where the proposed route runs north of the access road to the transfer site.

Challis Golf Course Area - The area includes mule deer winter ranges (typical and designated crucial) in T.13N., R.19E, Sections 6 and 7. The area is lower elevation terrain that may provide the early green-up grasses and forbs that are critical to post-winter survival and late-term fetal development.

Keystone Road - The area incorporates portions of the Bayhorse-Kinnikick LAU, and is in the Buffalo Ridge gray wolf pack territory (no denning locations have been identified in the area). While the area contains identified mule deer winter range (not designated as crucial), the isolated nature of the existing area helps to make it highly suitable for fawning/calving. The proposed route connects to areas of the Birch Creek drainage (see both the North Fork of Birch Creek and the Birch Creek discussions above).

Blaze Canyon Area – This area is in mule deer designated crucial winter range and borders elk designated crucial winter range. While the specific proposed routes do not include pronghorn antelope winter ranges (typical or designated crucial) or elk "typical" winter range these routes do connect with other existing roads/trails that involve these winter ranges. All of this lower elevation area can be considered as transition range which provides early spring green-up vegetation that can be critical to post-winter survival and late-term fetal development. The 2004 IDFG sage-grouse habitat map identifies this area as "key" greater sage-grouse habitat. However, the closest known greater sage-grouse lek is >4.0 miles. It is likely, but unconfirmed, that 1) potential suitable nesting habitat is present in some areas based on the vegetation, and 2) the Big Lost River and some of the irrigated fields could provide late brood-rearing habitat. Specific surveys for pygmy rabbit activities have not been conducted along the proposed routes but the soil-type and vegetation could provide suitable habitat.

Challis Day Use Site - The area around the Challis Bridge Day Use Site is not designated as a mule deer winter-use area but it is highly utilized by mule deer in the fall and winter seasons, even with the adjacent highway.

The Day Use Area/gravel pit lies adjacent to the Salmon River and has a cottonwood gallery which can be used by wintering bald eagles. No nesting bald eagles have been observed within 3.0 miles of this site but sufficient nesting structure exists along the Salmon River, including around the Day Use Area to provide opportunities for future nesting sites.

ENVIRONMENTAL IMPACTS OF ALTERNATIVES

Environmental Impacts Common to All Alternatives:

Fisheries/Threatened/Endangered/Sensitive Fish:
Management of existing roads, with respect to OHV use, is addressed at the field office scale in the Challis Resource Area Record of Decision and Resource Management Plan (BLM 1999). Direct effects to fisheries are described under each alternative's impact analysis in a route specific manner, below.

Indirect effects (common to all alternatives) to listed fish/habitat associated with new ground disturbance or increased use of existing roads and trails, regardless of travel mode, are similar to direct effects, except that a well-defined source is not identified. For example, upslope disturbance from increased use of a road or trail could introduce fine sediments into a stream in a diffuse and undetectable manner. If additional sediment input exceeds that which can be carried normally by the stream as bed load then TES fish and associated critical habitat may be adversely affected. The probability of habitat loss through this type of non-point-source sediment input occurring increases with presence of erosive soil types and impaired riparian buffers. Conversely, any measure that reduces ground disturbing activity (e.g. seasonal closures, OHV size restrictions, improved trail design, and etc.) could benefit TES fish and associated critical habitat.

Vegetation Resources:
The deposition of fine particulate dust on vegetation from windblown dust or from road created dust affects the physiological performance of plants (Sahrifi et al. 1997 and reference within). Heavily dusted desert shrubs have been shown to reduce photosynthesis, leaf conductance, transpiration and water efficiency (Sahrifi et al. 1997). While this study was conducted in a California Desert environment, the physiological effects are likely to be similar in other arid and semiarid zones because of the common mechanisms of gas exchange in plants (Sahrifi et al. 1997). Accumulated leaf dust has also been shown to result in an increase of 2-4 deg. C in leaf temperature (Eller 1997) also resulting in a lower rate of photosynthesis. While the physiological impacts of dust on plants has short-term effects (i.e., until it rains) of reduced water use efficiency and photosynthetic rates, it may have long term effects on shrub vigor and production (Sahrifi et al. 1997). This has been quantified by reduced leaf area (Sahrifi et al. 1997).

Surface dusting of plants would depend on the frequency of travel and speed of travel on roads. ATV trails that are near communities and promoted by communities would be expected to have higher use rates, and therefore dust deposition rates greater than less traveled remote roads or primitive roads.

Water Quality:
Management of existing roads, with respect to water quality, is addressed at the field office scale in the Challis Resource Area Record of Decision and Resource Management Plan (BLM 1999). Direct effects to water quality are described under each alternative's impact analysis in a route specific manner, below. Indirect effects to water quality with new ground disturbance or

increased use of existing roads and trails, regardless of travel mode, are similar to direct effects, except that a well-defined source is not identified. For example, upslope disturbance from increased use of a road or trail may eventually introduce fine sediments into a stream in a diffuse and undetectable manner. The process may take an extended period of time but once in-stream, effects are the same as for point source sediment introductions. Fine particles stay suspended longer and reduce sunlight penetration. Heavier particles settle and over time may exceed what can be carried as bed load, resulting in aquatic habitat alteration. The probability of water quality degradation and habitat loss through this type of non-point-source sediment input occurring increases with presence of erosive soil types and impaired riparian corridors.

Riparian and Wetland Areas:
Management of existing roads, with respect to riparian and wetland areas, is addressed at the field office scale in the in the Challis Resource Area Record of Decision and Resource Management Plan (BLM 1999). Direct effects to riparian and wetland areas are described under each alternative's impact analysis in a route specific manner, below.

Riparian and wetland areas create complex habitat for plants and wildlife while regulating hydraulic energy and providing water filtration. Because of their complexity and importance, seemingly minor alterations in their size, shape, continuity, and plant assemblages often results in gross changes down stream. Effects to riparian and wetland areas may be seen both downstream (erosion and sedimentation) and upstream (stream head-cutting and down-cutting). Increased turbidity and water velocity are common indications of up stream riparian/wetland alteration. Many of the techniques used to mitigate effects of riparian and wetland alteration or loss (bank armoring, levees, weirs, dams, etc.) often result in downstream deferment of problems.

Riparian/wetland alteration and loss also produces effects lacking obvious cause and effect (i.e. indirect). For example, upslope disturbance from construction or increased use of a road or trail may eventually introduce fine sediments into a wetland or riparian area. If the area lacks the capacity for storage, sediment entry into the stream goes un-metered. The effect is combined with those obviously related to onsite disturbance. Separating direct from indirect affects differs with detectability while results remain similar.

Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds:
An extensive literature search was conducted to ascertain how wildlife in general may be affected by the transportation elements being considered in this EA, i.e., roads, trails, ATVs, non-motorized conveyance, and by human-wildlife interactions; greater than 100 articles (from abstracts to entire reports) were reviewed. An extensive analysis of these articles is included in *Attachment 4*.

Where roads and trails exist there is the potential for effects to all wildlife species: (1) that are sensitive to roads or trails, (2) that encounter human activities within a distance that causes the animal to react in a manner which imposes a physiological change, i.e., increased heart rate, metabolic stress, (3) where an animal chooses to flee, flush, or abandon an area or nest as the result of human presence or activity on a road or trail, or (4) from human activities which alter an animal's behavior which is biologically necessary for survival or reproduction, i.e., feeding,

resting, mating, calving/fawning, etc. Areas most closely associated with winter ranges, including those areas which function as seasonal transition ranges, are critical to over-winter survival as animals attempt to replenish the depleted body fats, and for the nutritional needs of females in the final term of gestation.

The actual degree of impacts to wildlife are 1) dependent on the type of disturbance, e.g., ATV, horseback, foot traffic, 2) directly related to the amount of traffic, e.g., more traffic likely results in more disturbance, and 3) a function of the season-of-use, e.g., impacts during winter may have a greater affect on the animal physiology.

Routes and areas seasonally closed under the existing RMP for the protection of wildlife likely would continue to function as intended. However, wildlife species or individual animals that are specifically sensitive to the presence of roads or trails may continue to avoid potentially suitable habitats due to the mere presence of those roads or trails. Cross country, non-motorized use could impact wildlife as noted above since the situation continues to exist for human-wildlife interactions.

The actual method elected for a road closure could determine the ultimate benefit for wildlife. For example, "signing, with natural rehabilitation" will only be as good as the willingness of the public to properly observe the closure, and to the extent that said road is capable of natural revegetation/rehabilitation; the latter is likely to take many years. In fact, all of the methods of road closure are reliant upon the public to recognize that a closure is for resource protection or, in the case of wildlife, for the viability of various wildlife populations. Where road closures help to reduce "road density" in areas of high wildlife habitat values, a positive response by wildlife could be immediate due to the elimination of human-related disturbance. However, it is likely that any appreciable change and recurrent wildlife occupation would take years, and species that are subject to the physical nature of a road or trail would be slower to respond.

Environmental Impacts of Alternative 1:

Areas of Critical Environmental Concern and Research Natural Areas:
Under Alternative 1, roads identified for closure in the RMP would be formally closed in ACEC/RNAs and thereby would allow vegetation to colonize old road beds. We anticipate no other impacts to ACEC/RNAs that differ from the existing environment other than an increase in frequency of use as the county population grows.

There are four ACECs that specifically identify wildlife resource values associated with a parcel: Birch Creek and Cronk's Canyon for bighorn sheep, Donkey Hills for elk, and Thousand Springs for waterfowl. Under Alternative 1, impacts to these specific wildlife species would be as described previously under the *Impacts Common to All Alternatives* Wildlife section and as noted under the *Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds* section below**.**

The Lone Bird ACEC was designated to protect unique cultural resources and plants. Alternative 1 is unlikely to cause direct or indirect effects to historic properties located within the Lone Bird ACEC. Formal closure of specific routes identified in the RMP would help protect

the cultural resources for which the ACEC was designated. Indirect effects to cultural resources through soil compaction and erosion would be reduced. Closure of specific ACEC routes would be reviewed by the BLM archaeologist on a case-by-case basis prior to implementation to assess the potential effect of the proposed activity on historic properties, in compliance with the National Programmatic Agreement and Section 106 of the NHPA. If cultural resources are found to exist in the area, the Challis Field Office archaeologist, in consultation with the Idaho SHPO, travel managers and other interested parties would consider a variety of mitigation measures so there would be no effect to historic properties.

Cultural Resources:
Under Alternative 1, no changes to current management of the CFO's roads and trails would take place. Alternative 1 is unlikely to cause direct or indirect effects to historic properties, as allowing continued use of existing routes would not appreciably change current OHV use and associated impacts. Formal administrative closure of specific routes identified in the RMP, as well as unauthorized routes within WSAs, likely would have a beneficial effect to historic properties for the reasons detailed in the RMP (BLM 1999). Undertakings proposed to close specific routes as well as unauthorized routes created within WSAs would be assessed prior to implementation by a BLM archaeologist for their potential effect on historic properties, in compliance with the National Programmatic Agreement and Section 106 of the NHPA. If cultural resources were found to exist in the area, the CFO archaeologist in consultation with the Idaho SHPO, travel managers, and other interested parties would consider a variety of mitigation measures so that no undertaking would adversely affect historic properties.

Economic and Social Values:
Under this alternative there would be no change from present management to the Economic and Social values of the CFO area.

Fisheries/Threatened/Endangered/Sensitive Fish:
Alternative 1 is expected to produce no new adverse effects to federally protected fish species and associated critical habitat on BLM CFO-managed land. Some net benefit to threatened, endangered, sensitive (TES) fish and associated critical habitat may result from road closures. Also, a net benefit to TES fish and associated critical habitat may result from implementation of actions common to all alternatives (described above).

Invasive, Non-native Species:
There would be very little effect on the management, spread, or introduction of invasive species under this alternative. Formal closure of identified routes within ACEC's and unauthorized routes in WSA's would reduce the chance that invasive species would be introduced by motorized travel along these routes.

Recreation Use, Existing and Potential:
Under this alternative there would be no change to the recreational opportunities, experiences, or benefits available in the CFO area.

Soils:

Implementing RMP management actions are not expected to stop soil erosion, but rather to minimize the threat of accelerated erosion through improved management of vegetation, biological soil crusts, soil cover, and surface disturbing activities. Some site-disturbing activities such as road construction would cause an irretrievable commitment of soil resources on a localized basis. Road and trail design and management actions intended to protect vegetation and other resources would improve soil stability, condition, and trend. Improved upland and riparian conditions would have immediate and sustained soil stabilizing effects. Susceptibility of soils to compaction, erosion, and the disruption of biological soil crusts would receive greater consideration when planning resource activities.

Under this alternative a total 123.06 miles of roads and trails on Public Lands would be available for public travel uses on soils at risk for erosion, not including Non-BLM routes (county and state highways). The acreage of these routes is approximately 4,081 acres, or about ½ of one percent of the total CFO area.

Threatened/Endangered Plants, Sensitive Plants:
Under this alternative there would be 75 recorded sensitive plant locations within 200 feet of routes. Impacts to sensitive plant species would occur mostly through closure of routes identified in the RMP that traverse ACECs. Several ACECs and the resultant road closures were identified due to the presence of sensitive plant species. Implementing protective measures from the RMP would benefit these plant species by reducing the chances of being driven over, impacted by road maintenance, or invasive species introduction from motorized use.

Tribal Treaty Rights and Present Day American Indian Use:
Under Alternative 1, no changes to current management of the CFO's roads and trails would take place. The formal closure of unauthorized routes within WSAs would limit motorized and mechanized access in these areas, but access via non-motorized, non-mechanized means would still be allowed. RMP-designated road closures within ACECs would also limit motorized access, but access into these areas via non-motorized means would still be allowed. There would be no impacts to the treaty rights of the Shoshone-Bannock Tribes, as motorized use is not a reserved treaty right, and all reserved rights that currently apply to these lands would remain intact.

Vegetation Resources:
Under this alternative, roads officially closed in WSAs and ACECs and RNAs, would be expected to be colonized by vegetation. The official closure of roads classified as 'linear disturbance' would decrease the miles of road by approximately 3%. No other change to the existing environment would be expected.

Visual Resources:
Under this alternative there would be no immediate contrasts to the characteristic landscape in the CFO area. However, as routes which must be closed due to existing RMP limitations and WSA mandates begin/continue to rehabilitate, there would be some weak contrasts, primarily to the vegetative component of the landscape, over time.

Water Quality:

Both perennial surface water and channels exhibiting intermittent or ephemeral surface flows may experience sediment delivery from fine material generated from use of existing roads, trails, and stream crossings. However, some slight net benefit to water quality may result from road closures under this alternative. Also, a net benefit to water quality is may occur as a result of implementation of actions common to all alternatives (described above).

Wetlands/Riparian Zones:
Riparian and wetland alteration, through continued use of existing roads, trails, and stream crossings may occur under this alternative. However, some net benefit to riparian and wetland areas may result from road closures proposed under this alternative. Also, a net benefit to wetland and riparian zones may occur as a result of implementation of actions common to all alternatives (described above).

Wild Horse and Burro Designated Herd Management Areas:
Under this alternative there would be approximately 328 miles of routes within the HMA, classified as follows: roads- 36 miles; primitive roads -279 miles; and trails- 13 miles. There would be fewer disturbances to wild horses by motorized use in the Corral/Horse Basin and Jerry Peak WSAs and the Malm Gulch, Germer Basin, and Lone Bird ACECs.

Wilderness:
Under Alternative 1 there would be no change to the legal route system within the WSAs. However, this alternative would formally acknowledge those routes which have incrementally developed within the WSAs since the time of initial inventory and close them to motorized and mechanized use. Across the 140,260 acres of WSAs in the CFO, this would formally close approximately 42 miles of unauthorized routes. This alternative would help restore the WSAs to their original inventory condition, improving the naturalness and reducing the evidence of human activity in areas where vehicle ways have encroached over the past three decades. Under this alternative, the ability of Congress to designate these areas as wilderness would not be impaired.

Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds:
Impacts under Alternative 1 would be the same as identified under Impacts Common to All Alternatives.

Cumulative Effects
Cumulative effects for Alternative 1 are considered for each resource and analyzed in the Cumulative Effects section following "Environmental Impacts of Alternative 3."

Environmental Impacts of Alternative 2:

Areas of Critical Environmental Concern and Research Natural Areas:
Impacts to the ACECs/RNAs would be the same as described under Alternative 1 except as noted below.

The North Fork of Birch Creek motorcycle trail that is proposed to become an ATV trail would likely increase visitor access to the Birch Creek ACEC. We assume more visitors would travel on ATVs than on motorcycles because ATVs are experiencing greater registration increases than

motorcycles. Crucial winter range and lambing habitat for bighorn sheep and rare plants are the resource values for which the ACEC was established and designed to protect. Additional information is available in the Wildlife section.

Under Alternative 2, cultural resource values for which the Lone Bird ACEC was partially designated would be further protected from direct and indirect impacts. The system of roads and trails depicted in the 2006 CFO Travel map would be designated as open, and travel restrictions defined in the RMP would be retained and enforced. Motorized travel would be allowed only on roads and trails designated as "open."

Resource values for which the Malm Gulch/Germer Basin ACEC/RNA were established would be compromised by allowing ATVs to ride in the wash (gulch) and would require a Land Use Plan amendment to allow such action. Fragile volcanic soils could be displaced, the wash channel shape could be altered and compaction could occur if ATV use were to be allowed in the wash. Physical and biological soil crust could be destroyed thereby changing water infiltration rates, increasing wind erosion, and changing soil stability (USDA-NRCS 2001). The already unpredictable nature of cutting and deposition in the wash could thereby be exacerbated by allowing ATV use. Unauthorized use of ATVs on wash banks and movement out of the channel onto native vegetation could result in impacts to the four BLM sensitive plant species (Elzinga 2003) that occur in this area: Challis crazyweed (*Oxytropis besseyi var. salmonensis*), Challis milkvetch (*Astragalus amblytropis*), Lemhi milkvetch (*Astragalus aquilonius*), and wavy leaf thelypody (*Thelypodium repandum*). Two species, Challis crazyweed and wavy leaf thelypody have been observed in the main Malm Gulch wash (Perkins pers. observation May, 2005). The Conservation Assessment and Conservation Strategy for Wavy Leaf Thelypody (Elzinga 1996) identified 'problems facing the species' and 'actions to reduce or remove known threats'. Road maintenance and reconstruction, OHV use, and weed infestation and control have been outlined as threats although the extent of the risk to wavy leaf thelypody populations is largely unknown (Elzinga 2003). Wavy leaf thelypody is found on slopes that naturally experience disturbances due to steepness and low vegetative cover. It is the rarest of a suite of species endemic to the area around Challis (Elzinga 1996). It is probable that allowing ATV's in the Malm Gulch wash would contravene Goal 2 of Special Status Species, Challis RMP: *Maintain populations of special status species and/or their habitat over the range of natural distribution and habitat condition. Eliminate the need for listing of sensitive and candidate species and contribute to recovery of listed species by increasing the number or size of populations or* ***by removing threats to species and their habitats*** [emphasis added].

There are four ACECs that specifically identify wildlife resource values associated with a parcel: Birch Creek and Cronk's Canyon for bighorn sheep, Donkey Hills for elk, and Thousand Springs for waterfowl. Under Alternative 2, impacts to these specific wildlife species would be as described previously under *Impacts Common to All Alternatives* Wildlife section and as noted under Alternative 2: *Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds* section to follow for General Principles and Criteria, and the actions pertaining to the following: North Fork of Birch Creek, Birch Creek, Challis to Land of the Yankee Fork Interpretative Center, Challis Golf Course Area, and Keystone Road**.**

Cultural Resources:

Designation of a purposefully designed and clearly delineated travel network for OHV use, as proposed in Alternative 2, would reduce potential impacts to cultural resources by eliminating proliferation of user-defined roads and trails. All route changes or improvements (i.e., new routes, re-routes) proposed under Alternative 2 would be reviewed by the BLM archaeologist on a case-by-case basis prior to implementation to assess the potential effect of the proposed activity on historic properties, in compliance with the National Programmatic Agreement and Section 106 of the NHPA. If historic properties are found in the area, the Challis Field Office archaeologist in consultation with the Idaho SHPO, travel managers, and other interested parties will consider a variety of mitigation measures so that no undertaking would adversely effect historic properties.

Economic and Social Values:

Though the U.S. Census Bureau reports that the population of Idaho increased by about 13.3% between 2000-2006, IDPR noted in a scoping letter[5] that registrations for motorbikes and ATVs in Eastern Idaho increased by 120% between 2001-2005. The same letter also noted a 2004 IDPR survey showing that 52.4% of Idahoans participated in OHV recreation. The inclusion of an alternative that recommends the creation of community-based trails, which would require a land use plan amendment, could increase opportunities for businesses wishing to expand into ATV/bicycle/motorcycle sales, rentals and service, or an influx of out-of-area residents wishing to relocate to take advantage of nearby trails. This effect could vary depending on the success or failure of such initiatives as the IDPR-proposed state park or future interest in the previously-proposed IDPR Lost River Trail project.

County emergency services would be expected to be impacted by potential ATV accidents on newly created trails. Depending on terrain, narrow ATV trails (approx. 48" wide), may preclude entry by traditional ambulances and 4-wheel drive emergency vehicles, which under these circumstances could cause costs to emergency services to increase. A possible benefit of community-based trails would be the increase of trails closer to towns and more convenient to emergency services.

Fisheries/Threatened/Endangered/Sensitive Fish:

General/Landscape Level Considerations:

Aligning BLM and USFS Route Designations – The potential for negative affects to federally protected fisheries and associated critical habitat is discountable as a result of this alternative. TES fish and associated critical habitat could benefit from consistency in route designations through a decrease in accidental unauthorized travel in sensitive areas.

Conscious Design – The probability that the alternative would produce negative effects to federally protected fisheries and associated critical habitat is discountable. TES fish and associated critical habitat could benefit from design criteria that include protective measures, associated with conscious design.

SRMAs - The development of community trail based Special Recreation Management Areas around the towns of Mackay and Challis for the purpose of recreational access may affect

[5] Scoping letter dated November 28, 2006 from Jeff Cook, IDPR.

federally protected fisheries or associated critical habitat. Consultation with the Services would be implemented as necessary on a case-by-case (route specific) basis.

Route Specific impacts to Fisheries, T/E/S Fish:

French Creek: French Creek possesses westslope cutthroat trout and along with the Salmon River is designated critical habitat for steelhead trout and Chinook salmon, to the point of a natural barrier to fish passage. The mainstem Salmon River is also designated critical habitat for sockeye salmon. Therefore, development of an ATV route to the southwest of private lands at the mouth of French Creek may negatively affect BLM sensitive species and associated critical fish habitat. Negative effects could stem from sedimentation and or physical redd disturbance from route construction and or ATV use. Consultation with the Services would be required under this alternative.

North Fork Birch Creek: The North Fork of Birch Creek does not possess federally protected fish species nor is it designated critical habitat for listed fish species according to the current Challis Geographic Information System (GIS) fisheries database (2003). From the eastern border of sections 13 and 14 (T 13 N, R 18 E) the North Fork of Birch Creek runs approximately 1.8 miles before entering Birch Creek. Birch Creek is listed as "unknown" for the presence of federally protected fish species in the database but constitutes critical habitat for steelhead trout and salmon from its confluence with the Salmon River to the first natural migration barrier. Birch Creek runs approximately 2.8 miles between the North Fork of Birch Creek and the Salmon River. Given the lack of federally protected species and the distance from designated critical habitat, the probability for negative effects to listed species from the conversion of the existing motorcycle trail to an ATV trail here are discountable. Maintenance of a 300 foot buffer from waterways and implementation of sediment reducing BMPs during construction would ensure protection of downstream critical habitat.

Birch Creek: As stated above, Birch Creek is listed as "unknown" for the presence of federally protected fish species in the Challis Field Office's (CFOs) GIS fisheries database. Birch Creek is designated critical habitat for steelhead trout and salmon from its confluence with the Salmon River to the first natural migration barrier. The action under this alternative would begin approximately 3.0 miles upstream of Birch Creek's confluence with the Salmon River. Ground disturbing activity to renovate the existing trail would occur streamside for approximately 0.25 miles and in Birch Creek at two fording locations. Also, expected increased motorized use of the trail's streamside and fording sections may negatively affect downstream fisheries resources through sedimentation. Since relocation of the existing trail outside the riparian area is not feasible due to terrain steepness, consultation with the Services would be necessary under this alternative.

Malm Gulch: Malm Gulch is not a perennial fish bearing stream but is a natural sediment source to the Salmon River during spring runoff and infrequent rain showers. The area in question under this alternative is approximately 2.0 miles up-slope in Malm Gulch from where it intersects state highway 75. Connectivity of Malm Gulch to the Bradshaw Basin/Spar Canyon area through an un-maintained ATV trail there would be expected to have a discountable probability of producing negative effects to federally protected fish and associated critical habitat.

Bear Creek: Maintaining the road closure under this alternative may benefit critical habitat and fisheries through a reduction in sedimentation because of the elimination of a stream crossing.

Challis to LOYF Interpretive Center: The foothills between the city of Challis and the Land of the Yankee Fork Interpretive center do not contain perennial fish bearing streams. The Salmon River is the closest named water body and is approximately 0.30 miles distance over land from the southeast corner of section 9 (T 13 N, R 19 E). Therefore, the probability that the proposed non-motorized trail described under this alternative would negatively affect federally protected fish or their associated critical habitat is discountable.

Challis Golf Course Area: The foothills west of the golf course do not contain perennial fish bearing streams. The nearest perennial waterway is Garden Creek, which is approximately 0.20 miles to the north of the golf course. Therefore, the development of a non-motorized trail as described under this alternative would be expected to have a discountable probability of producing a negative effect to federally protected fish and associated critical habitat.

Keystone Road: Bayhorse Creek possesses bull and westslope cutthroat trout and is designated critical habitat for steelhead trout and chinook salmon from its confluence with the Salmon River to the first natural migration barrier up-stream. Keystone Road begins within 300 feet of Bayhorse Creek at the Bayhorse townsite and travels in an east/northeast direction up-slope and away from the drainage. The action under this alternative would narrow the road entrance restricting access to vehicles less than or equal to 48 inches in width (ATVs). Vehicle size restriction may produce a benefit to stream quality and, therefore, fish. The probability of the alternative resulting in negative effects to federally protected fish and associated critical habitat is discountable.

Blaze Canyon Area: According to the CFO's GIS database federally protected fish and associated critical habitat do not occur in Blaze Canyon.

Invasive, Non-native Species:

This alternative would have the same overall impacts as Alternative 1 except for the site specific route alterations. In general, construction of new routes or increased motorized use on existing routes increases the potential for non-native species to become established or spread. Specific impacts based on identified route changes are identified below:

Route Specific Impacts to Invasive Species:

French Creek: Spotted knapweed and cheatgrass have been mapped in this area. New construction would increase the possibility of these species increasing along the newly constructed sites.

North Fork of Birch Creek/Birch Creek: There have been no noxious weeds mapped in the Birch Creek drainage. Cheatgrass has been identified in the drainage. New construction in relatively weed free areas would provide opportunities for more cheatgrass or noxious

weed establishment. Increased use would raise the probability of noxious weeds becoming established along the route.

Malm Gulch: Spotted knapweed has been mapped at the north end of the proposed route and black henbane at the south end. Permitting motorized use on this route would increase the possibility of these species spreading into the Malm Gulch ACEC.

Bear Creek: Leaving this route closed to motorized use would decrease the possibility of invasive species becoming established in the Bear Creek drainage.

Challis to LOYF Interpretive Center/Golf Course area: There have been several species of noxious weed identified in this area. Spotted knapweed, rush skeletonweed, leafy spurge, Canada thistle, and Black henbane have been identified in the area of the route. Construction activity would initially increase available disturbance for new site establishment by these already existing weeds. Reseeding of the exposed soil would reduce the likelihood of these species spreading along the trail. Keeping the trails as non-motorized would reduce the probability of exotic specie establishment in the long term.

Keystone Road: Potentially, there could be impacts on toadflax populations from increased ATV use along Keystone Road if the road is incorporated into the IDPR Bayhorse mining area trails.

Blaze Canyon: Potentially, there could be impacts on leafy spurge populations from increased ATV use in Blaze Canyon if the road is incorporated into the Mine Hill Auto Tour routes.

Recreation Use, Existing and Potential:
General/Landscape Level Impacts:
Aligning BLM and USFS Route Designations- This alternative attempts to match BLM and USFS route numbering systems and designated uses. This would provide a more seamless management picture for recreationists as they attempt to navigate their way through federally managed lands. It is easy for well meaning recreationists to engage in inappropriate use of roads and trails by simply crossing an unmarked administrative boundary (for instance, where a trail is open to motorcycle use on the BLM, and is designated as a hiking trail on the USFS). Removal of these artificial management boundaries should help alleviate inadvertent misuse of roads and trails and improve the recreational experience.

Design any new roads for sustainability and with respect for setting - Making a conscious effort to design and build any future roads and trails with respect for setting and for long term sustainability would be expected to improve the recreational experience on public lands. Designing with respect for setting means that in a primitive or aesthetically sensitive area, a new trail might be located along a tree line or natural vegetative break so that it is less visually intrusive. Designing for sustainability would involve techniques such as allowing for cross slope drainage, or locating a road away from a wet meadow complex. These actions would help maintain the aesthetic qualities of an area deliver the expected experience (primitive road in a

primitive setting, or highly developed and maintained road in a more developed setting) of recreationists.

SRMAs- The development of community trail based Special Recreation Management Areas around the towns of Mackay and Challis would provide easy recreational access to public lands for residents and visitors to the area. Such a designation would place management emphasis on the value of recreation to the affected communities. Management prescriptions would be applied which would provide for the desired physical, social, and/or administrative settings of the area based on desired recreational benefits. It can be anticipated that as population pressures continue to expand into more and more rural settings, both of these communities would begin to rely on adjacent public lands to provide the benefits associated with outdoor recreation. The vision statement of the 2001 City of Challis Comprehensive Plan specifically refers to a "community which will be interconnected with pathway systems and public spaces." (City of Challis 2001). One obvious benefit of trail systems with easy access from town would be improved physical health of local residents. Other benefits that would be anticipated include increased local tourism value, increased work productivity, greater appreciation of the interrelation between the communities and public lands, and increased desirability of these communities as a place to live or retire.

Designate a system of routes within the CFO area, including the designation of specific uses on specific routes when appropriate- Specific trail uses and designations provide specific experiences and benefits for trail users. For instance, a hiker can hike on a county road or on a single track non-motorized trail. While the activity, hiking, is the same in both instances, the experience and resulting benefits may be far different. This action would provide for certain roads and trails to be designated for specific uses, thus better providing for the desired experiences of those users.

Route Specific Impacts to Recreation Use:

French Creek- This proposal is to construct approximately ¾ of a mile of ATV trail around a private in-holding. This would provide motorized public access from Highway 75 into the French Creek drainage as requested by IDPR and private citizens. This action would be expected to reduce the volume of trespass occurring on the private property at the mouth of the creek by recreationists, particularly during hunting season. However, this would create a confusing and problematic artificial management boundary for recreationists between BLM and Forest Service lands (ATV vs. motorcycle) and possible inappropriate ATV use on the SNRA portion of the trail.

North Fork of Birch Creek- This proposal would convert an existing single-track motorcycle trail into an ATV trail designed for all skill levels. It would be anticipated that this action would increase the volume of use on this trail, and, dependant on the growth of the IDPR Bayhorse mining area and townsite project, this increase could be substantial. This would alter the experience for existing users who likely enjoy a challenging and 'lonely' single track experience. In exchange, a greater volume of motorized users may experience the enjoyment of easy access to close-to-home outdoor amenities such as scenic vistas and the historic Bayhorse townsite.

Birch Creek- This alternative would re-develop a motorcycle trail in this drainage to connect the Keystone area to the main Birch Creek road and the trail discussed in #2 above. This would provide a loop opportunity for motorcycle riders either from Challis or from the Bayhorse townsite, with at least this part of the loop providing a single track trail experience. While general volume of motorized trail riding activities would be expected to increase with the development of IDPR's Bayhorse mining area and townsite project, most of that use would be expected to be ATV related, rather than motorcycle. Therefore, volume of use on this motorcycle trail would not be expected to be as high as the proposed ATV trail at the North Fork of Birch Creek.

Malm Gulch- This proposal would provide motorized connectivity and a loop opportunity between Highway 75, Spar Canyon Road, and the Germer Peak area. The existing area closure still allows motorized use up to a point of closure on the main road up the Malm Gulch drainage. This creates an artificial dead end motorized route. Therefore, despite the RMP closure and on-site signage, some motorized use has continued in this area due in large part to the long term historic use on the existing (administratively closed) roads. Reopening these roads, and utilizing the wash as an un-maintained ATV trail where the existing road is particularly subject to erosion, would provide a challenging loop riding experience and eliminate the dead end route situation which could be frustrating for some trail users.

Bear Creek- This proposal would keep approximately one mile of primitive road between Morgan Creek and the Forest Service boundary closed to motorized use. This action would eliminate the opportunity for motorized recreational access up this drainage. Lick Creek, one mile north, would represent the next closest motorized access point into the area. Most recreational access in this area occurs during the fall hunting season, so this would reduce the opportunity for motorized hunting, and increase the opportunity for non-motorized hunting.

Challis Foothill Non-motorized Trail- This proposal is to construct approximately 1.5 miles of non-motorized trail along the foothills between Challis and the Land of the Yankee Fork Interpretive Center. This trail would provide a new opportunity for residents and visitors of the Challis Area to utilize a trail segment close to town, without having to walk or bicycle on a mixed use road.

Development of a portion of this trail (the area between the Golf Course and the access road to the Non-municipal waste site), would lend itself toward a future loop trail, on private lands, returning back to the golf course trail. This segment of the trail is located in relatively flat topography and would provide for relatively easy access trail walks. The second portion of the trail which leads to the Interpretive Center would likely involve steep grades in order to navigate around private lands and would therefore provide a more challenging hiking opportunity.

Golf Course Mountain Bike Trails- This proposal would be to create non-motorized mountain bike trails into the foothills west of Challis utilizing a combination of existing primitive roads and new single track construction. There are currently no designated trails for mountain bikes around the town of Challis. This action would provide a new opportunity for residents and visitors of the Challis Area to utilize designated mountain bike trails close to town, without having to walk or bicycle on a mixed use road.

Keystone Road – This proposal would convert a small portion of the Keystone Road as it leaves the Bayhorse townsite to a designated ATV trail. This action is in direct response to IDPR plans to make the townsite an ATV trail riding hub. This section of road is both steep and narrow and well suited to an ATV designation. This would allow ATV riders to access the existing primitive road system in the vicinity of the townsite without having to worry about encounters with full sized vehicles.

Blaze Canyon Area- This proposal would convert two existing primitive road segments into ATV trails. Both of these road segments are rugged and steep and well suited to an ATV designation. These trails would tie in well to the existing Mine Hill interpretive trail system and would provide ATV users with scenic overlook opportunities to the north along the Big Lost River Valley and Mackay Reservoir.

Actions analyzed under Alternative 2 would result in some minor changes to the existing settings across the CFO area. There would be negligible changes to the physical setting across the CFO area as new construction of routes would result in an increase of approximately .5% of the existing transportation network (closed roads would not affect the physical setting until such time as the routes were no longer visible in the landscape). Any changes to the social setting would be expected to occur as a result of general population increases or via administrative setting changes rather than as a direct or indirect impact of any actions associated with this alternative. The administrative setting would experience the most change with a .1% increase in Front Country, .2% increase in Primitive, 2% increase in Backcountry, and 2% decrease in Middle Country.

Overall, this alternative would result in new opportunities for motorized recreational trail users through development of connecting trails to key areas such as the Bayhorse/Birch Creek areas, Malm Gulch, and the Mackay Mine Hill area. Non-motorized trail users would also benefit though construction of walking and mountain bike trails close to the town of Challis. Navigability, and thus recreational experience, should improve with the attempts to match USFS designations and numbering systems. Over the long term these trail developments would be expected to deliver benefits such as improved physical health for participants and increased desirability of the towns of Challis and Mackay as places to live and raise families.

Soils:
Impacts would be similar to Alternative 1, except that a total of 92.48 miles of roads and trails would be designated for public travel uses on soils at risk of erosion, not including Non-BLM routes (county and state highways) and construction of additional routes would increase erosion in small areas. Road design would follow appropriate guidelines, which would minimize erosion, sedimentation, and compaction. Restrictions on new road construction in riparian areas would minimize soil disturbance on these sensitive soils. Evaluation and appropriate modification and/or maintenance of existing roads would reduce the sediment discharge and other potential soil losses. Soil biological crust are an indicator of long term environmental factors and would receive reduced disturbance under this alternative. Construction of new additional routes would not take place on the soils at risk for erosion designated as such by the Proposed Challis RMP and FEIS. Some routes would be eliminated from areas at risk for

erosion or compaction. In the entire CFO area, 4,139 acres of roads and trails would exist, approximately one half of one percent of the entire CFO.

Threatened/Endangered Plants, Sensitive Plants:
Impacts would be similar to Alternative 1 with the exception of the Malm Gulch route specific change. The Malm Gulch area has been recognized for its sensitive specie habitat and diversity of sensitive plant species (Challis RMP). Implementation of this proposal would increase motorized use through the area and increase the probability that sensitive plants would be impacted through spread of invasive species and direct impacts of crushing or trampling. Under this alternative there would be 71 recorded sensitive plant locations within two hundred feet of routes.

The other route specific changes identified under this alternative do not pass through identified occupied sensitive plant habitat.

Tribal Treaty Rights and Present Day American Indian Use:
In addition to implementing "elements common to all alternatives," Alternative 2 proposes to close routes blocked by private lands and specific spur roads that exist within the CFO; these actions may have a beneficial effect on wildlife resources utilized by American Indians. Several new access routes are proposed under this alternative that would allow ingress-egress to CFO lands not currently accessible, thus enhancing tribal members' access to Federally-managed lands for treaty-reserved rights such as hunting, fishing and gathering of natural resources.

Alternative 2 also proposes to develop several existing primitive or single track routes into wider trails that can accommodate ATVs. Increasing trail densities and use intervals may increase noise and dust in these areas, and may adversely impact natural resources important to American Indians such as wildlife. This may decrease hunting potential in these areas, but improved access into these areas may enable tribal members to more easily access new or different areas for the exercise of treaty-reserved rights.

For other route-specific changes in Alternative 2, no adverse impacts to treaty-reserved rights resulting from implementing these route-specific changes have been identified. Implementation of Alternative 2 would positively influence access to federally-managed lands, increasing the area available to tribal members to exercise treaty-reserved rights.

Vegetation Resources:
Under Alternative 2, road density would change by less than 4% from the existing condition. From a practical standpoint, the number of motorized roads or trails included under this alternative is insufficient to directly impact the total amount of vegetation resources in the resource area. However site specific impacts to vegetation under Alternative 2 are discussed below.

French Creek- Approximately one acre (based on 3/4 mile x 10 foot wide disturbance) of mountain big sagebrush plant communities would be lost by ATV trail construction.

North Fork of Birch Creek- This proposal would convert an existing single-track motorcycle trail into an ATV trail designed for all skill levels. The width of the ATV trail expansion would result in a loss of Wyoming big sagebrush plant communities, and could introduce more non-native invasive plants and change water infiltration rates along the trail.

Birch Creek- This alternative would re-develop a motorcycle trail in this drainage to connect the Keystone area to the main Birch Creek road and could result in increased non-native invasive plants, and loss of native plant communities.

Malm Gulch ACEC/RNA- See the section on ACEC/RNA for discussion of impacts to vegetation and other resources.

Bear Creek: This action would allow plants to grow into the former road bed.

Challis Foothill Non-motorized Trail- This trail would displace native vegetation through construction. However, the close proximity to Challis could provide opportunities for native plant restoration, monitoring and educational opportunities.

Golf Course Mountain Bike Trails- New single track construction for mountain bikes would result in a loss of Wyoming sagebrush plant communities.

Keystone Road – No impacts were identified other than those discussed under the *Impacts Common to All Alternatives* section.

Blaze Canyon Area - No impacts were identified other than those discussed under the *Impacts Common to All Alternatives* section.

Table 13. Alternative 2 Road and Trails mileage impacting vegetation

Alternative 2	Primitive Road [miles]	Road [miles]	Trail [miles]	Total [miles]	Area [sq miles]	Density [mi/sq mile]
Wyoming Big Sagebrush	948	122	57	1127	516	2.2
Mountain Big Sagebrush	226	12	27	265	222	1.2
Low Sagebrush	379	14	34	427	170	2.5
Chicken Sage	50	13	0	63	19	3.3
Salt Desert Shrub	309	49	25	383	139	2.8
Mountain Mahogany	39	11	16	66	102	0.6
Forest	17	2	7	26	55	0.5
Riparian	6	6	4	16	4	4.0
Total	**1974**	**229**	**170**	**2373**	**1227**	**1.9**

Visual Resources:

Under Alternative 2, there are seven actions which would impact visual resources; conversion of the North Fork of Birch Creek motorcycle trail into an ATV trail; redeveloping a motorcycle trail up Birch Creek; constructing an ATV trail at French Creek; constructing a non-motorized trail between the town of Challis and the Yankee Fork Interpretive Center; creating mountain bike trails out of existing roads along with new single track linkages, route closures in various location, and creating SRMAs around the towns of Challis and Mackay.

North Fork of Birch Creek: This action would convert an existing single track motorcycle trail (approximately 18 inches wide) into an ATV trail (48 inches wide). Some areas would also require re-routing around steep sections of trail to create trails which are more sustainable. This construction would fall within a VRM Class 3 area where actions may be evident and begin to attract attention to the characteristic landscape.

Visual resources would be impacted slightly under this action. Contrast to the characteristic landscape would occur as the widened trail is cut into the sideslopes, creating a bold and distinct line into the otherwise contiguous vegetation. This contrast would be expected to lessen over time as exposed cuts and fills become revegetated. These contrasts would also be naturally mitigated by the remote nature of this area. These anticipated visual contrasts are well within the allowable limits for VRM class III areas and are not out of character for the site.

Birch Creek- This action would involve the construction of a motorcycle trail between the Birch Creek Road and Keystone Mine area. Though this trail appears on old maps, it is no longer evident in many places on the ground, particularly in the lower half of the drainage. This construction would also fall within a VRM Class 3 area.

There would be very weak visual contrasts expected under this action. A portion of the trail already exists and single track construction can occur with very little disturbance to the surrounding vegetation and soils. One or two small live water crossings may be needed which would contribute a new structural component to the landscape, but one which would be visible only in the very immediate vicinity. Like the North Fork of Birch Creek ATV trail, the remote nature of this site would also be a mitigating visual factor. These anticipated visual contrasts are well within the allowable limits for VRM class III areas and are not out of character for the site.

French Creek- This action would create a new ATV trail connection around the private property at the mouth of French Creek. Visual impacts would be similar to those described above for the North Fork of Birch Creek Trail. However, this trail would be located in a VRM Class 2 area where management actions may be seen but should not attract the attention of the casual observer. This trail would also be located on a hillside visible from Highway 75 and within view of (and in close proximity to) several private residences. The trail would be superior (above) in view from the highway and residences over most of its length, somewhat mitigating these impacts. The cut and fill slopes created during construction would be the most evident impacts as distinct edges are created within the vegetative element. These lines would be expected to fade over time as vegetation becomes reestablished. The anticipated visual contrasts would not be expected to draw the attention of the casual observer, particularly over the long term, and would be within the allowable limits for a VRM Class II area. However, visual impacts for the private residences in the immediate area would be more intrusive than for those of the casual observer.

Challis Foothills Non-motorized Trail – This action would be to develop a non-motorized trail linking the town of Challis (connecting to the golf course pedestrian trail) and the Land of the Yankee Fork Interpretive Center. The design would be anticipated to be similar to the Lost River Access Trail near Mackay (approximately 5 foot wide finished tread surface) to allow for the volume of use expected for a community based trail. Much of this trail would utilize an

existing primitive road system, though the most visible portion of the trail would require new construction along a hillside paralleling Highway 93. This trail would be located in a VRM Class II area and the visual impacts would be expected to be the same as for the French Creek and North Fork Birch Creek ATV trails. This trail would not be expected to draw the attention of the casual observer and would not be out of character for the site.

Golf Course Area Mountain Bike Trails – This action would require the construction of non-motorized single track linkages in the foothills west of the golf course and would be located within a VRM Class II area. The visual impacts would be expected to be similar to those of the Birch Creek motorcycle trail proposal and would be visible only at a very localized scale. Disturbance to the vegetation would result in sinuous and distinct lines in the vegetation. This type of disturbance is not uncharacteristic in the existing landscape and is already represented by various primitive roads and game trails. These anticipated impacts are well within the allowable limits for a VRM Class II area.

Route Closures- There would be some amount of route closures possible under this alternative involving routes accessing only private lands and routes only accessible through private lands. The closure of these routes would, over time, reduce the visual impacts to the characteristic landscape as the routes began to disappear due to non-use.

SRMAs- This action would require a plan amendment and a separate planning process to develop the goals and prescriptions for these SRMAs. However, in general these planning areas would be expected to result in some level of increased trail and facility development around the towns of Challis and Mackay. The area around Challis would include both VRM Class II and III designations, and the area around Mackay would be entirely within VRM Class II. Site specific visual clearances would likely be necessary to analyze future facility proposals, but nearly any proposed trail development would be expected to fit within VRM Class II or III objectives.

Water Quality:

General and Landscape Level Impacts:

Aligning BLM and USFS Route Designations – The potential for negative affects to water quality on BLM-managed land is discountable as a result of this alternative. Water quality could benefit from consistency in route designations through a decrease in accidental unauthorized travel in sensitive areas.

Conscious Design – The probability that the alternative would produce negative effects to water quality on BLM-managed land is discountable. Water quality could benefit from design criteria that include protective measures, associated with conscious design.

SRMAs - The development of community trail based Special Recreation Management Areas around the towns of Mackay and Challis for the purpose of recreational access may negatively affect water quality on BLM-managed land. Analysis of effects to water quality would be necessary on a case-by-case (route specific) basis.

Route-Specific Impacts:

French Creek – French Creek is not currently 303(d) listed but is a tributary to the Salmon River, which is listed for sediment, temperature, and pathogens (Table 8). Therefore, ATV route development to the southwest of private lands near the mouth of French Creek may negatively affect water quality in French Creek and in the nearby Salmon River, downstream. Potential negative effects would be sediment related (described above) and may occur during trail construction and or ATV use.

North Fork Birch Creek - The North Fork of Birch Creek is not currently 303(d) listed (Table 8). From the eastern border of sections 13 and 14 (T 13 N, R 18 E) the North Fork of Birch Creek runs approximately 1.8 miles before entering Birch Creek, which is also not listed. Birch Creek runs approximately 2.8 miles between the North Fork of Birch Creek and the Salmon River. The Salmon River is 303 (d) listed for sediment, temperature, and pathogens (Table 8). The existing trail is on the opposite side of the hill and approximately 0.15 miles (straight line distance) from the North Fork of Birch Creek at its closest point. Therefore, conversion of the existing motorcycle trail to an ATV trail here is likely to produce no measurable negative effect to water quality in the North Fork of Birch Creek and water ways below. Maintenance of 300 foot waterway buffers and implementation of sediment reducing BMPs during construction would further ensure protection of water quality.

Birch Creek - As stated above, Birch Creek is not a 303 (d) listed stream. The action under this alternative would begin approximately 3.0 miles upstream of Birch Creek's confluence with the, 303 (d) listed, Salmon River (Table 8). Ground disturbing activity to renovate the existing trail would occur streamside for approximately 0.25 miles and in Birch Creek at two fording locations. Also, expected increased motorized use of the trail's streamside and fording sections may degrade downstream water quality through sedimentation. Since relocation of the existing trail outside the riparian area is not feasible due to terrain steepness, negative effects are possible.

Malm Gulch - Malm Gulch is not a perennial stream but is a natural sediment source to the 303(d) listed Salmon River (Table 8) during spring runoff and infrequent rain showers. The area in question under this alternative is approximately 2.0 miles up-slope in Malm Gulch from where it intersects state highway 75. Due to a lack of persistent water flow, connecting Malm Gulch to the Bradshaw Basin/Spar Canyon area through an un-maintained ATV trail would not be expected to negatively affect water quality in the Salmon River below.

Bear Creek – Maintaining the road closure under this alternative may benefit critical habitat and fisheries through a reduction in sedimentation because of the elimination of a stream crossing.

Challis Foothills Non-motorized Trail - The foothills between the city of Challis and the Land of the Yankee Fork Interpretive center do not contain perennial streams. The 303(d) listed Salmon River (Table 6) is the closest named water body and is approximately 0.30 miles distance over land from the southeast corner of section 9 (T 13 N, R 19 E). Therefore, the probability that the proposed non-motorized trail described under this alternative would negatively affect existing water quality in the Salmon River is discountable.

Golf Course Area Mountain Bike Trails - The foothills west of the golf course do not contain perennial streams. The nearest perennial waterway is Garden Creek, which is approximately 0.20 miles to the north of the golf course. Garden Creek is 303(d) listed for sediment and nutrient pollution (Table 6). However, given the distance of the proposed alternative from Garden Creek and its exclusion of motorized use, the probability of degrading Garden Creek water quality beyond the current baseline is discountable.

Keystone Road - Bayhorse Creek is not on the current 303(d) list of impaired waters but drains into the Salmon River, which is listed for sediment, temperature, and pathogens. Keystone Road begins within 300 feet of Bayhorse Creek at the Bayhorse townsite and travels in an east/northeast direction up-slope and away from the drainage. The action under this alternative would narrow the existing road entrance restricting access to vehicles less than or equal to 48 inches in width (ATVs). Vehicle size restriction under this alternative may produce a benefit to stream quality, depending on the level of ATV use.

Blaze Canyon Area – Due to a lack of perennial water flow in Blaze Canyon, there is no effect to 303(d) listed streams.

Wetlands/Riparian Zones:

Landscape Level Impacts:

Aligning BLM and USFS Route Designations – The potential for negative affects to riparian/wetland areas on BLM-managed land is discountable as a result of this alternative. Wetland and riparian zones could benefit from consistency in route designations through a decrease in accidental unauthorized travel in sensitive areas.

Conscious Design – The probability that the alternative would produce negative effects to riparian/wetlands quality on BLM-managed land is discountable. Wetland and riparian zones could benefit from design criteria that include protective measures, associated with conscious design.

SRMAs - The development of community trail based Special Recreation Management Areas around the towns of Mackay and Challis for the purpose of recreational access may negatively affect the quality and function of nearby riparian/wetland areas on BLM-managed land. Analysis of effects to riparian/wetland quality would be necessary on a case-by-case (route specific) basis.

Route Specific Impacts:

French Creek – ATV route construction to the southwest of private lands near the mouth of French Creek may negatively affect the riparian area at the point of stream crossing. Also, increased use of the existing road, which follows French Creek, may negatively affect associated riparian/wetland areas.

North Fork Birch Creek – The North Fork of Birch Creek runs approximately 1.8 miles before entering Birch Creek (Sections 13 and 14, T 13 N, R 18 E) Birch Creek runs approximately 2.8 miles between the North Fork of Birch Creek and the Salmon River. The

existing trail is on the opposite side of the hill and approximately 0.15 miles (straight line distance) from the North Fork of Birch Creek at its closest point. Therefore, conversion of the existing motorcycle trail to an ATV trail here is not likely to produce measurable negative effects to riparian/wetland zones on the North Fork of Birch Creek. Maintenance of 300 foot waterway buffers and implementation of sediment reducing BMPs during construction would further ensure protection of riparian/wetland areas.

Birch Creek - The action proposed by this alternative would begin approximately 3.0 miles upstream of Birch Creek's confluence with the Salmon River. Ground disturbing activity to renovate the existing trail would occur inside the riparian area for approximately 0.25 miles and in Birch Creek itself at two fording locations. Also, expected increased motorized use of the trail's inside the riparian area and at fording locations would likely degrade riparian conditions as well as downstream water quality through sedimentation. Since relocation of the existing trail outside the riparian area is not feasible due to terrain steepness, the probability for negative effects to riparian/wetlands is not discountable under this alternative.

Malm Gulch - Malm Gulch is not a perennial stream but is a natural sediment source to Salmon River during spring runoff and infrequent rain showers. The area in question under this alternative is approximately 2.0 miles up-slope in Malm Gulch, from where it intersects state highway 75. Due to a lack of persistent water flow riparian/wetland areas along Malm Gulch are not well established. Therefore, connecting Malm Gulch to the Bradshaw Basin/Spar Canyon area through an un-maintained ATV trail would not be expected to produce measurable negative effects for riparian/wetlands areas.

Bear Creek – Maintaining the road closure under this alternative is expected to produce no negative effect to water quality.

Challis Foothills Non-motorized Trail - The foothills between the city of Challis and the Land of the Yankee Fork Interpretive center do not contain perennial streams and therefore riparian/wetland areas. The Salmon River is the closest named water body and is approximately 0.30 miles distance over land from the southeast corner of section 9 (T 13 N, R 19 E). Therefore, the probability that the proposed non-motorized trail described under this alternative would negatively affect riparian/wetland areas associated with the Salmon River is discountable.

Golf Course Area Mountain Bike Trails - The foothills west of the golf course do not contain perennial streams or associated wetland/riparian areas. The nearest perennial waterway is Garden Creek, which is approximately 0.20 miles to the north of the golf course. Garden Creek is a sediment- and nutrient-impaired stream (Table 6). However, given the distance of the proposed alternative from Garden Creek and its exclusion of motorized use, the probability of degrading Garden Creek's existing riparian area beyond the current baseline is discountable.

Keystone Road - Keystone Road begins within 300 feet of Bayhorse Creek at the Bayhorse townsite and travels in an east/northeast direction up-slope and away from the drainage. The action proposed under this alternative would narrow the existing road entrance restricting

access to vehicles less than or equal to 48 inches in width (ATVs). The vehicle size restriction under this alternative is not expected to degrade Bayhorse Creek's riparian area beyond existing conditions and may produce a benefit to riparian quality, depending on the level of ATV use.

Blaze Canyon Area – Due to a lack of wetland areas in Blaze Canyon, there is no effect to wetlands and riparian areas.

Wild Horse Designated Herd Management Areas (HMA):
Under this alternative there would be approximately 338 miles of routes within the HMA classified as follows: roads-36 miles; primitive roads -268 miles; and trails-34 miles. Impacts to wild horses under this alternative would remain similar to Alternative 1 with the exception of the Malm Gulch addition. This alternative would open a route between Highway 75 and Spar Canyon Road. This may result in more motorized disturbance to wild horses in the Bradshaw Basin area, as more OHV enthusiasts take advantage of this opportunity.

Wilderness:
Under this alternative, approximately seven miles of authorized ways (in existence at the time of inventory) would be closed to motorized use. These ways are mostly located behind private property through which there is no authorized public access. This action would enhance the wilderness values in these locations (roadlessness, naturalness, solitude, and primitive and unconfined recreation) without impacting motorized public access. This action would not impair any of the WSAs suitability for Congressional designation as wilderness.

Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds:
Impacts for Alternative 2 would be the same as identified in the Common to All Alternatives but would also include the following:

As pertaining to the General Principles and Criteria in route determination and selection:

a) Where roads/routes are closed because the path is "blocked by private lands" or where the road/route is considered a "spur road" there is the potential to reduce the amount of traffic on there routes, and therefore the habitat fragmentation could be eliminated. The extent of the benefits to wildlife would be species specific.
b) The "attempt to match" BLM routes with USFS routes could have mixed results for wildlife. To the extent that traffic is carried away from BLM-administered lands where wildlife is negatively affected, the re-route could be expected to have some benefit. If the identification/designation of routes causes an increase of traffic onto USFS-administered lands it is possible that some more forested wildlife species could be impacted from increased noise, or merely from human presence.
c) Development of the SRMAs around Challis and Mackay could have a negative impact on wildlife. While it is not expected that habitat would be fragmented per se, there could be an extension or expansion of less suitable habitat. The degree of impacts also would be dependent on the types of authorized activities, as well as the types of habitats and associated wildlife being affected.

Regarding the Route Specific proposals:

French Creek - The proposed route connection lies close to an upgraded road leading to private lands and to private lands themselves, and as such the connection would not contribute to further fragmentation of habitats although habitat suitability could be reduced. While the area is specifically recognized as a winter habitat, the potential would exist to alter traffic, either by type or volume, and as such could affect associated areas of transition range or parturition. Impacts to forest-dwelling species on USFS-administered lands could increase.

North Fork of Birch Creek – The existing motorcycle route already fragments the mule deer and elk winter ranges. However, the conversion to an ATV route could increase the effects of the fragmentation due to increases in noise and to a change in wildlife perceived threats. While the area is specifically recognized as a winter habitat, the potential would exist to alter traffic, either by type or volume, and as such could affect associated areas of transition range or parturition. In areas where ATV use could be upslope of certain species, visible, and within a distance that induces a wildlife reaction, then the habitat suitability would be reduced. Impacts to forested species on USFS-administered lands could increase as a result of more ATV thru-traffic and from higher human-wildlife interactions, more noise, etc. Increased traffic could reduce the suitability of the Bayhorse-Kinnikick LAU; however, as identified under the Affected Resources/Values section pertaining to Canada lynx, other considerations on the actual suitability of this LAU may already preclude this portion of the LAU as truly suitable lynx habitat.

Birch Creek – There is a high potential for impacts to bighorn sheep across the Birch Creek ACEC from human disturbances attributed to traffic on the proposed route. These impacts could result in a reduced lamb crop. Human-related disturbances and human-wildlife interactions likely would reduce the habitat suitability of the big game winter ranges, important seasonal transition ranges, and potential parturition areas. The previous discussion on the potential impacts to the Bayhorse-Kinnikick LAU in the North Fork of Birch Creek also applies to this proposed route.

Malm Gulch Area – The existing road/trail system in the area already fragments the habitat. Providing a "loop" from Hwy 75 to as far as U.S. Hwy 93 could result in further affects to habitats solely because of increased traffic, noise or potential for human-wildlife interactions.

Bear Creek – Maintaining this route as "closed to motorized use" would likely help to reduce the habitat fragmentation (decreasing the road density, at least associated with motorized traffic) given the location of the upgraded roads to the north (0.5 mile) and to the south (1.5 miles), and thus increasing the habitat suitability. Those wildlife species that are affected by the mere presence of a road would continue to be affected since the BLM route would not be rehabilitated beyond what would occur naturally. Human-wildlife interactions along the road could continue to occur from horseback riders, biking or hiking activities. To some extent it is possible that impacts to gray wolf movements could be reduced but it is expected that this would be minimal given the relationship to other roads and the continued potential for human presence.

Challis to LOYF Interpretative Center – The proposed non-motorized route would not further fragment the designated mule deer crucial winter range but the potential for increased human presence could cause wintering mule deer and elk to utilize the area less if there is a perceived threat. The effects to these animals would be based more on their responses, i.e., elevated heart rates, increased demand on energy (fat) reserves associated with fleeing the area, than on the amount of foraging area lost. It is possible that if elk are flushed from the area that wolf predation could occur; however, the predation would not be additive to what would be expected to occur anyway.

The impacts to the bald and golden eagles are difficult to quantify since the winter-use pattern is unpredictable. The proposed route falls within a distance that could elicit a reaction. It is possible that any flushed birds would move to the opposite side of the ridgeline where the topography is a buffer to the disturbance, rather than the birds wanting to abandon the area entirely. Again, the responses are individual bird specific.

Challis Golf Course Area – While some semblance of a trail already exists and may be used by non-motorized activities, the proposal to "develop" this trail likely would result in additional human-wildlife encounters and a reduction in habitat suitability.

Keystone Road - Impacts under Alternative 2 likely would increase the potential for human-wildlife interactions, and would further reduce the habitat suitability. Any increases in human presence during the late-spring period could shift the ungulate parturition range.

As previously discussed, increased traffic could reduce the suitability of the Bayhorse-Kinnikick LAU.

Increased human presence would negatively impact the suitability of the area for gray wolf activities.

Blaze Canyon Area – When comparisons between ATVs and OHVs, i.e., full-sized vehicles, or other forms of human activities were made in the reviewed scientific literature there was a decidedly greater disturbance from ATVs (Stokowski and LaPointe 2000, Vieira 2000, and Kingsmill 2004). As such, the conversion of the existing trails to designated ATV-use could reduce habitat suitability for mule deer, and could affect wintering populations, including use of transition ranges which provide early spring grasses and forbs. Impacts could result in higher winter related mortalities and reduced fawn/calf production. Pronghorn antelope and elk winter habitats in the surrounding area could be affected.

Impacts to greater sage-grouse or pygmy rabbits cannot be determined based on existing documentation.

Cumulative Effects

Cumulative effects of Alternative 2 are considered for each resource and analyzed in the Cumulative Effects section following "Environmental Impacts of Alternative 3."

Environmental Impacts of Alternative 3:

Areas of Critical Environmental Concern and Research Natural Areas:
Impacts to the remaining ACECs/RNAs would be the same as described under Alternative 1. except the elimination of cross-country game retrieval travel would be expected to decrease amount of pioneered routes through ACECs./RNAs.

Four ACECs specifically identify wildlife resource values associated with a parcel: Birch Creek and Cronk's Canyon for bighorn sheep, Donkey Hills for elk, and Thousand Springs for waterfowl. Under Alternative 3, impacts to these specific wildlife species would be as described previously under *Impacts Common to All Alternatives (Wildlife)* and as noted under *Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds* below for General Principles and Criteria, and for actions pertaining to the following: North Fork of Birch Creek and Keystone Road.

Impacts to the Lone Bird ACEC under Alternative 3 would be similar to those described under Alternative 2. Cultural resource values in the Lone Bird ACEC would be further protected from direct and indirect impacts by enforcement of travel restrictions detailed in the RMP, by the elimination of cross country game retrieval, and through the reduction of redundant routes.

Cultural Resources:
Alternative 3 builds on actions proposed under Alternative 2. Undertakings proposed under Alternative 3, including closure of unauthorized WSA routes and the creation of new access routes, would be assessed by a BLM archaeologist for their potential effect on historic properties prior to implementation, in compliance with the National Programmatic Agreement and Section 106 of the NHPA. If cultural resources were found to exist in the area, the Challis Field Office archaeologist in consultation with the Idaho SHPO, travel managers, and other interested parties would consider a variety of mitigation measures so that no undertaking would adversely affect historic properties. Proposed Resource Management Plan amendments (i.e., designation of play area at Challis Bridge, elimination of cross country motorized game retrieval) would have no effect on historic properties. In addition, the enforcement of travel restrictions detailed in the RMP, elimination of cross country game retrieval, and the reduction of redundant routes will reduce indirect and direct effects to cultural resources.

Economic and Social Values:
As Alternative 3 does not propose community-based trails, the effects of Alternative 3 are similar to those of Alternative 1.

Fisheries/Threatened/Endangered/Sensitive Fish:
Landscape Level Impacts:

Aligning BLM and USFS Route Designations – No negative effect to federally protected fisheries or associated critical habitat would be expected as a result of this alternative. TES fish and associated critical habitat could benefit from consistency in route designations through a decrease in accidental unauthorized travel in sensitive areas.

Conscious Design - No negative effect to federally protected fisheries or associated critical habitat would be expected as a result of this alternative. TES fish and associated critical habitat could benefit from design criteria that include protective measures, associated with conscious design.

Develop and Designate a System of Roads More Easily Communicated to Users - No negative effect to federally protected fisheries or associated critical habitat would be expected as a result of this alternative. TES fish and associated critical habitat could benefit from consistency in route designations through a decrease in accidental unauthorized travel in sensitive areas.

Seasonal Motorized Closures - No negative effect to federally protected fisheries or associated critical habitat would be expected as a result of this alternative. TES fish and associated critical habitat could benefit from rest associated with seasonal motorized route closures.

Cross Country Game Retrieval - No negative effect to federally protected fisheries or associated critical habitat would be expected as a result of this alternative. Disallowing cross country game retrieval could benefit TES fish and associated critical habitat through a reduction in OHV stream fording.

Challis Day Use Site – Opening the existing gravel pit at Challis Bridge to periodic ATV use is expected to have no measurable negative effect on federally protected fish or associated critical habitat.

Route Specific Impacts:

French Creek - French Creek possesses westslope cutthroat trout and along with the Salmon River is designated critical habitat for steelhead trout and Chinook salmon. The mainstem Salmon River is also designated critical habitat for sockeye salmon. Therefore, development of a motorcycle route to the southwest of private lands at the mouth of French Creek may negatively affect BLM sensitive species and associated critical fish habitat. Impacts would stem from sedimentation and or physical redd disturbance from route construction and or motorcycle use. Consultation with the Services would be required under this alternative.

North Fork Birch Creek - The North Fork of Birch Creek does not possess federally protected fish species nor is it designated critical habitat for listed fish species according to the current Challis Geographic Information System (GIS) fisheries database (2003). From the eastern border of sections 13 and 14 (T 13 N, R 18 E) the North Fork of Birch Creek runs approximately 1.8 miles before entering Birch Creek. Birch Creek is listed as “unknown” for the presence of federally protected fish species in the database but constitutes critical habitat for steelhead trout and salmon from its confluence with the Salmon River to the first natural migration barrier. Birch Creek runs approximately 2.8 miles between the North Fork of Birch Creek and the Salmon River. Given the lack of federally protected species and the distance from designated critical habitat, the probability for impacts to listed species from the conversion of the existing motorcycle trail to an ATV trail here are discountable.

Maintenance of a 300 foot buffer from waterways and implementation of sediment reducing BMPs during construction would ensure protection of downstream critical habitat.

Bear Creek – A net benefit to down-slope stream health (and, by extension, fish) may result from maintaining the road closure under this alternative.

Keystone Road - Bayhorse Creek possesses bull and westslope cutthroat trout and is designated critical habitat for steelhead trout and chinook salmon from its confluence with the Salmon River to the first natural migration barrier up-stream. Keystone Road begins within 300 feet of Bayhorse Creek at the Bayhorse townsite and travels in an east/northeast direction up-slope and away from the drainage. The action proposed under this alternative would narrow the road entrance restricting access to vehicles less than or equal to 48 inches in width (ATVs). Vehicle size restriction may produce a benefit to stream quality and fish.

Blaze Canyon Area - According to the CFOs GIS database federally protected fish and associated critical habitat do not occur in Blaze Canyon.

Invasive, Non-native Species:
This alternative would have impacts similar to Alternative 2. Specific differences from Alternative 2 that may affect invasive species are: 1) Provide for a non-motorized hunting experience in WSAs and Donkey Hills ACEC; 2) Designate gravel pit adjacent to Challis Bridge Day Use site as "open"; 3) Eliminate cross-country travel for game retrieval.

Seasonal closures in WSAs and in the Donkey Hills ACECs would limit motorized use in these areas during some of the most active OHV use of the year. Limiting motorized use would help to reduce the spread or introduction of invasive species in these areas.

Designation of the gravel pit next to Challis Bridge would increase the possibility of invasive specie spread due to elevated use the site would likely receive. This may be countered by the educational component this designation includes. In the long term, educated OHV users may have less of an impact on BLM administered lands due to the outreach received at this "open" site. This site may also attract users interested in "open" sites and keep them contained in one area as opposed to creating routes across the field office.

Eliminating cross country travel for game retrieval would reduce likelihood of spread and/or introduction of invasive species by motorized vehicles away from designated routes.

Recreation Use, Existing and Potential:
Alternative 3 primarily affects recreation at a landscape level, though some site specific route changes are analyzed as well. The specific route alterations, and the anticipated recreational impacts, are listed below:

French Creek-This proposal is to construct approximately ¾ of a mile of motorcycle trail around a private in-holding. This would provide motorized public access from Highway 75 into the French Creek drainage and would be expected to reduce the volume of trespass occurring on the private property at the mouth of the creek by recreationists. This designation would match

that of the SNRA. For street legal dual sport motorcycles, this would allow for a loop opportunity between Highway 75 and the East Fork Road.

Birch Creek- This alternative would construct an ATV trail in this drainage to connect the Keystone area to the main Birch Creek Road. Dependant on the decision made for the North Fork Birch Creek trail, this could provide a loop opportunity for ATV riders either from Challis or from the Bayhorse townsite. This would be expected to become a main loop trail of the proposed IDPR Bayhorse mining area and townsite park and could experience a substantial number of visitors during the riding season (generally June through September).

Bear Creek, Keystone Road, and Blaze Canyon- These actions would be the same as in Alternative 2, with the same impacts as described in Alternative 2.

Alternative 3 also addresses landscape level proposals, in addition to the route specific considerations:
Aligning BLM and USFS Route Designations- This portion of the alternative is the same as described in Alternative 2. This action would provide a more seamless management picture for recreationists as they navigate their way across lands managed by multiple federal jurisdictions.

Design any new roads for sustainability and with respect for setting - This portion of the alternative is also the same as described in Alternative 2. These actions would help maintain the aesthetic qualities of an area and deliver the expected experience to recreationists (primitive road in a primitive setting, or highly developed and maintained road in a more developed setting).

Develop and Designate a System of Roads More Easily Communicated to Users- This portion of Alternative 3 addresses areas in the CFO where there are a myriad of routes which lead from Point A to Point B. This existing scenario can create confusion for recreationists, particularly those not intimately familiar with the area. The designation of a subset of roads which still provide access to any given area, and still maintains loop opportunities, would, in theory, be easier for the general public to understand and navigate. Map products would be less cluttered and fewer signs would be required to identify the routes that are open. However, as demonstrated in Malm Gulch and other areas, administratively closed roads are likely to see continued use to some extent, especially in a high desert environment where roads are slow to heal. Therefore, until any closed roads are physically obscured, either naturally or through management action, the mixture of open and closed roads would be somewhat confusing to all public land users.

This portion of the alternative would also result in fewer driving options for recreationists, though it would not close down motorized access to any given area. As demand for recreational use expands in the coming years, this action would result in more users on fewer roads, rather than dispersing users across many routes which access the same location.

Seasonal Motorized Closures- This action would close the Donkey Hills ACEC and all of the WSAs to motorized use from October 1 through December 31 to provide a non-motorized hunting experience (the Donkey Hills are already closed to motorized use from December 16-April 30). This would reduce motorized hunting opportunities for those who desire it, and

conversely provide a new opportunity for those who hunt by non-motorized means. This would provide opportunities for both hunting styles in 5 of the 6 game units (36A, 37, 37A, 50, and 51) which fall within the CFO boundaries. Only unit 36B would not be affected. One study in northern Idaho suggests that hunter densities in closure areas such as these may likely decrease and the success rates for hunters would increase (Gratson and Whitman, 2000).

Cross Country Game Retrieval- This action would require hunters to pack out their game by non-motorized means, rather than allowing ¼ mile of cross country travel. This would require more exertion on the part of the hunter and could pose difficulties for persons with impaired mobility. However, this same exertion is already required for any game which is killed more than ¼ mile from an existing road and this action would reduce ambiguity as to legality of cross country travel.

Challis Day Use Site- This action would open approximately 16 acres of an existing gravel pit to cross country travel. This would provide a location for both formal and informal ATV and motorcycle training to occur in an area close to Challis. This would allow for beginning riders to practice their skills (starting, stopping, turning, traversing, etc.) without having to focus on staying on designated roads and trails. This would also provide a location for formalized classes to be held that teach the fundamentals and land use ethics of OHV operation.

TMA Designations- Although the Natural Resource Recreation Setting Matrix would be used as a tool for TMA guidance under this alternative, it would be used to manage resources other than recreation (wildlife, WSAs, etc.). Nonetheless, these TMA settings would still indirectly impact recreation. In general, the TMA setting goals would be to maintain the existing settings, or progress toward the less developed (Backcountry and Primitive) end of the Setting Matrix. This would be expected to eventually result in areas which require more primitive means of recreational access (foot, horse, bicycle), and other areas where motorized access becomes more concentrated. These TMA goals would better define the expected setting for recreationists in any given area managed by the CFO and therefore help direct recreationists to the appropriate area for their desired experiences.

Actions analyzed under Alternative 3 would result in some moderate direct changes to the existing settings across the CFO area. Despite a net decrease in the miles of authorized routes, the physical setting would not change until those closed routes were no longer physically or visually impacting on the landscape. Therefore, over time the physical setting would be expected to experience change, but the short term changes would be negligible. Any changes to the social setting would be expected to occur as a result of general population increases or via administrative setting changes rather than as a direct or indirect impact of any actions associated with this alternative. The administrative setting would experience the most change with a .1% increase in Front Country, 1.5% increase in Primitive, 2% increase in Backcountry, and 3% decrease in Middle Country.

Overall, new route construction activities would be expected to have direct and indirect impacts for both motorized and non-motorized trail users similar to those described in the summary for Alternative 2. Additionally, the implementation of TMAs for non-motorized hunting should provide improved experiences for non-motorized and motorized hunters alike by identifying the

expected setting up front and providing a method to deliver on those expectations. The reduction of redundant routes, identification of primary access routes up major drainages, and efforts to match USFS route designations and numbering systems should substantially improve navigability of the area by visiting recreationists. However, the reduction in redundant routes would also concentrate use on the remaining routes and likely increase the number of social contacts as well. The development of an 'open' area for training and development in the gravel pit near Challis Bridge recreation site should directly impact motorized users through improved skill development and indirectly improve land health through improved rider education and ethics.

Soils:
Impacts would be similar to Alternative 1, except a total 88.54 miles of roads and trails would be designated for public travel uses on soils at risk for erosion, not including Non-BLM routes (county and state highways). In this alternative approximately 3,945 acres (or about ½ of 1% of CFO resource area) of road surface would be designated. Road design would follow appropriate guidelines, which would minimize erosion, sedimentation, and compaction. Restrictions on new road construction in riparian areas would minimize soil disturbance on these sensitive soils. Soil biological crusts are an indicator of long term environmental factors and would receive reduced disturbance under this alternative. Evaluation and appropriate modification and/or maintenance of existing roads would reduce the sediment discharge and other potential soil losses that may currently exist. The closure of routes within WSAs and the Donkey Hills ACEC during the time soils are wet and most sensitive to degradation would provide fewer opportunities for compaction, creation of routes adjacent through sagebrush, and mud bogging.

Threatened/Endangered Plants, Sensitive Plants:
Under this alternative there would be 67 recorded sensitive plant locations within 200 feet of routes. Other than slightly fewer occurrences near routes, impacts of this alternative would be similar to Alternative 1.

Tribal Treaty Rights and Present Day American Indian Use:
Impacts to Shoshone-Bannock Tribes' reserved treaty rights and access to unoccupied Federal lands under Alternative 3 would be similar to those anticipated under Alternative 2. Alternative 3 proposes to reduce parallel or redundant roads in some areas as well as close specific spur roads and routes blocked by private lands that exist within the CFO. Provisions for the design of new roads are outlined in Alternative 3 and include elements that would reduce wildlife habitat fragmentation and impacts to riparian areas and wetlands. All of these actions are expected to have a beneficial effect on vegetation, fish and wildlife habitat, which may enhance access to treaty reserved resources in these areas. Construction of several new ATV and motorcycle routes proposed under this alternative would result in opening CFO lands currently not accessible, which has the potential to adversely impact wildlife, but may also improve tribal members' ability to hunt, fish and gather on federally managed unoccupied lands.

Alternative 3 proposes to provide users with a non-motorized hunting experience within all WSAs and the Donkey Hills ACEC through seasonal road closures to motorized vehicles from October 1 to December 31. Shoshone-Bannock tribal members' hunting practices within these areas are currently unknown, but the Shoshone-Bannock Tribes' general hunting season usually

ends on December 31. The seasonal closure of all routes within WSAs and within the Donkey Hills ACEC would limit motorized access in these areas, but entry into these areas via non-motorized means would still be allowed. There would be no impacts to the treaty rights of the Shoshone-Bannock Tribes, as motorized access is not a reserved treaty right.

The elimination of motorized cross country travel for purposes of game retrieval would require an amendment to the existing Challis Field Office Resource Management Plan before implementation. Although eliminating motorized cross country travel for game retrieval could arguably increase the time and effort it takes to retrieve downed game, the use of non-motorized methods to retrieve game would still be allowed. Thus, this action would not prevent Shoshone-Bannock tribal members from exercising treaty-reserved rights on unoccupied CFO-managed public lands. The prohibition of unregulated motorized cross country travel is generally viewed as providing numerous benefits to multiple resources including wildlife, fisheries, and cultural resources.

Alternative 3 proposes to designate a 16-acre gravel pit adjacent to the Challis Bridge Day Use Area as open to cross country travel. This already disturbed area would be used as an OHV skill development area. This action would require an amendment to the existing Challis Field Office Resource Management Plan prior to implementation. No adverse impacts to treaty-reserved rights have been identified in association with this proposed plan amendment.

All proposals to amend the Challis RMP would require formal government-to-government consultation between the BLM and the Shoshone-Bannock Tribes.

Vegetation Resources:
Under Alternative 3, road density would decrease by approximately 11 % from the existing condition, resulting in an anticipated increase in vegetation on road beds. Both native and non-native species would colonize road surfaces. Total road density would change from 2.0 mi/sq. mile to 1.8 mi/sq miles.

Routes that would be seasonally closed would likely continue to be similar to year round route impacts. An exception would be that closures during the wet period from Oct. 1 to Dec. 31 could benefit plants by not disturbing vegetation-occupied soils or uprooting plants, or coating plants with mud.

The elimination of game retrieval would result in a beneficial impact to vegetation because plants would not be crushed and soils where they grow would not be compacted. The elimination of redundant routes would allow for colonization of old roads by native and non-native vegetation.

French Creek- Single track trail construction would displace native vegetation, could introduce non-native invasive plants, and change infiltration rates to surrounding vegetation. Less than one acre of sagebrush plant communities would be lost by trail construction as opposed to one acre for ATV trail construction under Alternative 2.

Bear Creek, Keystone Road, and Blaze Canyon - Impacts would be the same as those described under Alternative 2

Challis Day Use Site: The Challis Bridge area could be a source of non-native invasive seeds, unless mitigation is provided. Additionally, the native vegetation would likely be impacted due to the localized, intensive motorized use the site would receive.

Table 14. Alternative 3 Road and Trail mileage impacting vegetation

Alternative 3	Primitive Road [miles]	Road [miles]	Trail [miles]	Total [miles]	Area [sq miles]	Density [mi/sq mile]
Wyoming Big Sagebrush	874	122	49	1045	516	2.0
Mountain Big Sagebrush	213	12	25	250	222	1.1
Low Sagebrush	352	14	30	396	170	2.3
Chicken Sage	46	12	0	58	19	3.1
Salt Desert Shrub	283	49	18	350	139	2.5
Mountain Mahogany	40	11	15	66	102	0.6
Forest	18	2	6	26	55	0.5
Riparian	5	6	4	15	4	3.8

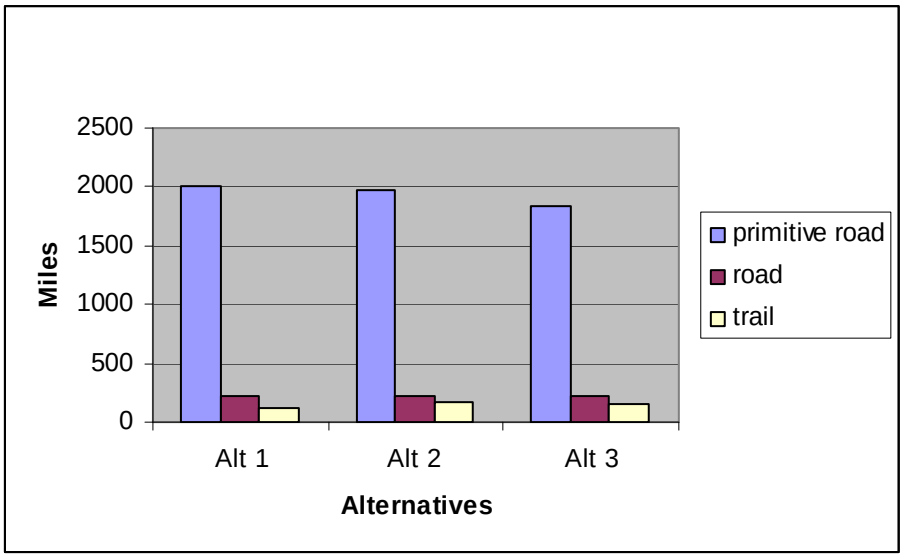

Figure 21. Miles Traversing All Vegetation Types

Visual Resources:
Three site specific actions under this alternative would affect visual resources:

French Creek- This proposal would result in the construction of approximately ¾ of a mile of single track motorcycle trail on a hillside above Highway 75. There would be weak visual contrasts expected under this action. A small portion of the trail would follow the existing powerline road and require no new construction. Cut and fill slopes created where construction is necessary would be very minimal for a single track trail and would not be expected to cause evident distinct edges within the vegetative element except on a localized scale. The trail would

be superior (above) in view from the highway and residences over most of its length, somewhat mitigating most impacts. These anticipated visual contrasts would be expected to be within the allowable limits for VRM class II areas and are not out of character for the site.

Birch Creek- This action would involve the construction of an ATV trail up the Birch Creek drainage. Visual resources would be impacted slightly under this action. This trail is not evident in many places on the ground, particularly in the lower half of the drainage. Contrast to the characteristic landscape would occur where the trail is widened and when it is cut into the sideslopes, creating a bold and distinct line into the otherwise contiguous vegetation. This contrast would be expected to lessen over time as exposed cuts and fills become revegetated. These contrasts would also be naturally mitigated by the remote nature of this area. These anticipated visual contrasts are well within the allowable limits for VRM class III areas and are not out of character for the site.

Challis Day Use Site- This action would require a plan amendment and would open approximately 16 acres of the gravel pit near Challis Bridge to cross country motorized travel. Structural visual contrasts would be expected to arise from the control fencing designed to confine the use to that location. These contrasts would be weak due to the presence of similar structures already in view within the area (private fences, power poles, control fencing within the Challis Bridge Day Use area, etc.). The anticipated visual contrasts associated with this action would fall within the VRM Class II objectives for the area and would not be out of character for the site.

Three elements to this alternative would also affect visual resources at a landscape level:

Design any new roads for sustainability and with respect for setting - This alternative would implement conscious design effort for all future road and trail construction projects. Designing new roads and trails with respect for setting would be expected to minimize potential visual impacts through proper siting and other related built-in mitigations.

Develop and Designate a System of Roads More Easily Communicated to Users- This action would reduce many of the redundant primitive roads throughout the CFO. These routes are generally on sage brush flats and alluvial fans and not visible from any great distance, unless viewed from a superior vantage point. However, some of these routes cross steeper slopes and are visible from greater distances. Generally speaking, however, the reduction of redundant roads would be expected to lessen the visual impacts of the CFO transportation system as these roads are reclaimed by vegetative cover over the next several years.

Route Closures- There would be several route closures possible under this alternative involving routes accessing only private lands, routes only accessible through private lands, and redundant routes leading to and from similar locations. The closure of these routes would, over time, reduce the visual impacts to the characteristic landscape as the routes began to disappear due to non-use.

Water Quality:

Landscape Level Impacts:

Aligning BLM and USFS Route Designations – No negative effect to water quality would be expected as a result of this alternative. Water quality could benefit from consistency in route designations through a decrease in accidental unauthorized travel in sensitive areas.

Conscious Design - No negative effect to water quality would be expected as a result of this alternative. Water quality could benefit from design criteria that include protective measures, associated with conscious design.

Develop and Designate a System of Roads More Easily Communicated to Users - No negative effect to water quality would be expected as a result of this alternative. Water quality could benefit from consistency in route designations through a decrease in accidental unauthorized travel in sensitive areas.

Seasonal Motorized Closures - No negative effect to water quality would be expected as a result of this alternative. Water quality could benefit from rest associated with seasonal motorized route closures.

Cross Country Game Retrieval - No negative affect to water quality would be expected as a result of this alternative. Dissallowing cross country game retrieval could benefit water quality through a reduction in OHV stream fording.

Challis Day Use Site – Opening the existing gravel pit at Challis Bridge to periodic ATV use is expected to have a discountable probability of producing a negative effect to water quality.

Route Specific Impacts:

French Creek – French Creek is not currently 303(d) listed but is a tributary to the Salmon River, which is listed for sediment, temperature, and pathogens (Table 8). Therefore, ATV route development to the southwest of private lands near the mouth of French Creek may affect water quality in French Creek and in the nearby Salmon River, downstream. Potential impacts would be sediment related (described above) and may occur during trail construction and or ATV use.

North Fork Birch Creek - The North Fork of Birch Creek is not currently 303(d) listed (Table 8). From the eastern border of sections 13 and 14 (T 13 N, R 18 E) the North Fork of Birch Creek runs approximately 1.8 miles before entering Birch Creek, which is also not listed. Birch Creek runs approximately 2.8 miles between the North Fork of Birch Creek and the Salmon River. The Salmon River is 303(d) listed for sediment, temperature, and pathogens (Table 8). The existing trail is on the opposite side of the hill and approximately 0.15 miles (straight line distance) from the North Fork of Birch Creek at its closest point. Therefore, conversion of the existing motorcycle trail to an ATV trail here is likely to produce no measurable negative effect to water quality in the North Fork of Birch Creek and water ways below. Maintenance of 300 foot waterway buffers and implementation of

sediment reducing BMPs during construction would further ensure protection of water quality.

Bear Creek – Maintaining the road closure under this alternative is not likely to affect water quality.

Keystone Road - Bayhorse Creek is not on the current 303(d) list of impaired waters but drains into the Salmon River, which is listed for sediment, temperature, and pathogens. Keystone Road begins within 300 feet of Bayhorse Creek at the Bayhorse townsite and travels in an east/northeast direction up-slope and away from the drainage. The action proposed under this alternative would narrow the existing road entrance restricting access to vehicles less than or equal to 48 inches in width (ATVs). Vehicle size restriction under this alternative may produce a benefit to stream quality, depending on the level of ATV use.

Blaze Canyon Area – Due to a lack of perennial water flow in Blaze Canyon, the potential for this alternative to produce a negative effect water quality is discountable.

Wetlands/Riparian Zones:

Landscape Level Impacts:

Aligning BLM and USFS Route Designations – No negative effect to water quality would be expected as a result of this alternative. Wetland and riparian zones could benefit from consistency in route designations through a decrease in accidental unauthorized travel in sensitive areas.

Conscious Design - No negative effect to water quality would be expected as a result of this alternative. Wetland and riparian zones could benefit from design criteria that include protective measures, associated with conscious design.

Develop and Designate a System of Roads More Easily Communicated to Users - No negative effect to water quality would be expected as a result of this alternative. Wetland and riparian zones could benefit from consistency in route designations through a decrease in accidental unauthorized travel in sensitive areas.

Seasonal Motorized Closures - No negative effect to water quality would be expected as a result of this alternative. Wetland and riparian zones could benefit from rest associated with seasonal motorized route closures.

Cross Country Game Retrieval - No negative effect to water quality would be expected as a result of this alternative. Dissallowing cross country game retrieval could benefit wetland and riparian zones through a reduction in OHV activity in these zones.

Challis Day Use Site – Opening the existing gravel pit at Challis Bridge to periodic ATV use is expected to have a discountable probability of producing a negative effect to wetland and riparian zones.

Route Specific Impacts:

French Creek – ATV route construction to the southwest of private lands near the mouth of French Creek may affect the riparian area at the point of stream crossing. Also, increased use of the existing road, which follows French Creek, may affect associated riparian/wetland areas.

North Fork Birch Creek – The North Fork of Birch Creek runs approximately 1.8 miles before entering Birch Creek (Sections 13 and 14, T 13 N, R 18 E) Birch Creek runs approximately 2.8 miles between the North Fork of Birch Creek and the Salmon River. The existing trail is on the opposite side of the hill and approximately 0.15 miles (straight line distance) from the North Fork of Birch Creek at its closest point. Therefore, conversion of the existing motorcycle trail to an ATV trail here is not likely to produce measurable negative effects to riparian/wetland zones on the North Fork of Birch Creek. Maintenance of 300 foot waterway buffers and implementation of sediment reducing BMPs during construction would further ensure protection of riparian/wetland areas.

Bear Creek – Maintaining the road closure under this alternative is not expected to affect water quality.

Keystone Road - Keystone Road begins within 300 feet of Bayhorse Creek at the Bayhorse townsite and travels in an east/northeast direction up-slope and away from the drainage. The action proposed under this alternative would narrow the existing road entrance restricting access to vehicles less than or equal to 48 inches in width (ATVs). The vehicle size restriction under this alternative is not expected to degrade Bayhorse Creek's riparian area beyond existing conditions and may benefit riparian quality, depending on the level of ATV use.

Blaze Canyon Area – Blaze Canyon's lack of perennial water flow, and associated riparian areas, leaves no potential for the alternative to affect riparian or wetland areas.

Wild Horse Designated Herd Management Areas (HMA):
This alternative would result in 307 miles of routes within the HMA classified as follows: roads- 36 miles; primitive roads - 254 miles; and trails- 17 miles. Effects of this alternative would be similar to Alternative 1 with the following exception: "Provide for a non-motorized hunting experience within the WSAs…" By reducing motorized travel within the Jerry Peak and Horse/Corral Basin WSAs from October 1 to December 31, wild horses would have three months with little disturbance from motorized use in the south end of the HMA.

As a result of motorized limitations in WSAs during hunting season, domestic horse use for hunting could be expected to increase. This increase could result in conflicts between domestic horses and wild horses during this time of year.

Wilderness:
There are four elements to this alternative which would be expected to impact the wilderness characteristics of the seven WSAs managed by the CFO:

Route Closure- Under the IMP, primitive vehicle routes (called 'ways' in a WSA) which were in existence at the time of inventory can continue to be used and maintained as before, as long as this does not cause new impacts that would impair the area's wilderness suitability (USDI-BLM, 1995, pg. 12). Under this alternative approximately 17 miles (13% of the existing, authorized ways) of these routes would be closed. This action would enhance the wilderness values of these WSAs (roadlessness, naturalness, solitude, and primitive and unconfined recreation). Many of the routes identified for closure under this alternative are spur roads. The closure of spur routes would create a more manageable and enforceable system of ways in the WSAs and would be expected to reduce the indirect impacts associated with incremental route extension.

WSA Travel Management Areas- This alternative would create a TMA for each WSA to help manage future transportation decisions. These TMAs would all have the same goal of managing for a progression toward a primitive physical setting which would continue to enhance the wilderness values of these areas.

Cross Country Game Retrieval- Alternative 3 would eliminate the exception to cross country game retrieval across the entire CFO. While this exception is already not applicable in WSAs, many hunters do not recognize this administrative boundary and still proceed under the impression that cross country game retrieval is allowable everywhere within the CFO. This action would be expected to help reduce confusion created by this disparity in regulations and reduce the amount of unauthorized cross country motorized travel in WSAs.

Seasonal Motorized Closures- This action would close all of the WSAs to motorized use from October 1 through December 31 to provide a non-motorized hunting experience. As use of ATVs as a tool for hunting has increased over the past several years, so have the reports of unauthorized, cross country travel in WSAs during the hunting season. This would be expected to enhance the opportunities for visitors to experience solitude and primitive and unconfined recreation in all of the WSAs during this high use time of the year. An anticipated in-direct impact of this action would be a reduction in surface disturbance caused by cross country vehicle use off of authorized boundary roads and existing ways.

None of these actions would impair any of the WSAs suitability for Congressional designation as wilderness and would be expected to enhance wilderness values such as roadlessness, naturalness, solitude, and primitive and unconfined recreation.

Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds:
Impacts under Alternative 3, General Principles and Criteria, Items 1 through 8 would be the same as for Impacts Common to All Alternatives, and as identified under Alternative 2. Impacts associated with Alternative 3**,** General Principles and Criteria, Items 9 through 14 would be as follows:

9. Reducing wildlife habitat fragmentation is expected to benefit wildlife populations by increasing the available suitable habitat where disturbance from some human-induced activities are eliminated or at least minimized. The amount of "edge habitat" would be reduced as roads and trails return to a native condition; this change in habitat-type would affect edge-obligate species, mostly limited to avian species and small mammals, and

alter the habitat suitability for edge-facultative species. However, edge-habitat is prevalent, and not just associated with roads and trails, and it is not expected that reducing the quantity of edge-habitat would alter either the biodiversity or quantity of a species composition across the watershed.

10. Riparian and wetland areas contain among the highest wildlife biodiversity of any habitat-type. These areas provide for the requisite access to water as well as to high quality forage later into the summer-season, and a variety of nesting site structure. Management actions which help to reduce negative impacts on riparian and wetland areas likely would contribute to improvements to wildlife habitats. Any determination on the ultimate habitat benefits is site-specific.
11. Reducing parallel and redundant routes would have the same benefit as reducing habitat fragmentation (Item 9).
12. The emphases of reducing impacts associated with OHV activities within greater sage-grouse habitats are 1) eliminate cross-country travel, 2) avoid creation of accesses, 3) remove or re-route existing trails, 4) consider seasonal timing and use restrictions, and 5) develop a public awareness campaign in cooperation with IDPR, and specific user groups (ISAC 2006 and CSGLWG 2007). The proposed Travel Management Plan carries forward the restriction on cross-country motorized travel. The development of any new roads/accesses would take potential greater sage-grouse use into consideration. Implementing timing and use restrictions associated with leks can be problematic when considering the actual lekking season, and even where a lek might be located. While lek activities tend to occur at the same location from year-to-year it is possible that these activities may move, or not initiate in any particular year, and all of the lek locations are probably not known. Trying to set restrictions can be a moving target, thus the ability to use an adaptive management approach may be fundamental to the success of lek protections. Public education about greater sage-grouse activities and the potential for human impacts likely would produce positive results in reducing negative effects.
13. The seasonal elimination of motorized traffic in WSAs and the Donkey Hills ACEC would reduce the potential for big game disturbance. The actual extent of the benefit is still dependent on the level of disturbance that would continue to occur from non-motorized human activities. The potential for big game winter survival and higher reproductive success is improved to the degree that less body-fat reserves are expended heading into the winter-season.
14. The prohibition on cross-country game retrieval would help to prevent arbitrary encroachment into wildlife occupied areas. A reduction in wildlife disturbance would help sustain big game body-fat reserves and lower stress factors which are already elevated due to hunting pressures.

Impacts to Route Specific Impacts under Alternative 3 would be as follows:

French Creek – Impacts would be similar to Alternative 2 but may be less as the volume of traffic, as well as the noise levels, may be lower with only motorcycle traffic, compared to ATVs.

Bear Creek – Impacts under Alternative 3 would be the same as under Alternative 2.

Keystone Road as it leaves Bayhorse townsite – Impacts under Alternative 3 would be the same as under Alternative 2.

Blaze Canyon Area: Impacts under Alternative 3 would be the same as under Alternative 2.

Challis Bridge Day Use Area: It is likely that authorizing motorized activities at this site will alter mule deer use because of the resulting human-wildlife interaction. However, because there is a high incident rate of vehicle-mule deer collisions in this area there may be an indirect benefit by reducing mule deer presence.

There is a likely potential for any motorized activities at the site to affect bald eagle use in the immediate area. Because of the open nature of the area, the 660-foot buffer identified in the Bald Eagle Management Guidelines would be appropriate for this site during the bald eagle winter-use period; this would necessitate a winter-use closure since all portions of the gravel pit are within this buffer. If bald eagles were to establish a nest within 660 feet of the Day Use Area/gravel pit it could be necessary to impose a seasonal closure, depending on the line-of-sight characteristics.

Cumulative Effects
Cumulative effects of Alternative 3 are considered for each resource and analyzed in the Cumulative Effects section following this section.

Cumulative Effects of Alternatives:
Cumulative Effects Common to All Alternatives:
Cumulative effects are defined by the Council on Environmental Quality as "…the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (40 CFR 1508.7).

Past Actions: The concept of active transportation management and limitations to motorized travel such as "limited to existing roads," or "limited to designated roads" is a relatively recent development in federal land management. In the past, particularly for the BLM, motorized use has been largely unregulated, due in part to limited use. Travel routes which were often created for resource access needs (mining, grazing, water management, timber, etc.) were typically minimally-impacting as those routes received use once, or perhaps a few times over the course of a year. Mining and timber roads would typically see the most active use during extraction activities, but road use would decline precipitously after those activities ceased. Additionally, in the past, private lands in the west were often large ranches with few fences or other impediments to public usage.

Over the recent years, as population growth has exploded in the West, and motorized technology has outpaced planning efforts, resource impacts from un-managed motorized transportation have become a serious issue for the BLM, USFS, and other land management agencies. The BLM

follows a multiple use mandate that allows for many resources and uses besides transportation, including, but not limited to:

- Range (including grazing permits, troughs, fences, pipelines, etc.),
- Recreation (including developed recreation sites, dispersed recreation, etc.),
- Oil, Gas, and geothermal exploration and permits,
- Wildlife (including research, construction and maintenance of guzzlers, habitat improvements, etc.),
- Fisheries (including research, culvert replacements, habitat improvements, etc.),
- Minerals (including free use permits, mineral material sales, etc.),
- Fuels management (including hazardous fuels reductions, invasive weed treatments, etc.),
- Forest Resources (including forest health actions, etc.), and
- Realty (including Rights of Ways (ROWs), easements, land transfers, etc).

Attempts to create an organized, region-wide ATV/motorcycle trail system by IDPR occurred in 2002; the proposed trail was eventually formally dropped, but the concept has arisen during BLM public meetings and in other venues as a future possibility.

Present Actions: Today, the impacts of increased motorized use under passive management have led land management agencies to begin to implement travel management planning. The federally managed lands within and surrounding the CFO include:

1) CFO roads, designated as "limited to existing," with some closed areas.
2) BLM Salmon Field Office lands, which are largely designated as "open" with some areas as "limited to designated roads/trails."
3) USFS: Salmon-Challis National Forest and Sawtooth National Recreation Areas, which roads and trails have a combination of designations as "open," "limited to existing/designated," and "closed."
4) BLM Upper Snake Field Office lands, which are largely undesignated, with some "limited to existing" designations.

As mentioned previously, the IDPR has purchased private lands near the Bayhorse townsite and is in the process of developing a long-term management strategy for those lands. BLM and USFS lands surround the Bayhorse mining area and townsite, and BLM and USFS-managed roads and trails may be included in the IDPR's desired road and trail system. State land tracts managed by the Idaho Department of Lands are also located within the CFO boundary (typically Sections 16 and 36 of each Township), and the road and trail systems within state land tracts usually are primitive.

In recent years, private lands have become increasingly subdivided. This trend has resulted in fewer undeveloped tracts, more access and management controls applied to general public access, and increased pressure on adjacent public lands to allow for local landowner access. Actions described above for Range, Recreation, Wildlife, Fisheries, Minerals, Fuels, Forest Resources, and Realty activities continue to occur. Utilities continue to have an interest in maintenance and construction in established rights of way.

Current BLM actions include a proposal to install a BLM Bayhorse Campground boat ramp, proposed general fuels management actions to reduce Douglas-fir encroachments and strengthen aspen stands, implementation of the Lost River Fishing Access trail near Mackay, and proposals for municipal waste sites in Custer County. The Salmon-Challis National Forest is also working on a Forest-wide Travel Management Plan, the BLM Upper Snake Field Office is currently working on a new Resource Management Plan (scheduled for completion in 2011), and the BLM Salmon Field Office is inventorying roads and trails in preparation for a Travel Management Plan generally covering the northern portion of Lemhi County starting in 2008.

Reasonably Foreseeable Future Actions: Even where some level of active transportation management has been implemented in the form of "limited to existing," avoidable impacts have still occurred. Many routes were inherited and not engineered for the most appropriate location, design, or resource considerations. With continually changing technology, growing populations and continued increase use of public lands, roads and trails, most agencies are progressing toward a "limited to designated" system and a continued reduction of "open" areas. Private lands would be expected to continue the trend of increased subdivision, increased demand for 'out the backdoor' access, and decreased public access. Future developments for OHV destinations, at locations like the Mine Hill near Mackay or the Bayhorse mining area and townsite could also be expected to drive demand for motorized access in the future. The USFWS is reviewing prior listing decisions under ESA on the greater sage-grouse and pygmy rabbit. The federal listing of either species could affect BLM management of the public lands. Finally, the BLM may decide in the future to improve or replace river access developments in the Upper Salmon River SRMA.

Areas of Critical Environmental Concern and Research Natural Areas:
No effects common to all alternatives were identified for ACECs.

Cultural Resources:
Past activities such as road and trail construction and maintenance, grazing and grazing developments, and mining actions have adversely impacted some cultural resources located within the CFO. No adverse impacts to historic properties are expected as a result of present and future activities on BLM-managed lands because of adherence to federal laws and regulations that require consideration of cultural resources prior to implementation of projects.

The designation of routes proposed in Alternatives 1, 2 and 3 would result in motorized travel only on specific routes, which would reduce direct, indirect and adverse impacts to known and unknown cultural resources. These alternatives also establish criteria for implementing future changes to the roads and trails system, which include consideration of cultural resources.

Other foreseeable activities on private and public lands include IDPR's development of the Bayhorse townsite as a destination hub for OHV users, residential growth, new road construction on private lands, fuels reduction projects, utility corridor maintenance and upgrades, special recreation events, and mining exploration and development. Assuming that all proposed and foreseeable actions are implemented, and the National Programmatic Agreement and Section 106 of the NHPA are followed, no adverse cumulative effects to historic properties located on federally-managed lands are anticipated to result from travel management planning.

Economic and Social Values:
There is no indication that the growth in OHV use and ATV registrations described in Alternatives 2 and 3 will diminish over time. Likewise, private land development in southern Custer County is presently trending away from large farms and ranches toward mini-ranches and subdivisions, and other parts of the CFO area may follow the trend in the years to come. Prices for prime real estate near major rivers and public lands may be expected to increase at a rate faster than other locations. It is unknown when or whether these market trends will result in a significant increase in permanent residents, or whether the real estate will be retained as vacation homes and properties. However, occupants of vacation properties or permanent residences could increase the demand for organized trails, as noted in Alternative 2, and create opportunities for private businesses and public services that respond to ATV and OHV needs.

Invasive Species:
In addition to growth in recreational travel, reasonably foreseeable actions that may effect invasive and noxious weed spread on private and public lands in the CFO area include livestock grazing, residential growth, new road construction on private lands, fuels reduction projects, utility corridor maintenance and upgrades, special recreation events, and mining exploration and development.

Other future activities on public lands in the travel planning area that could also potentially impact the occurrence and spread of noxious weeds include the Idaho Department of Parks and Recreation's purchase and subsequent development of the Bayhorse townsite as a destination hub for OHV users, route designated travel plans by adjoining land management offices and agencies, and wildfires.

The cumulative impacts to noxious weed spread from all alternatives will be dispersed and long-term and continue to require on-going monitoring and management.

Fisheries/Threatened/Endangered/Sensitive Fish:
Past activities (dams, mining, water diversion, grazing, agriculture, timber harvest, cross country travel, urbanization, recreation, etc.) combine to produce the current baseline condition on BLM CFO-managed land. Data are not currently sufficient to determine when or if the sum of past, present, and foreseeable future activities on BLM CFO-managed lands will degrade the condition of TES fish and associated critical habitat relative to the current baseline. However, adherence to criteria and actions common to all alternatives (described above) and compliance with applicable laws could cumulatively benefit TES fish and associated critical habitat, through improved water quality.

Threatened/EndangeredPlants, Sensitive Plants:
Impacts to sensitive plants species occur from road maintenance, weed control, OHV use, grazing (both domestic and wildlife), and mining activities. The objective of this travel plan is to identify a system of roads and trails (the majority of which already exist). The result of this should help to keep motorized users on identified routes. Cumulative impacts to sensitive plant species from any of the alternatives should be slight to positive.

Tribal Treaty Rights and Present Day American Indian Use:
Cumulative effects analysis within the travel planning area considers the impacts that proposed actions and alternatives may have on tribal treaty rights in light of past, present and reasonably foreseeable actions. Past private and public road construction and maintenance, water utilization and ditches, and livestock grazing have impacted culturally important species (i.e., salmon, steelhead, sage grouse, deer and elk) through habitat fragmentation, increased noise and dust. These actions may also directly affect important riparian and upland tribal food resources. Other federal actions of tribal concern include large and small land sales, land use permits, mining actions, and private trespass on federal lands that have the cumulative effect of reducing the federally managed land base available for the exercise of treaty-reserved rights. Actions that have the potential to affect traditional procurement methods such as spear fishing, which requires clear water for success, are also of concern to the Tribes.

Other foreseeable activities on private and public lands include IDPR's development of the Bayhorse townsite as a destination hub for OHV users, residential growth, new road construction on private lands, fuels reduction projects, utility corridor maintenance and upgrades, special recreation events, and mining exploration and development. Assuming that all proposed and foreseeable actions are implemented, direct cumulative effects to treaty reserved rights are not anticipated to result from travel management planning. Alternatives 1, 2 and 3 would result in no additional impacts to treaty reserved rights, and actions proposed in Alternatives 2 and 3 would result in a net increase in access of federally-managed lands.

Wild Horses:
Activities that have the potential to impact wild horses in the Challis HMA come primarily from grazing (livestock and wildlife), mining, recreational activities and active management of the horse herd, mostly through population control. Management of livestock grazing across the HMA has resulted in improved vegetative conditions (Standards and Guides Assessments for the Mountain Springs, Road Creek, and Warm Springs Allotments). There has been no new fence construction that would impair wild horse movement across their range. Water developments have had a beneficial impact to wild horses in the Challis HMA. Two mines, the Three Rivers Stone Quarry on the west edge of the HMA, and the Rat's Nest Mine on the east side have had little effect on wild horses to this point. Wild horse gathers, which occur once every two to four years, are probably the primary disruption to the wild horses within the Challis HMA. Gathers usually occur over the course of a week and are conducted with a helicopter. Gathers are required to keep horse population numbers at AML in order to "maintain a thriving natural ecological balance." Recreational use within the HMA includes hunting, antler hunting, ATV riding and sight seeing, including wild horse viewing. Overall these activities tend to temporarily displace horses, although as previously discussed, some bands are very tolerant of these activities.

Implementation of any of these travel plan alternatives should result in no or positive cumulative effects to wild horses.

Recreation/Wilderness/Visuals:
The impacts to recreation, wilderness, and visual resources on the CFO come primarily from range, mineral, realty, and recreation-related actions. The transportation system, while not a function of any one resource, also affects recreation, wilderness, and visual resources.

Range management-related fencing is often an impediment to recreational users and can add to confusion when trying to differentiate private and public lands. Most range related improvements (troughs, pipelines, and fences) impact visual resources to some extent and reduce the naturalness of the area, particularly in WSAs.

Mineral activities tend to displace recreational use, and occasionally close access to an area entirely (generally only in the case of larger mines such as the Three Rivers Stone Quarry and Thompson Creek Mine). However, historic mining activities are often a draw for tourism, as evidenced by the Custer Motorway, the Mackay Mine Hill area, Ima Mine, and the Bayhorse mining area and townsite. These activities also create visual contrasts in the landscape over the course of their lifespan and until rehabilitation efforts are completed.

Realty actions can both impair and improve recreational access. ROWs and easements are often attained to ensure public access to an area otherwise controlled by private land ownership. However, land sales and exchanges may result in acreage lost to general public recreational pursuits.

Recreation actions generally benefit one type of recreational user group, often at the expense of another. For example, a campground designed for modern motor-homes may discourage users who prefer a primitive tent camping experience and a boat launch designed for canoes would displace motorboat access. Increasing levels of recreational development generally correspond to increasing levels of visual contrast as well, dependant on the existing setting. For example, a developed campground along a highway corridor would result in less visual contrast than that same level of development in a primitive area.

Similar to recreation actions, transportation system actions generally benefit one recreational user group at the expense of another. For instance, a trail designed for ATVs would likely discourage hiking use.

The transportation network also impacts the naturalness of WSAs. Though new routes cannot be authorized in a WSA, the elimination of any existing routes (authorized or unauthorized) would generally improve the wilderness values of the area.

Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds:
Authorizations and/or activities (current and future) that increase the potential for wildlife-human interactions can be expected to cause some reaction by wildlife, either physiologic or in altered behavior. Direct effects on public lands from development, i.e., for mineral materials, ROWs to private lands (access, utilities) have the potential to incrementally diminish wildlife habitats. The extent of the reaction is both species and individual-animal specific, and the effects can be exacerbated during certain seasons, i.e., winter or gestation. Likewise, seasonal restrictions, closures, or other management efforts, e.g., prohibition on cross-country travel or

limitation on harvested game retrieval, that help to reduce wildlife-human interactions, or that result in improvements to habitats can be expected to be beneficial; changes in habitat conditions may not be realized for an extended period of time, and benefits to some species may also be a detriment to other species.

BLM activities like weed management, wildland fire/fuels treatment, and livestock grazing also have direct effects on wildlife habitat suitability. Noxious weeds treatments are considered to have a beneficial effect for wildlife as the reduction in or prevention of invasive weeds helps to sustain the native habitat. Fuels treatments are generally considered to have a beneficial effect for wildlife as they incorporate "desired" wildlife habitats into the analyses. Depending on the prescription, there may be some habitat losses for some wildlife species; these potential impacts are considered in the analyses. Wildland fire operations, i.e., suppression, wildland fire for resource benefit, are considered to have as positive an impact as possible given the unpredictability of when or where wildland fires may occur. Certainly some level of negative impacts to wildlife habitats are likely with wildland fires but the efforts to have a planned response will have as beneficial an impact as possible. Livestock grazing and the associated infrastructure, e.g., the actual animals, troughs, salting areas, fences, etc., also has the potential to impact wildlife habitats where prescribed management plans are inadequate; currently the Range program's Rangeland Health Assessments indicate whether standards for rangeland health are being met or making significant progress towards meeting the standards.

Indirect effects of recreational activities, mining, or general public access may reduce habitat suitability through redistribution of wildlife from preferred, higher quality habitats, to secondary or lower quality habitats; where wildlife numbers increase beyond the carrying capacity of the habitat to support viability populations the result can be habitat degradation, and often is accompanied by increased wildlife mortality. Specifically, the development of the Bayhorse mining area and townsite by IDPR could reduce the viability of the Bayhorse-Kinnikick LAU and various wildlife activities because of increased human presence associated with tourism in or around the townsite; people who are less familiar with wildlife may attempt to "get closer to nature" without realizing the consequences.

The authorization and/or activities of other government entities also affect wildlife. Authority to manage resident wildlife resources on federal lands is given to the state agencies while the habitats on federal lands remains with the Federal government: 43 CFR 24.4(c) and (d). Actions, e.g., predator control, wildlife damage control, carried out by the U.S. Department of Agriculture/Animal and Plant Health Inspection Service/Wildlife Services, in cooperation with IDFG, USFWS, and/or BLM also will affect wildlife populations.

Other impacts to wildlife and/or habitats include "unauthorized" activities, e.g., dumping of household or hazardous waste which result in negative, as well as unobserved, effects. The availability of an extensive road/trail system contributes to the opportunity or temptation to conduct these types of activities.

Cumulative Effects of Alternative 1:

Fisheries/Threatened/Endangered/Sensitive Fish:

Direct and indirect effects to TES fish and associated critical habitat under each alternative are considered in the Alternative 1 *Fisheries* impact analysis section.

Where water availability, connectivity with larger more open systems, and temperature conditions are sufficient, in-stream fish habitat is generally not limiting to salmonid recruitment on BLM CFO-administered land. Past activities (dams, mining, water diversion, grazing, agriculture, timber harvest, cross country travel, urbanization, recreation, etc.) have combined to produce the current baseline condition. Cumulative effects to TES fish species in the foreseeable future are consistent with those described for *Stream Crossing Structure Replacement and Removal Activities Affecting ESA-listed Species in Idaho National Forests (Payette, Boise, Sawtooth, Salmon-Challis, Nez Perce, and Clearwater National Forests and Idaho/Nevada Bureau of Land Management Public Lands in Challis, Cottonwood, Coeur d'Alene, Four Rivers, Jarbidge, Salmon, and Upper Snake Field Offices (USFS and BLM 2005)*:

> (1) reduced streamflows from water diversions for urban, agricultural and other purposes;
> (2) destruction or degradation of spawning and rearing habitat from logging, grazing, mining, farming and urban development on private and other non-federal lands;
> (3) degraded water quality as a result of polluted runoff from urban and rural areas;
> (4) migration barriers that result from dams on private or other non-federal lands (not regulated by the federal government);
> (5) introduced diseases, resource competition and gene pool dilution as a result private-, tribal- or state-operated hatcheries;
> (6) commercial, sport and tribal fisheries on Chinook salmon;
> (7) mortality as a result of illegal harvest through incidental catch;
> (8) habitat degradation associated with non-federal road building and maintenance; and
> (9) competition, predation and hybridization problems associated with introduction of non-native fish.

NEPA and ESA Section 7 processes combine to minimize the probability that individual federal actions on BLM CFO-administered land may result in deleterious effects to TES fish and associated critical habitat. Data are not currently sufficient to determine when or if the sum of past, present, and foreseeable future activities on BLM CFO-managed land will adversely affect TES fish and associated critical habitat, relative to the current baseline. Federal actions on BLM CFO-administered land which adhere to criteria and actions common to all alternatives (described above) and comply with applicable laws could cumulatively benefit TES fish and associated critical habitat, through improved water quality.

Recreation/Wilderness/Visuals:
Alternative 1 would not add to any of the direct impacts from other resources, as described under the Recreation/Wilderness/Visuals heading under Cumulative Impacts Common to All Alternatives, and would therefore not result in any cumulative impacts to recreation, visual, or wilderness resources in the CFO area.

Riparian and Wetland Areas:
Because riparian corridors are logical travel routes, effects to these areas are expected to increase with increased construction and use of roads and trails, regardless of travel mode. Past activities

(dams, mining, water diversion, grazing, agriculture, timber harvest, cross country travel, urbanization, recreation, and etc) have impacted riparian and wetland areas on BLM CFO-managed land. These effects to date form the current baseline riparian/wetland condition. Cumulative effects to riparian and wetland areas in the foreseeable future include:

(1) reduced stream flows from water diversions for urban, agricultural and other purposes;
(2) destruction or degradation of riparian and wetland areas from logging, grazing, mining, farming and urban development on private and other non-federal lands;
(3) degraded riparian and wetland areas as a result of polluted runoff from urban and rural areas;
(4) stream bed load movement barriers from non-federal dams;
(5) riparian and wetland areas and habitat degradation associated with non-federal road building and maintenance.

Healthy and intact riparian and wetland areas provide a buffer to up stream and up slope alteration that cannot be overstated. The sum of past and present actions underscores the need to protect existing riparian and wetland areas on BLM CFO-managed land.

Soils:
Cumulative effects in regards to soils would include changes in erosion rates, compaction, infiltration, vegetative cover, and stability. The increasing intensity and diversity of activities taking place on public lands with increased population would be expected to cumulatively affect soils.

Anticipated population growth, increased OHV demand, and the potential for even greater localized OHV use in relation to the Bayhorse mining area and townsite would be expected to cause greater soil compaction and vegetative loss over time.

Mineral activities, especially open pit mining, are disruptive to soils, but only limited areas are likely to be affected in the near foreseeable future (approximately 20 years) within the CFO. The effects of these mines on soils include decreased stability resulting in increased erosion and compaction, as well as profile inversion on a limited basis

Vegetation treatments are frequently beneficial to soils in the long term. The long term objective of these treatments is ecosystem health, which may increase soil stability after recovery. Short term effects of vegetation treatments to soils may result in increased vulnerability to erosion due to the loss of vegetative cover. Proper project design minimizes this risk.

In general, rangeland health assessments show that soil standards are being met, or are making significant progress towards being met, under current livestock management practices.

Tribal Treaty Resources:
Cumulative impacts from implementation of Alternative 1 are expected to be the same as those listed under Cumulative Impacts Common to All Alternatives.

Water Quality:
Past activities (dams, mining, water diversion, grazing, agriculture, timber harvest, cross country travel, urbanization, recreation, and etc) have combined to produce the current water quality baseline on BLM CFO-managed land. Cumulative effects to water quality in the foreseeable future include:

(1) reduced stream flows from water diversions for urban, agricultural and other purposes;
(2) destruction or degradation water quality from logging, grazing, mining, farming and urban development on private and other non-federal lands;
(3) degraded water quality as a result of polluted runoff from urban and rural areas;
(4) stream bed load movement barriers from non-federal dams;
(5) water quality and habitat degradation associated with non-federal road building and maintenance.

The sum of past, present, and foreseeable future activities on and near BLM CFO-managed land combine to alter water quality. Incomplete and infrequent monitoring combined with ownership boundaries and the remoteness of the resource area; create a time lag for the detection of reduced water quality. This in turn increases the time for a corrective response. Net effects range from minor habitat alteration and sub-lethal effects to aquatic biota to complete loss or stranding of protected aquatic organisms. The extent of these effects is not expected to involve human health.

Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds:
Cumulative Effects under Alternative 1 would be as described under Cumulative Effects Common to All Alternatives.

Cumulative Effects of Alternative 2:

In General:
Under Alternative 2, the creation of a list of general principles and criteria in route determination and selection would provide a tool for future BLM decisions when faced with proposals for changes to the existing road and trail system. While new proposals would still be considered on a case-by-case basis, consideration would be based on past public comments and BLM administrative needs gathered through the public process for this document. Travel restrictions in WSAs, ACECs, and seasonal closure areas would remain in effect. Habitat fragmentation would not necessarily be a prime consideration in the development of new roads or trails, but could be considered in the context of all other resources and uses. The closure of redundant roads or trails, including spur roads accessing only private lands, results in only a small change from existing conditions.

See the first paragraph of the analysis of cumulative effects for Alternative 1 for a discussion of general cumulative effects common to all alternatives. Cumulative impacts to *threatened endangered or sensitive fish/fisheries*; *soils*; *water quality*; and *riparian and wetland areas* are the same as those described under Alternative 1.

Cultural Resources:

Impacts to cultural resources under Alternative 2 are expected to be similar as those described in the discussions under Cumulative Effects Common to All Alternatives, and under Alterative 1. Under Alternative 2, all un-surveyed roads and trails that have proposed ground disturbance through decommissioning, construction, or reconstruction would be examined by an archaeologist prior to project implementation, in accordance with the National Programmatic Agreement and Section 106 of the NHPA. These examinations would determine if any adverse effect to historic properties would occur as a direct or indirect result of these activities, and mitigation of those effects would be developed by the BLM archaeologist in consultation with the Idaho SHPO, travel managers, and other interested parties. Land Use Plan amendments proposed in Alternative 2 would also require Section 106 compliance and evaluation prior to implementation.

Recreation/Wilderness/Visual Resources:
The general trend in transportation management by federal agencies is a progression from 'open to cross country motorized travel' to 'limited to designated routes'. While this alternative also follows this progression toward greater motorized restrictions through designation, it generally designates most authorized existing routes as open to some method of motorized travel. It also adds a few new trails, both motorized and non-motorized. The cumulative impact to all forms of recreation, in reference to the existing condition, is negligible as there is almost no change to the existing settings as a result of the actions proposed under this alternative. While there are some minor changes to specific routes (addressed in the direct impact section) which would benefit various recreation participants, the overall transportation system as it pertains to recreation is basically unaltered under this alternative.
The actions described in Alternative 2 would not result in any substantive cumulative impacts to either visual resources or WSAs. There are no proposed route additions in the WSAs which would result in cumulative impacts. The motorized and non-motorized trails analyzed under this alternative would result in weak direct impacts to the characteristic visual landscape, and when added with other visually impacting actions across the CFO area would not result in any measurable cumulative impacts.

Tribal Treaty Rights and Present Day American Indian Use:
Cumulative effects of Alternative 2 are expected to be similar to those listed under Common to All Alternatives. In the past, the Shoshone-Bannock Tribes' ability to access, hunt, fish and gather on federally-managed unoccupied lands has been impacted by private land owners who chose to close roads or trails that travel through their private lands and lead onto federally managed lands. Alternative 2 would address some of these access issues by creating new routes around private lands that currently block access to adjacent federally managed lands. Alternative 2 would have no adverse cumulative to treaty reserved rights, and actions proposed in Alternatives 2 would result in a net increase in access of federally-managed lands.

Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds:
The cumulative effects to wildlife under Alternative 2 are similar to the impacts identified under Cumulative Effects Common to All Alternatives. In addition, the following potential effects could occur:

- The combination of the North Fork of Birch Creek, the Birch Creek, the Challis Golf Course Area, the Challis to LOYF Interpretative Center, and the Keystone Road actions,

together with potential human excursions out from the Bayhorse mining area and Townsite associated with IDPR state park development, could appreciably increase OHV/ATV related human disturbances for >20 square miles of wildlife habitats.

- The opening of an access through Malm Gulch could influence wildlife disturbances over an area >100 square miles, i.e., from U.S. Hwy 93 to Hwy 75 to the Spar Canyon Road to the intersection of these two highways near Challis; most of the roads/trails surrounding Malm Gulch are already accessible from other points so the connection via Malm Gulch only contributes to a "loop" or provides start/end points for OHV traveling. The extent of the potential for additional disturbances from human-wildlife interactions is unknown.
- Tourist activity at the Mackay Mine Hill and the BLM's Lost River access could contribute to increased human activities around the Blaze Canyon area; as the City of Mackay markets the Mine Hill tour the potential increases for public use of adjacent areas which could be expected to affect wildlife resources.

Cumulative Effects of Alternative 3:

In General:
Under Alternative 3, the creation of a list of general principles and criteria in route determination and selection would provide a tool for future BLM decisions when faced with proposals for changes to the existing road and trail system. Consideration for new routes or changes to existing routes would be given for travel management at a landscape level, with emphasis given to reducing wildlife habitat fragmentation, reducing parallel and redundant routes, and protecting riparian areas and wetlands, which would yield benefits to water quality, fisheries and riparian area-dependent species. Travel restrictions in WSAs, ACECs, and seasonal closure areas would remain in effect, reducing human interactions with wildlife and sensitive species. Additionally, the creation of an open area near the community of Challis could have a slight effect on social and economic opportunities of the community.

Cumulative impacts to *riparian and wetland areas; soils; threatened endangered or sensitive fish/fisheries;* and *water quality* are the same as those described under Alternative 1 above.

Recreation/Wilderness/Visual Resources:
The general trend in transportation management by federal agencies is a progression from 'open to cross country motorized travel' to 'limited to designated routes'. This alternative makes the greatest changes to the existing transportation system to the benefit of many different types of recreation. The cumulative impacts to recreation under this alternative include a continuing restriction on motorized recreationists through a designated route system. This action, combined with similar restrictions occurring or likely to occur on other BLM jurisdictions and USFS lands, is akin to the tip of the iceberg for motorized users. As more and more federal lands transition from 'open' to 'limited to designated', these users would be expected to feel substantial impacts to their opportunities for unrestricted travel. However, route specific actions designed to provide key motorized loop opportunities would also result in an improved system of motorized trails across the CFO area.

Conversely, this progression toward designated routes would be expected to equally impact non-motorized recreationists as more acreage is removed from the 'open' designation across the

region (note, there are currently no 'open' areas in the CFO area, though there are 'open' areas on adjoining USFS and BLM jurisdictions).

The cumulative impacts of this alternative, and other similar actions described above, would be expected to slow the incremental impacts to both visual resources and wilderness values such as naturalness and opportunities for primitive and unconfined recreation. Any actions which result in new construction or ground disturbance (such as mining, range improvements, recreation site development, etc.) result in some amount of reduction of naturalness in WSAs and increased visual contrasts to the characteristic landscape. Changes in grazing systems which result in improved range conditions, successfully reclaimed mining activity, and opportunities for route reduction (as described in this alternative) cumulatively result in increased naturalness and reductions in visual contrasts.

Tribal Treaty Rights and Present Day American Indian Use:
Cumulative effects of Alternative 3 are expected to be similar to those described under Common to All Alternatives and Alternative 2.

Wildlife, Threatened/Endangered Animals, Sensitive Animals, Migratory Birds:
The cumulative effects under Alternative 3 would include impacts identified under Cumulative Effects Common to All Alternatives, and be similar to Alternative 2 with the following exceptions which would not occur:

- The Birch Creek, the Challis to LOYF Interpretative Center, and the Challis Golf Course area actions would not connect to the Keystone Mine/Bayhorse townsite. The elimination of these routes, as well as not converting the North Fork of Birch Creek to an ATV route, would likely reduce the potential for human-wildlife interactions, and thereby lower the associated wildlife impacts; however, the extent of any benefits are unknown. The North Fork of Birch Creek would still provide a connection to the Keystone Mine as an existing motorcycle route, so the potential for wildlife-human interactions would continue.
- The Malm Gulch access would not connect to other road/trails but the level of any reduction in human-wildlife interaction is unknown.

As they pertain to wildlife, the other analyzed actions and the impacts under Alternative 3 do not dove-tail with activities associated with other governments or on private lands, so the effects are not "cumulative" by the definition. The portions of Alternative 3 detailing the *General Principles and Criteria*, likely would reduce the potential negative affects to wildlife and/or their habitats.

Summary:
No significant individual or cumulative impacts are anticipated as a result of any of the alternatives described above.

CONSULTATION AND COORDINATION

Governments, Agencies and Persons Consulted:

Shoshone-Bannock Tribes, Fort Hall Business Council: Letters requesting early tribal participation in the Challis Field Office travel management process, including requests for information on areas of special tribal concern and routes of special importance to the Tribes were sent to the Fort Hall Business Council and tribal technical staff on 7/2004 and again on 7/2006. BLM and Shoshone-Bannock tribal technical staff met on October 7, 2005 to discuss the basic TMP planning process, and tribal staff was again invited to participate in the TMP process. To date, no final response from the Shoshone-Bannock Tribes has been received. General concerns about maintaining access to all federally managed lands and addressing impacts of transportation activities on cultural resources were expressed by Chad Colter, Shoshone-Bannock tribal member and tribal Fisheries Director, during a 2006 Idaho Falls District Resource Advisory Committee meeting.

Scoping comments: In September and October of 2006, a BLM Resource Advisory Council (RAC) subgroup hosted three public meetings in Challis, May and Mackay to gather input on how the BLM should proceed with the Travel Management Planning process. About 50 people attended the meetings, providing comments and observations. In November 2006, the BLM followed up by hosting four more public meetings in Challis, Clayton, May, and Mackay to look at a landscape approach to travel planning. All secondary roads were taken off of the maps and the public was asked "what recreational activities they wanted, where they liked to do it, why the activity was is important to their experiences, and how they would like to access the area." About 20 people attended the November 2006 BLM public meetings.

Comments received from "Focus Areas" outreach: BLM staff considered an alternative that would create "Recreation Focus Areas" across the CFO area. These Focus Areas were designed to provide a wide range of potential management options for recreational use of roads and trails by managing recreation based settings. Eleven emailed comments were received on this proposal. However, it was determined that, based on these comments and guidance from other experienced BLM specialists, this approach amounted to creating Land Use Plan Level allocations not discussed in the RMP, so it was decided not to analyze this further. BLM retained elements of this approach in the criteria under Alternative 2.

U.S. Forest Service: The CFO met formally and informally with Salmon-Challis National Forest managers and Karen Gallogly, Travel Planning Lead, as well as with managers of the Sawtooth National Recreation Area. Through these meetings and informal discussions, the agencies came to an understanding of the need to provide consistent direction for roads and trails that connect at agency boundaries, develop a consistent numbering system to reduce public confusion of primary routes, and provide public education about the need for riders to stay on existing trails.

Idaho Department of Parks and Recreation (IDPR): IDPR is a cooperating agency for the purpose of this travel planning effort. The IDPR proposed the creation of a new state park in the Bayhorse mining area following the state's acquisition of private land holdings. The new state park site is adjacent to BLM and USFS lands, and IDPR has proposed using BLM and USFS

trails as extensions of the state park's trail system. The federal agencies immediately recognized the need to consult, and value of consulting, with IDPR for long-term management of the state park site. As a result of several formal and informal meetings, BLM has included proposed roads and trails that would fit into IDPR's desired system between the Bayhorse mining area and townsite and the Land of the Yankee Fork Interpretive Center.

Idaho Department of Lands and Idaho Department of Fish and Game were consulted during the preparation of this document.

Consultation with all of these agencies on travel and transportation management is expected to continue past the decision stage of this environmental document.

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Glossary of Terms, Acronyms:

ACEC: Area of Critical Environmental Concern

ACHP: Advisory Council on Historic Preservation

AML: Appropriate Management Level

ATV: All Terrain Vehicle. per House (Idaho) Bill 204, an ATV is defined as any recreational vehicle with three (3) or more tires, under eight hundred fifty (850) pounds and forty-eight (48) inches or less in width, having a wheelbase of sixty-one (61) inches, traveling on low pressure tires of ten (10) psi or less.

BLM: Bureau of Land Management, an agency of the U.S. Department of the Interior.

BMP: Best Management Practices

BURP: Beneficial Use Reconnaissance Program

CFO: Challis Field Office

CSGLWG: Challis Sage Grouse Local Working Group

CTMP/TMP: Comprehensive Travel Management Plan, Travel Management Plan

CWMA: Cooperative Weed Management Area

ERMA: Extensive Recreation Management Area

ESA: Endangered Species Act

HMA: Herd Management Area

IDPR: Idaho Department of Parks and Recreation

IMP: Interim Management Policy

LAU: Lynx Analysis

LCAS: Lynx Conservation Assessment and Strategy

LOYF: Land of the Yankee Fork Interpretive Center, a unit of the Idaho Department of Parks and Recreation.

MIM:

Motorcycle/Motorbike: per House (Idaho) Bill 204, a Motorbike is defined as any self-propelled two (2) wheeled motorcycle or motor-driven cycle, excluding tractor, designed for or capable of traveling off developed roadways and highways and also referred to as trailbikes, enduro bikes, trials bikes, motocross bikes or dual purpose motorcycles.

NHPA: National Historic Preservation Act

NOAA: National Oceanic and Atmospheric Administration

NMFS: National Marine Fisheries Service

NRHP: National Register of Historic Places

OHV: Off Highway Vehicle (previously called ORV, Off Road Vehicle). Defined by the state of Idaho as: Any motorized vehicle capable of, or designated for travel on or immediately over land, water, or other natural terrain, excluding: 1) any non-amphibious registered motorboat; 2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; 3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; 4) vehicles in official use; 5) any combat or combat support vehicle when used for national defense.

Open Area: An area where all types of vehicle use is permitted at all times, anywhere in the area subject to the operating regulations and vehicle standards set forth in 43 CFR 8341 and 8342.

PFC: Proper Functioning Condition

RAC: Resource Advisory Council. The RAC is a group of citizens representing a variety of interests whose mission it is to advise the BLM, as per the Federal Advisory Committee Act.

RMP: Resource Management Plan

ROD: Record of Decision

ROW: Right of Way

SHPO: State Historic Preservation Officer (or Office)

SNRA: Sawtooth National Recreation Area, a unit of the Sawtooth National Forest (USFS).

SRMA: Special Recreation Management Area

TES: Threatened, Endangered, or Sensitive (species)

TMA: Travel Management Area

TMDL: Total Maximum Daily Load

USFS: United States Forest Service, an agency of the U.S. Department of Agriculture

USSRAMP: Upper Salmon River Recreation Area Management Plan

USFWS: United States Fish and Wildlife Service

VRM: Visual Resource Management

WSA: Wilderness Study Area

Attachments

Attachment 1: Challis Resource Area Resource Management Plan Travel Management Guidance (July 1999)

Section	Title/Goal #	Decision #	Page #
ACEC/RNA	Antelope Flat/1	2	8
	Birch Creek/1	2	8
	Cronk's Canyon/1	5	9
	Donkey Hills/1	2	10
	Donkey Hills/1	9	11
	Dry Gulch/1	4	11
	East Fork Salmon River Bench/1	4	12
	Herd Creek/1	9	13
	Lone Bird/1	2	13
	Malm Gulch/Germer Basin/1	4	14
	Pecks Canyon/1	4	15
	Pennal Gulch/1	2	15
	Sand Hollow/1	3	16
	Summit Creek/1	2,3	16
	Thousand Springs/1	6	17
Cultural Resources	1	9 (a), (b), (c), (d)	19,20
Fire Management	1	5 (c) 1	22
Land Tenure and Access	5	1 (a), (b), (c), (d), (e)	36
OHV	Entire section	Entire section	47-49
Recreation Opportunities and Visitor Use	1	3 (a)	52
	1	4	53
	1	5	53

Section	Title/Goal #	Decision #	Page #
	1	10	54
	2	2	54
	3	Entire section	55
	4	1	56
Transportation	Entire section	Entire section	62,63
Upland Watershed	1	2	65
	1	10	66
Water quality	1	5,6	68
Wilderness Study Areas	1	1	69
	1	3	69, 70
	1	4	70
Wild Horse and Burro	1	5	71
Wildlife	2	6	73
Attachment #8: Design Specifications	General/1		98
	Forest Mgmt-Road Construction and Rehab.	3	100

Attachment 2: TMA Goals

Travel Management Area	Resource Value	Existing Physical/ Administrative Setting*	TMA Goal
Antelope Flat/ Lone Bird	Greater sage-grouse Priority Area. Cultural. Rare Plants	BC: 8% MC: 63% FC: 19% R: 10%	Progress toward BC administrative setting.
Barton Flat	Greater sage-grouse Priority Area	BC: 3% MC: 61% FC: 36%	Progress toward BC administrative setting.
Birch Creek	Crucial winter range and lambing for bighorn sheep. Rare Plants	BC: 21% MC: 54% FC: 7% R: 18%	Maintain existing administrative setting within +/- 5%
Borah Peak	Solitude, primitive and unconfined recreation, scenic values.	BC: 5% MC: 76% FC: 1% R: 19%	Progress toward Primitive physical setting.
Burnt Creek	Solitude, primitive and unconfined recreation, scenic values.	BC: 43% MC: 57%	Progress toward Primitive physical setting.
Challis Bridge Open Area	OHV Training and Educational Site	R: 100%	Maintain existing physical setting.
Morgan/Hat/Fuller/Cronk's Canyon	Greater sage-grouse Priority Area. Relict bighorn sheep population. Pristine natural plant communities.	BC: 24% MC:65% FC: 8% R: 2%	Progress toward BC administrative setting.
Donkey Hills/Upper Pahsimeroi	Crucial elk habitat. Greater sage-grouse Priority Area	BC: 12% MC: 79% FC: 10%	Progress toward BC administrative setting.
East Fork Area (Corral-Horse Basin/Jerry Peak/Jerry Peak West/ Boulder Creek)	Solitude, primitive and unconfined recreation, scenic values.	BC: 34% MC: 53% FC: 13% R: <1%	Progress toward Primitive physical setting.
Germer Basin/Malm Gulch	Rare plants. Unusual plant communities. Petrified forest. Fragile soils.	BC: 27% MC: 66% FC: 1% R: 6%	Progress toward BC physical setting.
Goldberg	Solitude, primitive and unconfined recreation, scenic values	BC: 6% MC: 90% FC: 4%	Progress toward Primitive physical setting.
Grouse Creek/Morse Creek	Greater sage-grouse Priority Area	BC: 2% MC: 73% FC: 24%	Progress toward BC administrative setting.
Mackay Bar	Greater sage-grouse Priority Area	BC: <1% MC: 69% FC: 10% R: 21%	Progress toward BC administrative setting.
Peck's Canyon	Excellent condition plant	BC: <1%	Maintain existing

Travel Management Area	Resource Value	Existing Physical/ Administrative Setting*	TMA Goal
	communities	MC: 92% FC: 8%	physical setting within +/- 5%
Pennal Gulch	Rare plants. Unique riparian area. Unique and representative vegetation	BC: 7% MC: 79% FC: 12% R: 2%	Maintain existing physical setting within +/- 5%
Summit Creek	Unique wetland system. Rare Plants. Special Recreation Values.	F: 100%	Progress toward BC administrative setting.
Thousand Springs	Unique wetland ecosystem. High value for waterfowl.	BC: 49% MC: 16% R: 35%	Maintain existing physical setting within +/- 5%
Swenson Basin	Greater sage-grouse Priority Area	BC: 3% MC: 71% FC: 26%	Progress toward BC administrative setting.

*P=Primitive
BC= Back Country
MC=Middle Country
FC= Front Country
R= Rural
U= Urban

See Natural Resource Recreation Setting Matrix for definitions

Attachment 3: Alternative Comparison

General Guidance

	Alternative 1	Alternative 2	Alternative 3
Fix Attributing/Mapping Errors			
Close Restricted Accesses in WSA/ACEC			
Change Nomenclature to match current BLM guidance			
Provide appropriate public and administrative access			
Designate a subset of existing road system, including designating specific uses on specific routes when appropriate			
Identify Maintenance Intensities as Low, Moderate, or High			
Close Restricted Access Routes behind privately owned lands unless Easement granted			
Attempt to match BLM routes to USFS routes in both numbering system and designated use			
Design all new roads for sustainability and with respect for setting			
Provide quality recreation opportunities to a variety of users. **(Criteria)**			
Develop a system of roads which can be effectively communicated to users **(Criteria)**			
Reduce fragmentation of wildlife habitat **(Criteria)**			
Reduce impacts to riparian areas and wetlands **(Criteria)**			
Reduce parallel routes**(Criteria)**			
Consider conservation measures for OHV disturbance as identified in the Idaho Sage Grouse Conservation Strategy (p.4-70) **(Criteria)**			
Consider closure of private access spurs unless BLM ROW is sought by private land owner(s) **(Criteria)**			
Develop Community Trail SRMA (Plan amendment)			
Designate gravel pit adjacent to Challis Bridge Day Use Site as "open" (Plan amendment)			
Eliminate cross country travel for game retrieval (Plan Amendment)			

Attachment 4: Literature review of Wildlife Impacts

An extensive literature search was conducted to ascertain how wildlife in general may be affected by the transportation elements being considered in this EA, i.e., roads, trails, ATVs, non-motorized conveyance, and by human-wildlife interactions; greater than 100 articles (from abstracts to entire reports) were reviewed. The vast majority of published research studies covered a few years of observations, some of the literature performed an analysis on other studies and all research at least included corroborating works, and a few papers would be categorized as "opinion." In the review of the relevant data, every effort has been made to give complete, individual credit to all of the authors. Each reviewed paper not specifically cited in the wildlife sections but still considered in the evaluation is identified in a separate section of the References.

Some of the considered materials included annotated bibliographies or literature reviews that focused on previous evaluations of other federal actions involving off-road activities. Noted here are some of the "key findings" or "summary of ecological effects of roads" or "conclusions" as provided by the authors:

From Ouren et al. (2007) – an assessment by the U.S. Geological Survey of environmental effects of OHVs on BLM-administered lands -

> "Reduced habitat connectivity may disrupt plant and animal movement and dispersal, resulting in altered population dynamics and reduced potential for recolonization if a species is extirpated from a given habitat fragment. Wildlife is also directly affected by excessive noise (decibel levels/noise durations well above those of typical background noise) and other perturbations associated with OHV activities. Disturbance effects range from physiological impacts – including stress and mortality due to breakage of nest-supporting vegetation, collapsed burrows, inner ear bleeding, and vehicle-animal collisions- to altered behaviors and population distribution/dispersal patterns, which can lead to declines in local population size, survivorship, and productivity."

From Gucinski et al. (2001) – a synthesis of scientific information (439 references) on forest roads; this is a USFS document of extensive detail, covering multiple resource values -

- "Natural populations of animal species are affected by habitat fragmentation caused by the presence of roads and by avoidance of areas near roads by some species and attractiveness to those areas by other species. Fragmented populations can produce increased demographic fluctuation, inbreeding, loss of genetic variability, and local extinctions. Roads fragment habitat by changing landscape structure, dissecting vegetation patches, increasing the amount of edge, decreasing interior area, and increasing the uniformity of patch characteristics."
- "In general, road building fragments habitat and created habitat edge, thereby modifying in favor of species that use edges."
- "Forest roads create corridors by which predators, especially people, can enter the forest environment and affect wildlife populations. Nest predation of songbirds may increase by predators attracted to edges."

- "In summary, no terrestrial vertebrate taxa seem immune to the myriad of road-associated factors that can degrade habitat or increase mortality…The result given here would generally apply to any area."

From Stokowski and LaPointe (2000) – an annotated bibliography and research assessment on the environmental and social effect of ATVs and ORVs

- " Regardless of vehicle type (ATVs, ORVs [off-road vehicles], snowmobiles), research generally show very similar impacts; difference in impact level are due more to intensity of use or use characteristics, in combination with the level of fragility of the affected environment."
- "Wildlife are negatively impacted by the presence and noise of ATVs, ORVs, and snowmobiles, although some mammals (deer, for example) may become, over time, habituated to these vehicles. Snow compaction also affects the survival and activities of small mammals."
- "The mean distance moved by the elk in response to the ATV was more than twice the pedestrian mean" (Vieira 2000).

From Spellerberg (1998): a review of 388 articles -

- "The loss of habitat and change in habitat extends beyond the edge of the road" or as also stated "The changes in the biological communities may extend for varying distance from the road edge."
- "There is fragmentation of habitat and this in turn has implications for habitat damage and loss, for dispersal and vagility of organisms, and for isolation of populations."

From Trombulak and Frissell (2000) -

- "We reviewed the scientific literature on the ecological effects of roads and found support for the general conclusion that they are associated with negative effects on biotic integrity in both terrestrial and aquatic ecosystems."
- "Roads alter animal behavior by causing changes in home ranges, movement, reproductive success, escape response, and physiological state."
- "Our review underscores the importance to conservation of avoiding construction of new roads in roadless or sparsely roaded areas and of removal or restoration of existing roads to benefit both terrestrial and aquatic biota."

From U.S. Forest Service (USFS) (2000) on a draft EA for some proposed road closures specifically to benefit wildlife -

- "When food or living space are altered, short-term effects on the behavior, survival, reproduction, and distribution of individual animals will likely cause long-term reactions throughout an animal community."
- The significance and magnitude of any effect are related to the extensiveness, intensity, and timing of the activity."
- "Human intrusion, the mere presence of people in the environment, has been shown to adversely affect avian populations in many ways."
- "Human intrusion has the potential to cause impacts that accumulate through time and that are manifested as progressive declines in avian richness and abundance."
- "Human disturbance to one animal often can affect an entire community."

Other literature was focused on impacts to habitats, rather than on any particular wildlife species. Most of the literature evaluated impacts in reference to "edge effect, patches, fragmentation, or corridors." Discussion and conclusions from some of the documents are as follows:

From Bender et al. (1998) -

- "Habitat fragmentation, by definition, is an event that creates a greater number of habitat patches that are smaller in size than the original contiguous tract(s) of habitat."
- "fragmentation effects can potentially compound the effects of pure habitat loss, often producing an even greater population decline."
- "As fragmentation increases within a landscape, migratory species will generally suffer less of a decline in population size than resident species." As discussed in the paper, this conclusion is "contrary to current conviction."

From Hawbaker et al. (2006) -

- "Increases in road density increase edge exposure in forests."
- "Fragmentation was largely driven by increases in road density."
- "Roads remove habitat, alter adjacent areas, and interrupt and redirect ecological flows."

From Crist et al. (2004) on roadless areas -

- "Scientific studies show that use of ORVs greatly magnifies the effects of human disturbance on wildlife species, primarily because the vehicles can travel across a wide range of landscapes and because of their noise."
  "elk were displaced within 400 meters (1,312 feet) of roads" (Ward 1976).

From The Wilderness Society (TWS 2006) addressing travel planning by BLM -

- "Habitat fragmentation from roads presents a major threat to the survival of wildlife populations throughout the United States."

From Fahrig (1997 and 2003) comparing habitat loss vs habitat fragmentation on population extinction -

- "Results indicate that the effects of habitat loss far outweight [sic] the effects of habitat fragmentation."
- "Empirical studies to date suggest that habitat loss has large, consistently negative effects on biodiversity. Habitat fragmentation per se has much weaker effect on biodiversity that are at least as likely to be positive as negative." This conclusion was based on 17 studies.

From McDonald and St. Clair (2004) on the effects of artificial and natural barriers on the movement of small mammals -

"Barriers that dissect continuous habitat, such as roads, initiate the process of habitat fragmentation and can filter or eliminate movement through otherwise pristine areas."

From Zhongiun et al. (2005) on ecological effects of roads on terrestrial animals -

"There are five general effects: mortality from road construction and collision with vehicles, which has been a pimary lethal factor for vertebrates; barrier to movements between conspecies populations and complementary resources for individuals of

terrestrial animals; road avoidance of forest-interior and edge-sensitive species; reproduction depression of the avian; and biotic invasion facilitated by dispersal of small wildlives [sic wildlife] along road edge."

From Stritthold and Dellasala (2001) on the importance of roadless areas in biodiversity conservation -

- "Although some species may benefit from the physical changes and fragmentation caused by roads, their overall and cumulative effect in natural forest landscapes is negative, often seriously so."
- "Our fragmentation results demonstrated the importance of roadless areas to regional connectivity.
- "If small roadless areas are important in the Klamath-Siskiyou, where a high proportion of larger roadless areas exist, then they are likely to be even more important in regions where the majority of roadless areas are small…."

From Reed et al. (1996) on the contribution of roads to forest fragmentation -

- "These factors [associated with road edge, i.e., air pollution, soil erosion, direct vehicular fatalities, disturbance by human activities, and exotic species introduction] combine to create particularly deleterious habitat situations, and endanger the existence and perpetuation of all native species (interior and edge species alike) on the landscape."
- "Even though roads occupy a small fraction of the landscape in terms of land area, their influence extends far beyond their immediate boundaries."

From Brown and Laband (2006) on species imperilment associated with human activities -

- "In general, our results point to rising levels of human activity – and not some particular (e.g., sprawling) distribution of human activity – as the most relevant anthropogenic factor explaining biodiversity loss in the United States."
- Of interest is the point made that "Policy makers and others may wonder how many more (or fewer) species would be imperiled if road presence were increased (or decreased) by a specific amount."

From Forman and Alexander (1998) on roads and their major ecological effects -

- "Road avoidance, especially due to traffic noise, has a greater ecological impact [than roadkills]."
- "The still-more-important barrier effect subdivides populations, with demographic and probably genetic consequences."
- "Road networks interrupt horizontal ecological flows, alter landscape spatial pattern, and therefore inhibit important interior species."

From Yahner (1988) on wildlife communities near edges -

- "species diversity generally increase near habitat edges."
- "Edges also may be detrimental to species requiring large undisturbed areas because increases in edge generally result in concomitant reductions in size and possible isolation of patches and corridors."

The preponderance of literature reviewed focused on ungulate species, most specifically Rocky Mountain elk, mule deer, pronghorn antelope and to a lesser extent Rocky Mountain bighorn sheep. One on-going research effort with elk and mule deer is at the Starkey Experimental Forest and Range in northeast Oregon. Five of the reviewed studies were associated with this 40 square mile facility: two specifically addressed off-road recreation and wildlife responses to human disturbance (Wisdom et al. 2005[a], and Preisler et al. 2006), two included roads and traffic with other research emphasis, i.e., timber production and thermal cover, breeding efficiency of bull elk, and competition with cattle (Wisdom et al. 2005[b], and PNRS 2006), and one focused on ungulate herbivory (Vavra et al. 2005). Some of the conclusions were:

From Wisdom et al. (2005[a]) -

- "Consequently, off-road recreational activities like those evaluated [ATV, mountain bikes, horseback and hiking] in our study appear to have a substantial effect on elk behavior…Animal energy budgets also may be adversely affected by the loss of foraging opportunities while animals respond to off-road activities, both from increased movements, and from displacement from foraging habitat."
- "Our results show that one pass per day by any of the four off-road activities causes increased movement rates and flight responses by elk."
- "In contrast to elk, mule deer showed little measurable response to the off-road treatments.
- For elk the probability of a flight response was $\geq$0.50 for all of the recreational activities when the animals were 100 meters (109 yards) away and 0.62 for ATVs alone. For ATVs at 500 meters (545 yards) and 1000 meters (1090 yards) the flight responses were 0.43 and 0.25, respectively.

From Preisler et al. (2006) -

- "…we observed that elk appeared to respond at relatively long distances (>1000 m) to ATVs, and that the estimated probability of flight appeared to be higher when elk were closer to the ATV routes, even when the distance to an ATV was large."
- "…we detected a small but significant response when the ATV was 3000 m from elk, well beyond the observational range of the observers in forested habitats."

From PNRS (2006) "key findings": note that "the study area [at Starkey] had about 2.5 miles of open road per square mile." -

"Elk avoid roads open to motorized traffic, and their avoidance increases as the rate of traffic increases. Mule deer avoid elk and thus can be displaced into areas least used by elk, such as areas near roads with the most traffic."

Other literature that considered ungulate responses and/or distances include the following with their respective observations:

From Taylor and Knight (2003) – considered bison (*Bison bison*), mule deer and pronghorn antelope responses to hiking and biking -

- "Outdoor recreation has the potential to disturb wildlife, resulting in energetic costs, impacts to animals' behavior and fitness, and avoidance of otherwise suitable habitat."

- "Mule deer showed a 96% probability of flushing within 100 m of recreationists located off trails; their probability of flushing did not drop below 70% until perpendicular distance reached 390 m."
- The alert distance, flight distance and distance moved by mule deer off trails in response to hiking disturbances were "227.54 m, 149.63 m and 189.49 m, respectively." Similar response distances were observed for biking.
- In response to hiking disturbances, pronghorn antelope appeared to be more "alert (at 330.04 m) and flushed slightly sooner than mule deer (at 233.20 m) but moved a shorter distance (156.19 m)." Again, response distances were similar for biking disturbance.
- "Animals responded most to recreationists above them and least to recreationists below them."
- In conclusion, "we found no biological justification for managing mountain biking any differently than hiking, if management decisions were to be based only on wildlife responses for each activity."

From Miller et al. (2001) – considered three avian species and mule deer "exposed to a pedestrian, a pedestrian accompanied by a dog on a leash, a dog along (only for grassland birds), on and away from recreational trails -

> "For all species, area of influence, flush distance, distance moved, and alert distance (for mule deer) was greater when activities occurred off-trail verses on-trail."

From Rost and Bailey (1979) – considered mule deer and elk responses as determined by animal "distribution in relation to roads on winter ranges" -

> "Deer and elk avoid roads, particularly areas within 200 m of a road. Road avoidance was greater (1) east, rather than west, of the continental divide, (2) along more heavily traveled roads, (3) by deer, when compared to elk, and (4) for deer in shrub habitats when compared to pine and juniper habitats."

From Lyon (1979) – considered elk as influenced by roads and cover -

- "Elk in western Montana tend to avoid habitat adjacent to open forest roads. The area avoided increases where the density of tree cover is low."
- "The area of avoidance has been reported as one-fourth to one-half mile from the road, depending on the amount of traffic, road quality, and density of cover near the road."

From Lyon (1983) – considered a model "to predict habitat effectiveness for elk" in Washington, Montana and Idaho -

- "Evidence is consistent and overwhelming that vehicular traffic on forest roads evokes an avoidance response by elk."
- "Even though habitat near roads is not denied to elk, it is not fully utilized."
- "In the seven areas with an average of road density of five and a half miles per square mile, elk use was 18.8 percent of potential."
- The "cumulative effectiveness" of habitat use increased both with the distance from a road and as road density decreased.

From Watson (2005) – a literature review focused on habitat fragmentation and the effects of roads on wildlife and habitats -

- "roads reduce big game use of adjacent habitat from the road edge to over 0.5 miles away" (Berry and Overly 1976)
- "elk occurred in greater densities in roadless areas compared to roaded areas" (Thiessen 1976)

From Thomas et al. (1979) – considering wildlife habitats in managed forests

> "Roads left open to vehicular traffic will adversely affect use of the area by elk and, to a lesser extent, by deer."

Gaines et al. (2003) "conducted a literature review [of 238 articles] to document the effects of linear recreation routes (roads, motorized trails, nonmotorized trails, designated and groomed ski and snowmobile routes) on wildlife and to assess current level of human influence on focal wildlife species habitats on a portion of the Okanogan and Wenatchee National Forests in the state of Washington." The general conclusions included the following:

- "The most common reported interactions included displacement and avoidance where animals were reported as altering their use of habitats in response to roads or road networks."
- "Disturbance at a specific site was also commonly reported and included disruption of animal nesting, breeding, or wintering areas."
- "The interactions of the focal species and motorized or nonmotorized trails were quite similar."

From Ream (1979) concerning backcountry recreationists, and therefore more appropriate for consideration of potential impacts associated with trail-activities, i.e., hikers and horseback -

> "Flight distances from man vary by species but are further influenced by distance to escape cover, and the age, sex, and number of animals. Animals with young are less tolerant of disturbance than groups of mature animals."

From Altmann (1958) on flight distances influence for elk and moose -

> "Factors influencing the flight distance in my wapiti and moose studies were: a seasonally changing threshold of sensitivity due to reproductive and nutritional status; variations due to type of habitat; and variations due to the specific experience of the individual or the group."

The issue of road density (miles of road per square mile of surface area), core areas, and distance to a road are functions that have been considered in research, as mentioned above in Lyon (1983), and is further discussed in the following, with some examples:

From Sawyer et al. (2007) -

- "the effectiveness of elk habitat in forested regions declines when road densities exceed 0.62 km/km^2 (1 mi/mi^2) (Lyon 1983, Wisdom et al. 1986, and Thomas et al. 1988).
- road density "significantly influenced both summer and winter habitat use patterns" at a value of only "0.17 km/km^2 (<0.11 mi/mi^2)."

From Thomas et al. (1988) -

First, elk "habitat effectiveness is an index accounting for elk-habitat conditions on winter ranges in managed forests. The index relates to potential levels of elk use of habitats, elk productivity, and suitability of habitats for elk- that is a biologically based index." Figure 2 graphed the relationship of "habitat effectiveness" against miles of road/mile^2 of habitat; basically, the decline was most severe from 0-1 mile with "habitat effectiveness" dropping from 1.0 (100%) to around 0.65 (65%), or a change of 35%; from 1 to 6 miles/mile^2 the decline is approximately 10% per mile.

From Tinker et al. (1998) on fragmentation -

"…roads which were more evenly distributed across a watershed had a greater effect on landscape pattern than did those which were densely clustered." This highlights the importance of the need to determine exactly how the mi/mi^2 or other density index is distributed across the analyzed landscape.

From Wyoming Game and Fish Department (WGFD 2004) considering an elk habitat conservation plan -

"Elk selected areas that averaged 0.41 mi. rd/mi^2" in the adjusted model from the original model which calculated the average to be "0.43 mi. rd/mi^2."

Three other numerical values associated with roads are 1) the distances from roads that have reduced big game use, thereby effectively removing potentially suitable habitat, 2) the effect of the amount of traffic associated with a road and how big game respond, and 3) the extent of displacement.

From Forman (2000) -

The "road –affect zone for secondary roads is 200 m wide, a rough estimate for a highly variable zone."

From Thomas et al. (1988) -

"very rare use of roads seems unlikely to influence elk use significantly" which translate to the cause of disturbance is the road, not the traffic.

From Thomas et al. (1979) -

"decreased use of areas adjacent to roads for distances ranging from 0.4 to 0.8 km, or 0.25 to 0.50 miles" (Perry and Overly 1977, Ward 1976).

From Smith (2007) -

"Idaho Department of Fish and Game states "The degree of displacement varies with the type of activity and level of use."

From Canfield et al. (1999) that reviewed effect on ungulates -

- "As the size of the area affected by recreationists expands to fill an increasing proportion of the animals' summer range, the potential for impact increases because options decline for acquiring high-quality nutrition with the least possible effort."

- "Where summer recreational activities approach high levels…impacts on reproductive performance of ungulate populations may be expected."

From Pelletier (2006) that monitored ungulate (elk, mule deer, white-tailed deer [*Odocoileus virgianus*], and bighorn sheep behavior relative to traffic volume in a protect area (Sheep River Provincial Park, Alberta, Canada) -

- "Motorized traffic appeared to have a negative effect on the behavior of the three deer species studied."
- "Bighorn sheep did not appear to be as affected by motorized traffic as cervids in their area-use patterns, possibly because very few areas used by bighorns in the Park are out of sight of the road.

The overwhelming majority of the reviewed literature provides the evidence for the conclusion that human activities on, and off, roads have the potential to negatively affect wildlife. Beyond what has been stated previously, the question(s) becomes "how is wildlife affected when disturbance does occur?" The conclusions from some articles include the following:

From Boyle and Samson (1985) - considered 568 references concerning the effects of nonconsumptive outdoor recreation on wildlife -

"Negative effects were reported most commonly [81% as cited in Miller et al. 1998] for most activity types and all major taxa" and "reports of ***positive*** effects were few" [emphasis added].

From Kingsmill (2004) -

- "ATV riders create large networks of trails, which fragment natural areas and decrease the amount of usable habitat. This habitat fragmentation affects feeding and movements, and increased noise leads to lower reproduction rates in wild animals."
- "Research shows that noise and harassment increased metabolic rates, stress, and energy expenditures in animals."

From Sawyer et al. (2007) -

"Research in other elk populations has suggested that moderate levels of human disturbance during the calving season may result in reduced reproductive success" (Phillips and Alldredge 2000, Shively et al. 2005).

From Smith (2007) -

- "increased human activities influence how effectively mule deer can use available habitat; and thereby influences reproduction, fawn survival, buck vulnerability and ultimately deer numbers."
- "Displacement from preferred habitats can affect diet and energy conservation…"

From Wisdom et al. (2005[a]) -

- "if the additional energy required [by elk] to flee from an off-road activity reduces the percent body fat of elk below 9 percent as animals enter the winter period, the probability of surviving the winter is reduced" (Cook et al. 2004).

- As pertains to elk -"Animal energy budgets also may be adversely affected by the loss of foraging opportunities while animals respond to off-road activities, both from increased movements, and from displacement from foraging habitat."
- As pertains to mule deer -"it is possible that deer may respond to an off-road activity by seeking dense cover, rather than running from the activity. If mule deer are spending more time in dense cover, in reaction to any of the off-road activities, this could result in reduced foraging opportunities, and a subsequent reduction in opportunities to put on fat reserves during summer that are needed for winter survival."

From Radle (no date) -

- "Most researchers agree that noise can effect [affect] an animal's physiology and behavior, and if it becomes a chronic stress, noise can be injurious to an animal's energy budget, reproductive success and long-term survival."
- "The inability of creatures to successfully communicate or otherwise employ their auditory senses is detrimental to the long-term survival of these displaced creatures and the overall biological integrity of the environment" (Krause 1993).
  "Physiological responses to noise include an increased heart rate, and altering the metabolism and hormone balance. Behavioral reactions consist of head raising, body shifting, trotting short distances, flapping of wings (birds), and panic and escape behavior. According to the text, the coupling of these effects has the potential to cause bodily injury, energy loss, a decrease in food intake, habitat avoidance and abandonment, and reproductive losses" (Fletcher and Busnel 1978; Radle reference as Busnel and Fletcher).

From Jaeger et al. (2005) predicting animal road avoidance behavior with a model -

- "Roads and traffic affect animal populations detrimentally in four ways: they decrease habitat amount and quality, enhance mortality due to collisions with vehicles, prevent access to resources on the other side of the road, and subdivide animal populations into smaller and more vulnerable fractions [fragmentation]."
- "Noise avoidance results in an additional loss of habitat because the animals have reduced densities in the road noise zone. Therefore, noise avoidance adds a band of less hospitable area on either side of the road."

From MacArthur et al. (1982) concerning bighorn sheep -

- "Cardiac and behavioral responses of sheep (4 ewes, 1 ram) to an approaching human were greatest when the person was accompanied by a dog or approached sheep from over a ridge."
- "Reactions to road traffic were minimal as only 8.8% of vehicles passes elicited HR [heart rate] responses."
- A key note that should be considered when observing the behavior of any wildlife is the statement that "Responses to disturbance were detected use HR telemetry that were not evident from behavioral cues alone."

From Storlie (2006) as a Thesis on female Roosevelt elk (*Cervus elaphus roosevelti*) and human disturbance -

- "Persistent human disturbance may ultimately lead to increased energetic demands, decreased reproductive success, a greater risk of predation, and the avoidance of habitats that would otherwise be utilized."
- "Elk used distances within 100 m of secondary roads less than expected across all seasons."

From Hicks and Elder (1979) concerning Sierra Nevada bighorn sheep -

"Hiker foot-trails did not affect sheep movements in the summer population."

From Laliberte and Ripple (2004) on range contraction and persistence of North American carnivores and ungulates associated with human disturbance. The study considered 43 North American species, of which 19 could be represented within the Challis Field Office area -

"In areas of higher human influence, species were more likely to contract and less likely to persist."

From Robbins (1979) on effect of forest fragmentation on bird populations -

"When altered habitat conditions result in increased mortality or lowered reproductive rate, the population will decline unless it can be supported by immigrations from nearby areas where a high reproductive rate produces a surplus of individuals.

From Wildlands CPR (2007) –

"ORV noise can cause significant adverse impacts to wildlife in at least two ways. First, exposure to ORV noise can result in hearing impairment or even loss, with severe consequences for animals dependent on their sense of hearing for finding prey, avoiding predators, and interacting with other individuals of the same species. Second, wildlife exposed to ORV noise often experiences stress and other disturbance effects."

Some of the reviewed documents addressed the vulnerability of wildlife during the critical winter season, whether or not human disturbance contributed to impacts. Some of these articles include the following which are listed solely to emphasize the importance of winter habitats and how human disturbance "could" alter habitat suitability:

From Strong (1977) for pronghorn antelope -

"Pronghorns selected microhabitats with more favorable conditions than the average for the area as a whole these being: 63 percent lower wind velocities, 24 percent less snow, and 87 percent softer snow."

From Martinka (1967) for pronghorn antelope "associated with severe weather" resulting in high mortality -

"Comparison of rumen samples with feeding site examinations suggested that starvation occurred while animals were restricted to the grassland vegetation.

From Barrett (1982) for pronghorn antelope -

- "As an apparent response to record snowfall in portions of their range, only 34% of the pronghorns observed during aerial surveys in January and February occupied typical winter ranges…."

- "Winter mortality was 48.5%"
- "Fawns of both sexes and adult males were more susceptible to winterkill than were adult females."

From Parker et al. (1984) on locomotion of mule deer and elk -

"Energy expenditures for locomotion in snow increased curvilinearly as a function of snow depth and density."

From Sawyer et al. (2006) on mule deer habitat selection associated with a disturbance. While the focus was on the impacts from natural gas field development, the resulting redistribution of mule deer from the "preferred" winter habitat to "less-preferred and presumably less-suitable habitats" illustrates potential effects of a high level of disturbance.

Literature/research also addresses nongame wildlife such as neotropical or migratory birds, amphibians, small mammals, etc. Some of the documents reviewed and the key points/conclusions include the following:

From Wind (1999) on effects of habitat fragmentation on amphibians -

"Because amphibians have low vagility, high philopatry, and are susceptible to desiccation, they may be particularly vulnerable to habitat fragmentation."

From Gibbs (1998) on amphibian movements in response to forest edges, roads, and streambeds -

"the relative permeability of forest-road edges was much reduced in comparison to the forest interior and to edges between forest and open land. The data suggest that landscape-level conservation strategies aimed at amphibians should account for such filters and conduits to amphibian movements."

From DeMaynadier and Hunter (2000) on amphibian movements in a forested landscape -

"Forest roads apparently can serve as a partial filter to the movements of some amphibian species."

From Fahrig et al. (1995) on the effect of road traffic on amphibian density; this study was on paved roads -

"(1) The number of dead and live frogs and toads per km decreased with increasing traffic intensity; (2) the proportion of frog and toads dead increased with increasing traffic intensity; and (3) the frog and toad density, as measured by the chorus intensity, decreased with increasing traffic intensity."

From Graham (2002) on human influences in forest wildlife habitat -

- "The effects of roads and power line corridors on forest wildlife are species dependent. For some forest wildlife, the corridors exclude or result in avoidance of the area for distances of 330 feet or more."
- "For some forest wildlife species, roads and power line corridors act as barriers, fragmenting populations."
- "shifts in forest bird composition have been documented along trails."

From Steidl and Anthony (2000) on human activity impacts on bald eagles -

- "Human activity near nests caused clear and consistent changes in behaviors of breeding eagles, suggesting that frequent human activities near nests could adversely affect nestling survival, and therefore reproductive success."
- "With humans near nests, adult eagles decreased the time they preened (percentage change from control to treatment = -53%), slept (-56%), maintained nests (-50%), and fed themselves and their nestlings (-30%) and increased the time they brooded nestlings (+14%)."

From Hickman et al. (1999) on human activity impacts on small mammals -

- "Based on the literature, it is apparent that recreationists affect wildlife through direct disturbance of normal [wildlife] activities" (Knight and Cole 1991).
- Perhaps a key point in this paper is the statement, that "Areas of ORV use have significantly fewer species of vertebrates, greatly reduced abundance of individuals, and noticeably lower small mammal biomass" (Bury et al. 1977).

From Crête and Larievière (2003) on locomotion of coyotes in snow -

"We hypothesize that the use of snow packed by anthropogenic activities, especially snowmobile trails, may not only facilitate coyote movements in deep snow environments but also allow occupation of marginal habitats…."

From Buskirk et al. (2000) on Canada lynx (*Lynx canadensis*) and habitat fragmentation and interspecific competition -

- "Habitat fragmentation and interspecific competition are two important forces that potentially affect lynx populations."
- "Fragmentation operates by various mechanisms, including direct habitat loss, vehicle collisions and behavioral disturbance from roads, and changes in landscape features such as edges."
- "Exploitation competition involves potential competitors, such as coyotes and raptors, for food with lynx."

From Gaines et al. (2003) – for bald eagle buffer distances

- "recommended buffer distances to reduce the potential for disturbance to eagles during nesting period have ranged from 300 to 800 m" (Anthony and Isaacs 1989, Fraser et al. 1985, McGarigal 1988, and Stalmaster 1987).
- "the influence of pedestrian traffic and vehicle traffic on bald eagle nesting activities and recommended buffers of 550 m for pedestrians and 450 m for vehicles" (Grubb and King 1991).

The following reviewed documents focused on impacts to avian species, specifically.

From Ingelfinger and Anderson (2004) on sagebrush obligate passerines impacted by road traffic or by a natural gas pipeline: two Idaho BLM sensitive species were considered in this study, the Brewer's sparrow and the sage sparrow -

- "Density of sagebrush obligates decline by as much as 60% (95% CI [confidence interval] = 40%-81%) within a 100-m buffer around these [high traffic volume] roads."
- "Even along roads with light traffic volume (<12 cars per day), density of sagebrush obligates was reduced within the 100-m road zone."
- At the rate of <12 vehicles per day, "habitat fragmentation and avoidance of habitat edges may be influencing passerine distribution."
- "Sage Sparrow density was reduced by 64% within a 100-m buffer of the surface disturbance [pipeline]."
- "Sage Sparrows may select against edges created by road construction."
- "Density of sagebrush obligates, particularly Brewer's and Sage Sparrow, was reduced by 39%-60% within a 100-m buffer around dirt roads with low traffic volumes…."
- Another common species along roads is the Horned lark (*Eremophila alpestris*). While not a sagebrush obligate, the Horned Lark is "common along dirt roadways" and will "defend" its foraging areas. "Increased concentration of Horned Larks along roads may reduce the surrounding habitat's attractiveness to other sympatric species through either exploitative or interference competition." And, "Horned Larks were repeatedly observed initiating aggressive interactions with Brewer's and Sage Sparrows along roads."

From Reijnen et al. (1995) on the effects of car traffic on breeding bird populations in woodlands -

> "This study suggests that the effect of car traffic on breeding bird densities in woodland can be largely explained by noise load."

From Knick and Rotenberry (1995) on fragmented shrub habitats and breeding passerine birds, specifically Sage and Brewer's Sparrows and Sage Thrashers-

- "All three typical shrubsteppe species were more likely to return to sites that had high shrub cover (particularly sagebrush) and low disturbance, combined with large patch sizes and high within-site spatial similarity."
- "Fragmentation of shrubsteppe habitats is of concern for the conservation of obligate species."

From Maurer and Heywood (1993) on fragmentation and impact to neotropical migratory birds -

> "A substantial amount of the threat to these species [studied] comes from habitat loss and increased fragmentation of once relatively continuous habitat on the North American breeding grounds."

From Miller et al. (1998) on influence of recreational trails on breeding bird communities -

- "Our results indicate that composition and abundance of birds were altered adjacent to trails in both grassland and forest ecosystems."
- "For the majority of species found in reduced numbers near trails, the zone of influence of trails appears to be ~75 m…."
- "We found elevated rates of nest predation near trails."

From Barton and Holmes (2007) on OHV trail impacts on breeding songbirds -

- "We found evidence of greater nest desertion and abandonment and reduced predation on shrub nests <100 m from OHV trails than at nests >100 m from OHV trails."
- The possible reason for reduced predation is "the OHV traffic on these trails could have frightened away predators."

From Riffell et al. (1996) on repeated human intrusion causing declines in avian richness and abundance. This study included observations of four BLM Sensitive Species: northern goshawk, Williamson's sapsucker, Hammond's flycatcher and olive-sided flycatcher -

- "The intrusions administered in the present study are comparable (in seasonal timing, spatial scale, and frequency) to disturbances induced by anglers, hikers, campers, backpackers, photographers, wildlife viewers, and other wildland users…."
- "For some years, repeated intrusions thus altered the composition of the community represented by the most common species. However, when all species were considered, richness and abundance were not influenced."
- "Although cumulative effects did not occur, the declines in richness and abundance we found during some sets of years for core species indicate that intrusion has the potential to generate important problems for some or all of these species during the breeding season."

From Ahlering and Faaborg (2006) -

> "of the hundreds of studies done on animal responses to habitat fragmentation, virtually all show increasing diversity of species with ***increasing*** fragment size, in part because some species are present only on fragments of a certain minimum size or larger" [emphasis added].

The considerations for what are the "existing impacts" and what are the "potential impacts" attributed to the actions within the Alternatives are based on the scientific literature as well as general field observations. Specific, peer reviewed studies have not been conducted on the local wildlife populations in recent years. Therefore, the dilemma becomes one of making some relevant determination from all of the literature. A case in point is where Ryall and Fahrig (2006) reviewed "theoretical literature on how predator-prey interactions are influenced by habitat loss and fragmentation" and determined that much of the literature included shortcomings and potentially flawed conclusions. Problems with modeling and predicting population effects without the appropriate level of "spatial details of landscape structure" are identified in Fahrig and Merriam (1994). Another pitfall in drawing inferences from any individual study, much less trying to formulate a grandiose solution for a complicated problem, is the selection of "what is important" or the old adage "taking things out of context." As initially stated in the first paragraph of this compilation of research data, the majority of the data come from relatively short-term studies. Collins (2001) expresses concern over the longevity, or not, of the studies: "in some cases, extrapolation from short-term surveys could produce misleading information on long-term population stability or change." As with many research efforts, the interrelated nature of multiple variables can in itself create a problem for the analysis, i.e., variable dominance. This point was stated in Miller et al. (1998) where "the question of whether the influence of

recreational trails on bird communities is due to the physical presence of the trail, or rather to the associated human disturbance remains, for the most part, unanswered." If there are "safety in numbers" and sample size really helps to lessen the "data scatter" then taking note of a greater number of literature citing should help in making some valid assumptions.

Scientific studies, as well as literature reviews, often include recommendations for management actions that are intended to benefit the species evaluated. In most cases these recommendations do not consider the entire range of species that could occupy an area, or the potential effects to various land-uses. Some of the conclusions drawn from the studies by the researcher(s) include the following:

From Lyon (1983) –

> "Avoidance of roads is presumed to be a behavioral response conditioned by vehicular traffic. Other factors, including better hiding cover and lower road standards can be expected partially to mitigate the negative response by elk. ***However, the best method for attaining full use of habitat appears to be effective road closures***" [emphasis added].

From Parker et al. (1984) –

> "Restrict human access to winter ranges if the welfare of elk is a primary concern."

From Thomas et al. (1988) –

> "Elk welfare should be a primary consideration in the design and management of roads on elk winter ranges" (Pedersen et al. 1979)

From Barton and Holmes (2007) –

> "Limitation on OHV trail development in breeding areas of rare or endangered birds could minimize conflicts over land use between recreation and wildlife conservation."

From Shively et al. (2005) –

- "We recommend developing recreation plans that incorporate specific habitat and wildlife protection regimes *a priori* rather than managing reactively once potentially irreversible damage is done.
- "Selective closures, or at least restrictions on recreational activity, may be warranted during [elk] calving season."

From Pelletier (2006) –

> "If the goal of protected areas is to conserve biodiversity, human disturbance should be avoided in habitats that animals depend on for their reproduction and survival."

From Sawyer et al. (2006) and Gaines et al. (2003) –

> "road closures have been shown to decrease elk movements and increase survival" (Cole et al. 1997).

From Watson (2005) – on road closure benefits to elk

- "Closing roads extended the age structure of the bull population to 7.5 years [from 5.5 years], and 16% of the bull population consisted of mature animals [compared to 5% living to maturity]" (Leptich and Zager 1991).
- "travel restrictions on roads appeared to increase the capacity of the area to hold elk in Montana" (Basile and Lonner 1979).
- "road closures allowed elk to remain longer in preferred areas" (Irwin and Peek 1979).

From Crist et al. (2004) – agency (USFS) recommendations

- "Designate roadless areas off limits to motorized use."
- "Determine the specific road and motorized trail network and close and restore all other routes that have been used for motorized use."
- "Ensure that motorized route densities for the road and trail network are lower than those that are known to adversely affect all species of concern and threatened and endangered species."

From Canfield et al. (1999) – guidelines/recommendations

- "one of the surest methods of increasing elk security has been to close roads and/or areas to motorized vehicles"
- "limit all motorized users (including ORVs) to designated routes"

Winter/spring seasons

- "route winter-use facilities, trails, and/or roads away from ungulate wintering areas"
- "establish designated travel routes within area closures where recreation occurs on or across winter ranges (no off-road/trail use) to make human use of wintering areas as predictable as possible"

Summer season

- "route summer recreation facilities away from key foraging areas and consider restrictions on existing roads and trails to minimize disruption"
- "establish designated routes within area closures to make human use of summer range as predictable as possible"
- "limit open road densities to zero in scattered key areas and less than 1 mile per section (mi^2) elsewhere; reclaim roads that are closed and re-establish native vegetation to help keep travel violations to a minimum"

From Storlie (2006) – "because elk productivity has been linked to habitats that are associated with permanent sources of water, assuring that adequate buffers are maintained around rivers, streams, and wetlands may provide long-term benefits for elk"

From Miller et al. (1998) – "Our results indicate that trails affect the distribution and abundance, as well as the reproductive success, of bird species, suggesting the need for more thoughtful trail planning and management of recreationists in natural areas."

From Ahlering and Faaborg (2006) – "As future human development inevitably results in avian populations that are smaller and more isolated, we will have to be as efficient as possible with the space available."

From Thomas et al. (1979) –

- "uncontrolled human disturbance may negate what has been achieved through well-planned habitat management"
- "proper location and management of roads is an essential part of deer and elk habitat management"

From Miller et al. (2001) –

"Restrictions on types of activities allowed in some areas such as prohibiting dogs or restricting use to trails will aid in minimizing disturbances. Additionally, managers can restrict the number and spatial arrangement of trails so that sensitive areas or habitats are avoided."

From Gaines et al. (2003) – "tools that have been used to mitigate recreational activities include":

- "spatial separation of humans and wildlife in key habitats"
- "temporal separation of humans and wildlife at critical periods"
- "information and education programs" that "reduce the effects [of human behaviors] on wildlife"

From Taylor and Knight (2003) –

"because wildlife reacted most strongly to recreationists off trails, visitors should stay on designated trails to reduce disturbance to wildlife"

Switalski et al. (2004) –

The authors reference potential influences of roads on wildlife as noted in Wisdom et al. (2000), i.e., "altered movement patterns, increased negative edge effects, and increased poaching, hunting, trapping, and additional negative interactions with humans facilitated by easier access" and concluded that "removed and revegetated roads would presumably reverse many of these impacts and create habitat for a variety of animals."

Attachment 5: Recreation Resource Settings Matrix

Recreation Management Zone:_____

Existing Setting Prescribed Setting

Natural Resource Recreation Settings Matrix
Criteria for Classification and Prescriptions

Physical - Land and Facilities: character of the natural landscape

	Primitive	Back Country	Middle Country	Front Country	Rural	Urban
a. Remoteness	More than 10 miles from any road/More than 3 miles from any road	More than 1/2 mile from any kind of road, but not as distant as 3 miles, and no road is in sight	On or near four-wheel drive roads, but at least 1/2 mile from all improved roads, though they may be in sight	On or near improved gravel roads, but at least 1/2 mile from highways	On or near paved primary highways, but still within a rural area	Municipal street and roads within towns and cities
b. Naturalness	Undisturbed natural landscape	Naturally-appearing landscape having modifications not readily noticeable	Naturally-appearing landscape except for obvious primitive roads	Landscape partially modified by roads, utility lines, etc. but none overpower natural landscape features	Natural landscape substantially modified by agriculture or industrial development	Urbanized developments dominate landscape
c. Facilities	None	Some primitive trails made of native materials such as log bridges and carved wooden signs	Maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets	Improved yet modest, rustic facilities such as campsites, restrooms, trails, and interpretive signs	Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits	Elaborate full-service facilities such as laundry, restaurants, and groceries

Social - Visitor Use and Users: character of the recreation-tourism use

	Primitive	Back Country	Middle Country	Front Country	Rural	Urban
a. Contacts(with other group)	Fewer than 3 encounters/day at camp sites and fewer than 6 encounters/day on travel routes	3-6 encounters/day off travel routes (e.g. campsites) and 7-15 encounters/day on travel routes	7-14 encounters/day off travel routes (e.g. staging areas) and 15-29 encounters/day en route	15-29 encounters/day off travel routes (e.g. campgrounds) and 30 or more encounters/day in route	People seem to be generally everywhere.	Busy place with other people constantly in view.
b. Group Size(other than your own)	Fewer than or equal to 3 people per group	4-6 people per group	7-12 people per group	13-25 people per group	26-50 people per group	Greater than 50 people per group

c. Evidence of Use	Only footprints observed. No noise or litter.	Footprints and bicycle tracks observed. Noise and litter infrequent. Slight vegetation trampling at campsites and popular areas. Fire rings seen.	Vehicle tracks observed. Occasional noise and litter. Vegetation and soils becoming worn at campsites and at high-use areas.	Vehicle tracks common. Some noise and litter. Vegetation and soils commonly worn at campsites, along travel routes, and at popular areas.	Frequent noise and litter. Large but localized areas with vegetation damage and soil compaction.	Unavoidable noise, music, and litter. Widespread vegetation damage and soil compaction.

Administrative - Administration and Services: How public land managers, cooperative agencies, and local businesses care for the area and serve visitors

	Primitive	Back Country	Middle Country	Front Country	Rural	Urban
a. Mechanized Use	None whatsoever	Mountain bikes and perhaps other mechanized use, but all is non-motorized	Four-wheel drives, all-terrain vehicles, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use	Two-wheel drive vehicles predominant, but also four wheel drives and non-motorized, mechanized use	Ordinary highway auto and truck traffic is characteristic.	Wide variety of street vehicles and highway traffic is ever-present
b. Visitor Services	None is available on-site.	Basic maps, but area personnel seldom available to provide on-site assistance	Area brochures and maps, plus area personnel occasionally present to provide on-site assistance	Information materials describe recreation areas and activities. Area personnel are periodically available.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics
c. Management Controls	No visitor controls apparent. No use limits. Enforcement presence very rare.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.	Rules clearly posted with some seasonal and day-of-week use restrictions. Periodic enforcement presence.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.