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Draft Resource Management Plan Amendment/Environmental Assessment For the Uncompahgre Field Office Dry Creek Travel Management Plan

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Project Name: Uncompahgre Field Office Resource Management Plan Amendment of OHV Designations and Travel Management Plan in the Dry Creek Travel Management Plan Area

Planning Unit: Uncompahgre Field Office/Uncompahgre Basin

Applicant: BLM

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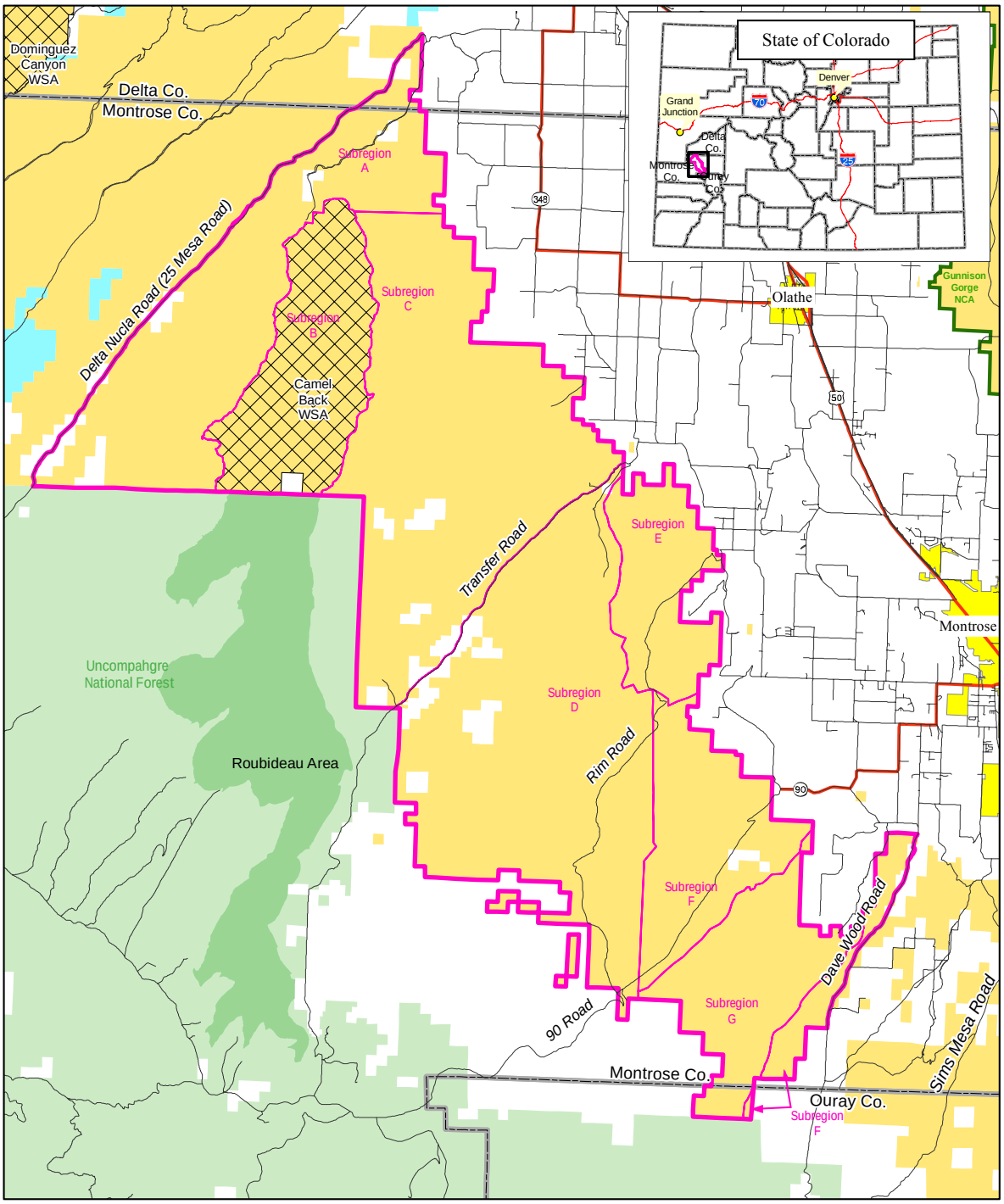
Dry Creek Travel Management Area



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Acronyms

ACRONYMS USED IN THIS DOCUMENT

ACEC	Area of Critical Environmental Concern
ATV	All Terrain Vehicle
BLM	Bureau of Land Management
BSC	Biological Soil Crust
CDOW	Colorado Division of Wildlife
CFR	Code of Federal Regulation
CNHP	Colorado Natural Heritage Program
CR	County Road
DFC	Desired Future Condition
DOW	Colorado Division of Wildlife
DR	Decision Record
EA	Environmental Assessment
4WD	Four-wheel drive
GIS	Geographic Information System
GPS	Global Positioning Satellite
NEPA	National Environmental Policy Act
OHV	Off-Highway Vehicle
ORV	Off-Road Vehicle
PA	Planning Area
RIZ	Road Influence Zone
RMP	Resource Management Plan
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
ROW	Rights-of-Way
SHPO	State Historic Preservation Office
TMPA	Travel Management Planning Area
TMP	Travel Management Plan
T&E	Threatened & Endangered Species
UFO	Uncompahgre Field Office
USFS	United States Forest Service
WAPA	Western Area Power Administration
WIZ	Water Influence Zone

INTRODUCTION

This Resource Management Plan Amendment/Environmental Assessment addresses the environmental and other effects of implementing four different alternatives to help address issues relative to the use of the public lands in the Dry Creek Travel Management Planning Area and the need for motorized and non-motorized travel for a variety of purposes, including land management-related and recreational activities. The alternatives are the No Action Alternative (Alternative 1) and three action alternatives (Alternative 2 – Proposed Action, and Alternatives 3 and 4). The three action alternatives would affect existing off-highway vehicle (OHV) Designations and travel management decisions on Public Lands within the Planning Area managed by the BLM in Delta and Montrose Counties near the communities of Montrose, Olathe and Delta. The document also describes and addresses the effects of implementing three different comprehensive travel management plans in the three action alternatives, and the continuation of the current methods of managing travel in the planning area (Alternative 1).

None of the alternatives or their management recommendations would be made for or on private lands in the area. The planning area contains approximately 110,500 acres of Public Land and approximately 4,500 acres of private land.

Under the existing 1989 Uncompahgre Basin Resource Management Plan (RMP), the Planning Area contains three categories of OHV designations: Open, Limited, and Closed. These designations are used by BLM to establish where and to what extent motorized uses may occur on public lands. Open designations are locations on public lands with no limitations or restrictions to cross-country travel. Closed designations are locations on public lands where absolutely no motorized travel is allowed. Limited designations are locations where motorized travel is limited to designated routes only, and may have seasonal or other conditional use limitations. There are no "Limited to Existing Routes" Designation Areas in the existing RMP.

The goals of this travel management plan are to: maintain, protect, and improve public land health; provide appropriate, sustainable, and reasonable access; enhance motorized and non-motorized recreation opportunities; and improve natural values.

The Uncompahgre Basin RMP is scheduled to be revised beginning in the spring of 2009. The actions taken as a result of the analysis in this document would be considered in the RMP revision. If special designations regarding the Dry Creek Planning Area are identified as an issue or concern in the revision process, those concerns would be addressed in that process.

BACKGROUND

The Dry Creek Travel Management Planning Area is approximately 115,000 acres bounded on the north by 25 Mesa Road (known as Delta-Nucla Road), on the south by Dave Wood Road, on the west by the National Forest Service Boundary, and the east by private lands in the Uncompahgre Valley. The terrain of the area generally consists of steep drainages, long and deep canyons, and narrow ridges and mesa tops. The area is within easy traveling distance from the cities of Montrose and Delta, the town of

Olathe, and other nearby communities. It is affected by the associated urban interface, pressures, and issues. The sights and sounds of human activity from towns, airports, highways, railroads, agricultural uses, residential subdivisions, power lines, and motorized recreation uses are evident throughout a great deal of the area.

The area has become a destination site for many recreational users who use motorized and mechanized vehicles. There are even some routes publicized on several websites. Most of the BLM lands are heavily utilized areas with easy public access. Mild winter conditions sometimes allow year-round access for a variety of motorized and non-motorized recreational uses.

The area is easily accessed nearly year round for a variety of purposes. Uses of the area include sightseeing, photography, hunting, hiking, cross-country skiing, camping, horseback riding, mountain bike riding, ATV riding, technical four-wheel driving, motorcycle riding, snowmobiling, livestock grazing management, decorative rock gathering, Christmas tree cutting, firewood gathering, rights of way management/operation/maintenance, BLM and Forest Service administrative purposes, and other uses. Much of the travel is heavily influenced by the regional population growth and nearby private land development.

Dave Wood Road and 25 Mesa Road are major county maintained routes that connect the communities on the east side of the Uncompahgre Plateau to the communities on the west side of the Plateau as well as key access to the Uncompahgre National Forest. Highway 90 and Transfer Road, contained within the heart of the planning area, are also county maintained roads and provide key access to public lands including the Uncompahgre National Forest.

NEED AND PURPOSE FOR THE ACTION

Need for the Action

Residents and visitors are discovering new opportunities on public lands managed by the Bureau of Land Management (BLM) Uncompahgre Field Office. This has placed an increasing demand on resources, resulting in user conflicts and impacts to vegetation, soils, cultural sites, wildlife habitat, and other natural and sensitive resources. The recreation industry has also contributed to this observed increase in use and level of impacts by introducing new technical advancements in modes of travel.

The OHV area designations in the 1989 RMP that apply to the planning area consist of Open, Limited, and Closed. The Open designations permit cross-country travel using motorized, mechanized, and all other forms of travel anywhere. The existing Limited designation restricts motorized travel in certain parts of the planning area to designated routes from December 1 through April 30 annually. The Closed designation applies to the Camel Back Wilderness Study Area (WSA), which was closed to motorized travel in the 1989 RMP. See Appendix 2 and the 1989 RMP at Appendix C, Maps 1 and 2, pages 49 and 50 for more information on these designations. Since the RMP has been in effect, travel management planning has been under-implemented in the planning area, resulting in on-route and cross-country motorized and mechanized travel occurring yearlong except within the WSA. New user-created routes established since the 1989 RMP have increased to the point that over 700 miles of routes of all kinds now exist within the 110,500 acres of public lands. Land health concerns, population growth and

proliferation of user-created routes have made it essential to amend the Uncompahgre Basin Resource Management Plan and adopt a travel management plan to address the need for resource management and access and transportation.

Montrose and the surrounding counties (i.e. San Miguel, Ouray, Delta, Mesa, and Gunnison) are also seeing an increase in population and destination tourism due to year-round access to public lands and the availability of a wide array of recreational opportunities. Montrose alone is expanding at an approximate rate of 6% per year and the Uncompahgre Field Office (UFO) reported a 9% increase in visitor days in Fiscal Year 2006. The Uncompahgre Field Office has also seen an increase in requests for commercial, competitive, organized and event use Special Recreation Permits (SRPs) over the past several years.

Due to increasing demands and impacts, BLM has determined that the current OHV designations and the current management practices are out-of-date. This has resulted in land health impacts that need to be addressed to provide active management and encourage responsible use. BLM has a responsibility to conform to the directions contained in Appendix 7.

Purpose for the Action

The purpose of the action is to

1) Present and analyze alternative travel management plans with a motorized and non-motorized designated route system* and other sets of related actions to address:

    a. the existing and future Land Health concerns expressed in the Roubideau Land Health Assessments (available at the Uncompahgre Field Office)

    b. appropriate actions to meet or maintain public land health standards, including the clear delineation of designated routes through new maps and appropriate signing

    c. the many public and internal issues and concerns regarding travel management

    d. the need to follow up on the 1989 RMP Off Road Vehicle decisions and implement travel management planning within this part of the Uncompahgre Field Office

2) Analyze changing the existing "Open" and "Limited" OHV designations to "Limited to Designated Routes Seasonally or Yearlong" on approximately 99,900 acres in order to respond to the identified need of the public and BLM, and specific, long-standing recommendations to the BLM from the Southwest Resource Advisory Council.

3) Consider travel management support facilities to compliment the motorized and non-motorized travel management plans in each of the alternatives identified. Planned parking areas, staging areas, hardened camping areas and trailheads would help distribute travel, thereby avoiding conflicts, resource impacts and overuse of areas. The lack of these facilities is currently resulting in user-created areas.

Need and Purpose

It is important for the BLM to provide a balance of quality recreation experiences with other resources and uses in a sustainable way that maintains the health of the land by designing travel systems that direct travel away from sensitive areas yet provide adequate transportation opportunities that meet BLM and the public needs. Several individuals, groups and organizations, including the Southwest Resource Advisory Council (SWRAC), have expressed concern over the current situation and feel that updated and additional resource and travel management is necessary to maintain the opportunities and experiences they benefit from the area. The Dry Creek Travel Plan will result in positive changes to the existing and future land health concerns and help resolve the many public and internal issues and concerns regarding OHV management for a variety of uses and purposes. Issues and concerns to be resolved include impacts to sensitive resources, user conflicts, historical use on routes, environmental impacts, conditions of use on routes, additional access needs, loop opportunities, quiet use areas, trail relocations, safety, and proliferation of user-created routes by cross-country travel. Travel related support facilities were not addressed in the 1989 RMP; some of the greatest user-created surface disturbing activities occur due to a lack of these facilities. The plan would also provide up to date information and management guidelines which will allow for better service, education and compliance, reducing resource impacts and conflicts through appropriate and informed decisions.

BLM policy for managing public lands is based on the BLM Colorado Standards for Public Land Health and the Colorado Recreation Management Guidelines to Meet Public Land Health Standards on BLM Lands. Under this policy, BLM is charged to manage the public lands in conformance with the standards and guidelines outlined in these documents, and must take appropriate actions when public land health standards are not being met.

**Designated route system refers to the method of managing a motorized and non-motorized transportation network in which the individual routes are limited to specific modes of travel, and are identified on travel maps and posted on the ground with signs. Under the current designation, motorized and mechanized travel is permitted to operate cross-county except for those routes that have been posted as closed. Under a designated route system, motorized and mechanized travel would be limited to routes that are identified on travel maps and posted as routes on the ground that are available for specified types of uses.*

Decisions that would be Considered

In order to meet the purpose and need for this action, decisions that would be considered in the Dry Creek Travel Management Plan (TMP) and the subsequent Resource Management Plan Amendment are:

1. What changes would be made to existing Off-Highway Vehicle (OHV) area designations?
2. If travel using motorized or mechanized modes of travel, including snowmobiles, bicycles, wheeled, muscle-powered big game carts or wagons, would be limited to use on or from designated routes only, on which routes would use restrictions apply? For example such restrictions could include seasonal use limitations and/ or limitations on vehicular parking adjacent to routes, off-route travel for camping, use of motorized or mechanized modes of travel for game retrieval, other vehicle limitations, including for snowmobiles and bicycles, and routes for administrative use of motorized vehicles only?
3. Where would support facilities, such as staging areas, trailheads, and camping areas be established or upgraded?

4. What following action plans would need to be prepared in order to fully implement the approved TMP?

ISSUES AND CONCERNS

The Bureau of Land Management Uncompahgre Field Office began work on the Uncompahgre Travel Management Plan (TMP) in March 2007. The public scoping process was initiated at that time, with the public notified through press releases, web site postings, and letters sent to approximately 650 individuals and groups who had expressed an interest in participating in the travel management planning effort. Public meetings were held in late March and early April 2007. The Uncompahgre Field Office received comments from 74 individuals and organizations in response to the request for public input.

These public and internal agency comments were placed into subject categories and summarized. These categories were determined to be the issues and concerns to be addressed in the different alternatives:

- Access and Transportation
- Cultural and Historic Resource Management
- Land Health and Threats
- Reality Authorizations
- Law Enforcement and Public Safety
- Multiple Use Management
- Noise
- Recreation
- Socioeconomics
- Soils
- Vegetation
- Water Resources
- Wildlife

See Appendix 5 for a general summary of the comments.

After identifying the agency and stakeholder group issues and concerns, the BLM Travel Management Planning Team began working on defining the boundaries and goals for the travel management plan and for the individual planning area sub-regions.

The goals were written in the form of "Desired Future Conditions" (DFCs), which are brief statements that describe the physical, biological, social and management conditions that are expected to be achieved when the travel management plan has been implemented.

Stakeholder and internal agency comments were an important part of the planning process, especially for identifying social component issues, which were considered by the team when fine-tuning the DFCs for this plan. The DFCs then guided the analysis of the routes within the draft alternative travel network systems.

DESCRIPTION OF THE ALTERNATIVES

Four alternatives were developed. See Appendix 4 for maps that illustrate each alternative and Table 4 for a summary and comparison of the most major elements of each alternative. Alternatives were developed considering the existing OHV designations and conditions on the ground, impacts to sensitive

resources, public input, existing recreational uses, route density, route condition, and the need for administrative access. These alternatives were also developed to address the issues and concerns. The decisions will be for public lands only; decisions will not be made for or on private lands, but may have some indirect effects.

Alternative 1 is the No Action Alternative (current management). Alternatives 2, 3 and 4 would affect existing OHV area designations and existing travel management. For purposes of describing the proposed differences in management and changes in the action alternatives, the area has been delineated into seven unique geographic Sub-Regions.

Appendix 2 shows acres in each of the existing OHV designation categories for each alternative and for each Sub-Region. Table 1 shows the miles of routes and their uses that would be designated in each of several Travel Use Categories in each alternative. Table 2 shows the same information by Sub-Region for each alternative. Mileages shown in all tables are approximate, and are for the primary uses in each Travel Use Category. These Travel Use Categories will be the foundation of the TMP in Alternatives 2, 3, and 4. The Travel Use Categories are also color-coded on alternative maps located in Appendix 4 for each of the alternatives. See Appendix 1 for detailed definitions of the Categories. Table 3 shows the total miles of designated routes subject to seasonal closures and the routes that would be available for use yearlong in each Sub-Region in each alternative.

Each Travel Use Category is named for the type of use that it is primarily suited to accommodate (bold in Table 1). The other travel uses included in the category should be considered as secondary uses. Although other use(s) might be allowed on a particular route, this descriptor does not mean that a specific route in the Category would be suitable for the allowed use(s). For example, routes included in the "Motorized Single Track" Category are primarily suited for or intended for motorcycle use, but the routes would also be available for the other uses listed, including bicycling, hiking and horseback riding.

Table 1 Miles of Routes in Travel Use Categories by Alternative					
Travel Use Category (see Appendix 1 for detailed definitions)	**Primary** *and Secondary* Permitted Uses	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Non-Motorized/Non-Mechanized Single Track	**Equestrian, foot**	15.6	43.4	47.0	29.0
Non-Motorized Single Track	**Bicycles,** *equestrian, foot*	8.9	28.2	39.8	16.8
Motorized Single Track	**Motorcycles,** *bicycles, equestrian, foot*	0	42.2	11.8	67.2
ATV 2-Track	**ATVs,** *motorcycles, bicycles, equestrian, foot*	0	33.7	13.3	29.3
4WD/2WD - Open	**All modes of transportation (Full-sized vehicles – 4WD/2WD),** *ATV, motorcycle, bicycles, equestrian, and foot*	645	230.3	123.2	422.2
Specialized Trails – Technical 4WD and Mechanized and Motorized Trial Bikes	**Modified high clearance 4-wheeled vehicles and mechanized and motorized trials bikes only**	0	8.6	3.4	8.5
Administrative Uses Only (AU)*	**Authorized uses only**	0	40.6	65.0	11.8
Non-BLM Routes	**Street legal motorized vehicles and other mechanized and non-motorized uses** (County jurisdiction)	32.3	32.3	32.3	32.3
Closed (CL)*	**Closed**	0	258.7	368.7	118.2

** Routes included in the Administrative Use Only (AU) category are not available to the general public for motorized or mechanized uses. AU routes provide administrative access for BLM personnel and authorized holders of permits, such as right-of-way and grazing permits, and will continue to be used for administrative purposes. The routes included in the AU category are not managed for specific recreation uses but, as long as the routes are legally accessible (not blocked by private lands), they are available to the public for foot and equestrian travel in most cases. "Legally Accessible" implies that a route can be legally accessed from public lands or without trespassing over private lands; i.e., a route is on public lands or access is provided from county, state, or federal highways or via roads where the BLM has obtained public easements. Routes included in the CL category are also not available to the general public for motorized or mechanized uses, they are available to the public for foot and equestrian travel in most cases. In some cases the CL routes may be identified for mechanical reclamation while others may be closed and allowed to reclaim naturally.*

Table 2
Miles of Designated Routes in Travel Use Categories by Sub-Regions, by Alternative*

Travel Use Category	Sub-Regions							Alt. Total Miles	Alter-natives
	A	B	C	D	E	F	G		
Non-Motorized/Non-Mechanized Single Track	0	15.6	0	0	0	0	0	15.6	1
	19.6	16.9	3.1	0.5	0	0.8	2.5	43.4	2
	26.5	12.2	4.0	4.2	0	0	0	46.9	3
	0	25.7	2.2	0.5	0.3	0.1	0	28.8	4
Non-Motorized Single Track	8.9	0	0	0	0	0	0	8.9	1
	0	0	0	4.1	0	17.8	6.3	28.2	2
	4.1	0	14.7	0.4	0.8	7.8	12	39.8	3
	8.9	0	3.7	3.3	0	0.9	0	16.8	4
Motorized Single Track	0	0	0	0	0	0	0	0	1
	0	0	0	34.6	1.2	0.1	6.3	42.2	2
	0	0	0	11.8	0	0	0	11.8	3
	7.0	0	0	39.8	0.8	7.7	11.9	67.2	4
ATV 2-Track	0	0	0	0	0	0	0	0	1
	1.7	0	5.4	8.5	0	5.3	12.8	33.7	2
	0	0	13.0	0.3	0	0	0	13.3	3
	8.2	0	1.0	6.6	0	13.5	0	29.3	4
4WD/2WD - Open*	79.4	0	169.1	163.4	55.7	108.7	67.9	644.2	1
	29.2	0	85.7	45.8	20.2	30.3	19.0	230.3	2
	12.9	0	41.8	25.8	7.6	16.9	17.4	122.4	3
	46.7	0	140.4	84.3	34.1	69.0	46.8	421.4	4
Specialized Routes – Technical 4WD and Mechanized and Motorized Trial Bikes	0	0	0	0	0	0	0	0	1
	0	0	0	6.6	1.1	0.9	0	8.6	2
	0	0	0	3.2	0	0.2	0	3.4	3
	0	0	0	6.0	1.6	0.9	0	8.5	4
Administrative Uses Only	0	0	0	0	0	0	0	0	1
	3.5	0	7.5	9.2	6.3	14.0	4.8	40.6	2
	2.7	0.4	9.8	16.5	12.5	21.9	1.3	65.0	3
	1.5	0	2.2	1.2	5.6	1.3	0	11.8	4
Non-BLM Routes	5.2	0	0	14.7	4.4	8.0	0	32.3	1
	5.2	0	0	14.7	4.4	8.0	0	32.3	2
	5.2	0	0	14.7	4.4	8.0	0	32.3	3
	5.2	0	0	14.7	4.4	8.0	0	32.3	4
Closed Routes	0	0	0	0	0	0	0	0	1
	35.1	3.6	68.3	58.3	27.7	44.2	21.5	258.7	2
	42.1	5.1	86.0	101.8	35.7	61.5	36.4	368.7	3
	18.1	1.5	24.2	26.2	14.1	23.4	10.7	118.2	4

* Numbers include routes that have been proposed within each alternative

Table 3 Miles of Designated Routes by Sub-Region in Each Alternative Sub-Region B, Camel Back WSA, would be closed to motorized & mechanized travel, all alternatives				
Sub-Region	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Miles of Designated Routes Subject to Seasonal Closures from 12/1 to 4/30				
A	Although the 1989 Resource Management Plan designated areas as "Limited to Designated Seasonally" those route designations are still to be determined.			
C				
D				
E				
F				
G				
Miles of Designated Routes Subject to Seasonal Closures from 12/1 to 4/15				
A		2.1	0	0
C		29.6	0	0
D		7.3	4.0	0
E		0.1	0.1	0
F		23.7	10.4	0
G		0	0	0
Miles of Designated Routes Available Yearlong				
A	91.8	89.7	91.8	91.8
B	32.0	31.2	32.0	32.0
C	173.8	144.2	173.8	173.8
D	182.7	175.3	178.6	182.7
E	61.0	60.9	60.9	61.0
F	125.8	102.1	115.4	125.8
G	69.5	69.5	69.5	69.5

Management Common to All Alternatives

OHV Designations

The existing Camel Back Wilderness Study Area contains 10,668 acres of Public Land. It is currently designated as "Closed", and would remain designated as "Closed" to motorized and mechanized use.

Travel Use Conditions

Travel use conditions describe allowed, restricted or limited travel uses on motorized or non-motorized designated routes. These conditions are as follows:

> In each alternative, motorized access in Camel Back WSA for emergency and administrative activities would comply with guidance provided under Wilderness Study Area Interim Management Plan guidance. An emergency situation is defined as one where there is a threat to human life, property (including livestock) or public land resources. Emergency activities

utilized, such as for law enforcement, would be the minimum necessary to address the situation and rehabilitation and restoration work would follow where needed.

Any emergency or administrative motorized vehicle or equipment use off authorized routes on Public Lands administered by the BLM would require prior notification and approval by the authorized BLM official. Should prior notification not be possible, contact would be made with the authorized BLM official within 72 hours following emergency entry.

All public lands would be available for horseback riding and hiking on routes or cross-country.

Design Features
Project based consultation regarding traditional cultural properties, "intangible spiritual attributes", and contemporary use areas with Ute tribal officials would be implemented, and the appropriate mitigation would be agreed upon with the Ute Tribe and State Historical Preservation Office (SHPO).

Follow-on Actions
The actions below would be implemented:

Maps, brochures, and educational material would be developed and made available for the public, in print and on the internet.

BLM is currently working with a landowner to acquire a public easement for the West Transfer Road, which is an existing road shown on maps for all alternatives. The continued use of that road is dependent upon BLM eventually acquiring an easement for legal public access. BLM would continue working with the private landowner regarding legal public access.

Existing Laws, Regulations, Policy, Guidance, Land Use Authorizations, and Valid Existing Rights
The BLM would manage the public lands in accordance with applicable laws and regulations, and BLM policy and guidance. Implementation of any of these alternatives would be subject to all valid existing rights at the time of the signing of the decisions relative to the Resource Management Plan Amendment and Travel Management Plan.

Existing laws and protocols regarding the protection of cultural and historical resources would be applied to known and discovered historic properties.

The use of motorized or mechanized modes of travel, including snowmobiles during the execution of a land use authorization or permit, such as rights-of-way construction, fuel wood and decorative rock gathering, or operations under a grazing permit, would be subject to the terms and conditions of each individual authorization. Additional environmental documentation and analysis would be required in some cases for these authorizations.

Any existing or future road use or maintenance agreements with counties would continue according to the terms and conditions of those agreements.

Management Common to Alternatives 2 (Proposed) Action, 3, and 4

OHV Designation Changes

Existing OHV designations on Public Lands categorized as "Open" and "Limited" would be changed to "Limited to designated routes" yearlong or with seasonal restrictions. Motorized and mechanized routes limited seasonally would be closed to all motorized and mechanized travel from December 1 to April 15 annually in order to prevent disturbance to wintering big game. These routes would be available for motorized and mechanized travel the remainder of the year. Any exceptions to the listed dates would be made by the authorizing officer and would be implemented according to appropriate notification and posting, and or according to other appropriate regulations. See Appendix 4 for the maps showing routes and restrictions in each alternative. The OHV designations and acreages on Public Land would be:

- Closed (to motorized and mechanized use) – 10,668 acres
- Limited to Designated Routes Yearlong or Seasonally – 99,896 acres.
- There would be no Public Lands with the area designation of Open.

See Appendix 2 for existing OHV Designations and those OHV Designations to be changed in Alternatives 2, 3, and 4, along with acreages by Sub-Region and totals.

Travel Management Plan

Alternatives 2 (Proposed Action), 3, and 4 consist of:

1. Proposed OHV designation changes,
2. Selected routes and uses, proposed new routes and routes to be closed to certain or all uses ("travel network system"),
3. Conditions of use and seasonal or travel type restrictions, such as seasonal closures to prevent disturbance to wintering big game, and
4. Proposed travel management support facilities.

No new routes, except for the proposed ones authorized by this Travel Management Plan, would be permitted to be constructed or established unless reviewed, analyzed and authorized by the BLM.

Travel Use Conditions

Travel use conditions describe allowed, restricted or limited travel uses on motorized or non-motorized designated routes. These conditions are:

> Each alternative identifies mileages of proposed selected routes, travel use categories, types of uses allowed, and the locations and choices of existing routes that would be designated and available for a variety travel opportunities. In the alternative descriptions, the term "available" is meant to imply a route where certain travel or uses would be allowed, seasonally or yearlong.
>
> Motorized and non-motorized travel off designated routes would not be authorized or permitted except as noted in each of the alternative descriptions.

Advanced Technology
Any advanced technology in regards to motorized or mechanized vehicles would adhere to the specified route width restrictions mentioned within the Definitions of Travel Use Categories found in Appendix 1.

Game Retrieval
The use of wheeled, muscle-powered game carts or wagons would be permitted off designated routes to retrieve big game, except within the Camel Back WSA (Sub-Region B), only during Colorado Division of Wildlife (CDOW) authorized big game and mountain lion hunting seasons.

Parking
In order to limit resource impacts and help prevent new user-created routes, users would be allowed to park motorized or mechanized modes of travel immediately adjacent and parallel to available designated routes for any purpose. Parking would be limited to one vehicle-width from the edge of the route. Users would be encouraged to park motorized or mechanized modes of travel in already disturbed areas where possible, consider safety and keep routes passable for other users. (Some alternatives have areas that allow parking a greater distance off the route.)

Camping
Some existing short spur routes that lead to popular dispersed campsites would be designated and identified. Dispersed camping would also be allowed in other areas, consistent with parking requirements in the alternatives.

Travel Management Support Facilities
Proposed facilities to support the travel management plan include staging areas, hardened camping areas, trailheads, and portal signs. These facilities could consist of a maximum of three acres of disturbed surface. Facilities could include restrooms, loading and unloading ramps, kiosks, hardened graveled parking areas and camping spurs, fencing, hitching rails, picnic tables and cabanas, vehicular control devices, native landscape islands, erosion and drainage control devices, hardened access trails, and limited hardened egress and ingress points for all technical four-wheel drive routes. Additional facility needs noted through the 2009 RMP scoping process would be considered in the revision.

Access onto Public Lands from Private Lands
Motorized and mechanized travel onto public lands from adjacent private lands would be limited to the public access points and designated routes provided in the alternatives (that is, if there is not a designated route, motorized or mechanized travel would not be permitted).

Maintenance
Any existing or future road use or maintenance agreements with Montrose County would continue according to the terms and conditions of those agreements.

Monitoring & Implementation
An Implementation and Monitoring Plan would be prepared; it would include measures for route closures or rehabilitation of impacted areas, as well as route signing, trailhead construction, and other

implementation activities. Levels and types of uses, visitor experiences and natural resources would be monitored. Monitoring would determine if targeted opportunities and experiences and protection of sensitive resources and land health are being achieved in order to meet desired future conditions. Monitoring tools would include traffic counter data, on-site patrols, surveys, and analysis of use occurring. Actions would then be taken to correct any deficiencies in these goals.

Follow-on Actions
The actions below would be implemented:

BLM administrative functions related to a variety of natural resource management objectives (e.g., wildlife habitat and species monitoring and management, noxious weed eradication, resource enhancement and restoration, and fence repair) that could potentially require cross-country travel using motorized vehicles or equipment off designated routes would be addressed at the project level on a case-by-case basis and with appropriate environmental documentation and assessment.

Applications for Special Recreation Permits (SRPs) would be considered, subject to the approved Travel Management Plan designated route system, the existing approved Resource Management Plan and Amendments, and appropriate environmental documentation and stipulations that would be developed during the processing of these applications.

All proposed routes in the approved Travel Management Plan would have the appropriate level of environmental analysis and documentation prepared, required clearances, and any necessary mitigation completed for cultural resources and special status plant/animal species and habitat before construction starts. Construction and maintenance work would be subject to the conditions and guidelines that create sustainable, low maintenance routes. These conditions would apply to any proposed route, regardless of the purpose of the route, and would help:

- Ensure that the designated routes in the approved Travel Management Plan would be considered in planning for new additional routes,
- Prevent impacts to public lands and resources, and
- Ensure that routes would be located properly and constructed with good design and planning.

A weed management plan would be prepared and implemented that would identify all weed infestations and concerns on all routes and an action plan to eliminate or reduce noxious weeds.

BLM would develop and maintain partnerships with key stakeholders to assist with managing and implementing travel decisions.

The BLM, in cooperation with other agencies and organizations, would prepare and implement a public education program in a variety of formats to promote wise use on public land, and would include information regarding controlling noise levels while recreating on public lands. Colorado noise level standards pertaining to the operation of motor vehicles, including provisions in Colorado Senate Bill 08-063, and any pertinent regulations that would be promulgated would be incorporated. Accurate maps and other information relevant to travel management for public

land visitors as well as contacting visitors on-site by BLM staff, volunteers, and partners would be a part of this program.

Adaptive Management
BLM would reserve the option to further restrict travel and use, by vehicle type or season, on any route to protect resources (natural or other) or infrastructure from being impacted from vehicular use in the event of extreme winters, wet conditions, to reduce safety hazards, or in other unforeseeable situations, or to better manage and protect sensitive resources or other values, such as big game or nesting raptors. These actions could include emergency closures of routes, permanent or seasonal closures of routes, or relocation of routes. These actions would be taken following appropriate emergency closure or other procedures, and/or after appropriate site-specific NEPA analysis.

Over time, changes may need to be made to the approved and adopted Travel Management Plan in terms of adding, relocating, or closing certain routes, maintenance needs, and seasonal or other use restrictions on routes. These changes would be documented using appropriate BLM Land Use Planning regulations and National Environmental Policy Act (NEPA) procedures. Persons or organizations can request the BLM to make route status changes based on a variety of criteria including route condition, maintenance needs, resource conditions, existing uses, historical information, changing needs, cultural information, economic information, ecological issues, and use types and levels.

Enforcement
BLM would assign personnel including law enforcement, recreation staff, other resource staff and volunteers to actively patrol route designations.

The official agency map made available to the public showing designated routes would be used to determine if travel is permitted and authorized on a particular route during any part of the year. Signs may be posted on routes that provide information as to whether travel on a particular route is permitted. However, users would be responsible for understanding and following the restrictions on the map(s). Implementation of the approved travel management plan would include a strategy of educating users, utilizing law enforcement efficiently, developing maps for the public, and other tools to communicate that driving off of designated routes for motorized or mechanized uses is not permitted.

Existing Laws, Regulations, Policy, Guidance, Land Use Authorizations, and Valid Existing Rights
The use of motorized or mechanized modes of travel, including snowmobiles, during the execution of a land use authorization or permit, such as rights-of-way construction, fuel wood and decorative rock gathering, or operations under a grazing permit, would be subject to the terms and conditions of each individual authorization and the travel management plans being considered in these alternatives. Additional environmental documentation and analysis would be required in some cases for these authorizations.

Design Features
Many of the design features below that would be implemented have been developed from mitigation measures that would reduce or eliminate impacts to certain resources.

BLM re-routes or re-locations needed for erosion or other mitigation would be limited to a corridor 25 feet wide on either side of the centerline of all designated routes. This corridor is

assumed as a potential area for future BLM re-routes only and in the foreseeable future this corridor would be seldom used.

Proposed routes would be designed and located such that Visual Resource Management Class Objectives would be met, in order to reduce visual contrast and impacts. They would also be located away from riparian and wetland areas. Surface disturbance would be kept to a minimum in order to maintain sufficient vegetation to protect soils, and the number of stream crossings would be kept to a minimum, in order to reduce impacts to wetlands and riparian areas.

Restoring natural drainage patterns, surface topography, and vegetation would be considered and implemented as needed during rehabilitation of routes to be relocated or closed to travel.

Improvements would be implemented at stream crossings to reduce channel and riparian impacts.

If necessary, as use increases, dust generated in localized areas and from specific uses, seasons, or events would be reduced by either hardening surfaces on certain high use routes, watering or treating routes during certain times with approved dust abatement chemicals, or installing speed bumps or obstacles in certain locations in a safe manner to reduce speeds and resultant dust.

Impacts to currently known eligible cultural properties would be avoided, minimized or mitigated in consultation with State Historical Preservation Office (SHPO). Where National Register eligible sites are known to be in danger or are currently being impacted by travel activities, routes would be closed to travel if necessary until the appropriate mitigation has been implemented. Proposed routes, parking areas and other facilities to be constructed under these alternatives would be intensively inventoried prior to construction or use. Where existing inventories are sufficient, standard discovery stipulations would apply.

Stipulations contained in applicable existing laws and protocols would be applied to known Sacred Sites and Traditional Cultural Properties. Where such properties are known to be in danger or are currently being impacted by travel activities, routes would be closed to travel until the appropriate mitigation has been implemented. Proposed routes, parking areas and other facilities to be constructed under these alternatives would be intensively inventoried prior to construction or use. Where existing inventories are sufficient, standard discovery stipulations would apply.

Informational/Directional signs will be installed where needed throughout the planning area, which would include kiosks on entry routes into Sub-Regions as appropriate. Signing for designated routes would be implemented by BLM over time and as funding allows.

All routes would be appropriately signed with allowed uses and seasons of use. Because signs are at times vandalized or removed, the user is responsible for determining the correct mode of travel based on official maps. Official maps would be made available to the public.

Design, construction and maintenance work for routes would be subject to the conditions and guidelines that create sustainable, low maintenance routes and provide quality recreation

experiences. Maintenance of routes would be performed according to the Implementation and Monitoring Plan to be prepared, BLM annual work plans, and as funding permits.

Closures, rehabilitation and/or re-vegetation of routes would be performed according to the Implementation and Monitoring Plan to be prepared, BLM annual work plans, and as funding permits. This could include reseeding, planting vegetation, such as willows, and/or constructing barriers. If any ground disturbance is required, such as ripping existing routes, digging post holes for fences, or using rangeland drills, the appropriate clearances will be conducted prior to implementation.

Alternative 1 – No Action

Management Objectives

The Management Objectives of Alternative 1 would be to continue existing management and priorities. BLM would strive to meet Land Health Standards on Public Lands, and would provide the same level of required resource management and protection that is currently being provided. Management of the routes would continue to emphasize "shared use" travel opportunities along with adequate and appropriate public access.

OHV Designation Changes

Public lands would retain current OHV designations. These designations and acreages are as follows:

- Closed – 10,664 acres (Camel Back Wilderness Study Area);
- Open – 28,557 acres;
- Limited to Designated Routes Yearlong – 1,964 acres; and
- Limited to Designated Routes Seasonally (12/1 to 4/30) – 69,375 acres.

The Camel Back WSA would continue to be closed to motorized and mechanized travel.

See Appendix 2 for acres of OHV designations in each Sub-Region by alternative.

Travel Management Plan

Decisions in the current 1989 Resource Management Plan/Record of Decision restrict motorized travel in certain parts of the area to designated routes from December 1 through April 30 annually or yearlong. See Appendix C, Maps 1 and 2, pages 49 and 50, RMP. However, since the RMP has been in effect, there has been little travel management planning to implement these seasonal or yearlong route designations and restriction decisions. In this alternative, these decisions would continue to be under-implemented until further travel planning could be completed, resulting in continued, yearlong, on-route and cross-country travel on approximately 676 miles of existing motorized and non-motorized routes. All modes of travel would continue to be allowed to go off routes yearlong on public lands designated as either "Limited seasonally or yearlong" or "Open", resulting in a possible increase in single and two-track routes being established by users traveling off existing routes. Table 1 shows the number of miles in each Travel Use Category for this alternative.

Travel Use Conditions

Travel use conditions describe allowed, restricted or limited travel uses on motorized or non-motorized

designated routes. These conditions are as follows:

> There would continue to be a lack of specific route restrictions or designations, travel management analysis or plan preparation, and route rehabilitation efforts, leaving the area susceptible to route proliferation due to cross-country travel. Visitor use levels and resource concerns would continue to increase, as is the current trend. Management to address route rehabilitation, public and administrative access needs, protect sensitive resources, promote public safety and minimize conflicts among various uses of public lands would continue to be under-implemented. See Appendix 4 for a map of Alternative 1 for existing inventoried routes.
>
> Except as otherwise noted, travel on horse, by foot, or by any type of motorized or mechanized modes of travel would continue to be permitted on routes or cross-country.
>
> Existing policies pertaining to motorized and mechanized travel and the distance vehicles are permitted to travel off existing routes for any purpose, including driving, parking, camping, and retrieving game, would remain unchanged. Currently, these activities can occur anywhere in the planning area except the Camelback Wilderness Study Area. All Public Lands and uses on Public Lands would continue to be managed according to new BLM policies or regulations as they become effective.

Travel Management Support Facilities
Facilities to support travel management would be considered on a case-by-case basis in this alternative.

Access onto Public Lands from Private Lands
Motorized and non-motorized entry onto public lands from adjacent private lands would continue to be permitted. No public access onto Public Lands within the Camel Back WSA using motorized or mechanized modes of travel would be permitted, unless noted otherwise.

Follow-on Actions
The actions below would be implemented:

> Special Recreation Permits would be considered, subject to appropriate environmental documentation and stipulations that would be developed during the processing of these applications.

<u>Alternative 2 – Proposed Action</u>

This alternative includes the actions in the section above headed "Management Common to Alternatives 2, 3, and 4".

Management Objectives
The objective of Alternative 2 (Proposed Action) is to strive to meet Land Health Standards, improve resource protection and minimize impacts to sensitive resources while providing quality travel opportunities and experiences along with adequate and appropriate public access. The OHV designation changes and travel management plan in this alternative along with the accompanying

management actions below would accomplish this objective. This Travel Management Plan and alternative was developed after considering the environmental consequences of implementing the other alternatives; issues raised throughout the planning process; specific resource and environmental values and resource uses; conflict resolution; public input; and laws, guidance, policies, and regulations. The alternative was developed with public input by the Uncompahgre Field Office manager and interdisciplinary team members. It represents the mix and variety of proposed designated routes, uses, and other actions that, in the opinion of the preparers, best resolve the issues and management concerns identified at scoping and follow up meetings that drove preparation of this document. See Appendix 4 for a map of designated routes in Alternative 2.

OHV Designation Changes

Within the project area, the Proposed Action would examine, analyze and amend land use plan decisions in the existing RMP related to OHV designations and transportation to change all current "Open" and "Limited to Designated Routes-Seasonally/Yearlong" OHV designations to the "Limited to Designated Routes-Yearlong/Seasonally" category. Those routes limited seasonally would be closed to all motorized and mechanized travel from December 1 to April 15 annually in order to prevent disturbance to wintering big game. These routes would be available for motorized and mechanized travel the remainder of the year. See Appendix 4 for maps showing routes and seasonally restricted routes in each alternative. The Proposed Action would result in no acres being designated as "Open" and no additional acres being designated as "Closed". The existing 10,668 acre Camel Back Wilderness Study Area (WSA) would remain designated as "Closed" to motorized and mechanized travel (i.e., mountain bikes and wheeled, muscle-powered game carts or wagons). See Appendix 2 for acres of OHV designations in each Sub-Region by alternative.

Travel Management Plan

The Proposed Action would adopt this comprehensive Travel Management Plan (TMP) for the Dry Creek Planning Area, which is an extensive route system and identifies travel management support facilities for most forms of travel. The TMP is a transportation system on public lands for managing and supporting all modes of travel. Uses of the routes would include general access to public lands and resources for multiple uses while protecting sensitive natural and cultural resources. These uses include, but are not limited to, recreation, fuel wood gathering, hunting, mineral activities, and BLM and other authorized administrative and program management, such as weed control, livestock grazing management, wildlife habitat management, rights-of-way maintenance and operation.

The TMP would identify and designate:

- 306 miles of routes in the Motorized Single-Track, ATV-2-Track, and 4WD-2WD travel use categories for motorized and non-motorized travel.

- 32 miles of non-BLM routes that would be available for authorized and legally permitted motorized and non-motorized uses that are not affected by decisions made in this TMP. These include County and private roads.

- 9 miles of routes in the Specialized Trails travel use category for Technical 4WD and Motorized and Mechanized Trials bike uses.

- 72 miles of non-motorized routes consisting of 44 miles in the Non-Motorized & Non-Mechanized, Single Track travel use category for hiking and horseback riding, and 28 miles in the Non-Motorized Single-Track travel use category for hiking, horseback riding, and mechanized use.

- 41 miles of routes in the Administrative Uses Only category that would be available for hiking and horseback riding, but not for motorized or mechanized uses by the public.

- 8 miles of certain designated routes users would be permitted to travel off-route a distance no greater than 300 feet to camp or park. The centerline of these routes would be the point from which the 300 feet would be measured. See Appendix 4 for a map of locations of these routes in Alternative 4.

- 258 miles of routes to be closed to all motorized and mechanized travel.

- Approximately 16 miles of proposed route construction would occur.

- Selected routes, identified on the map, would be closed from December 1 to April 15 to prevent disturbance to wintering big game. Any exceptions to the listed dates would be made by the authorizing officer and would be implemented according to appropriate notification and posting, and or according to other appropriate regulations.

Travel Management Support Facilities
The travel management support facilities would be implemented in selected Sub-Regions in this Alternative to support the travel management plan described above and help ensure its success in meeting the alternative objections, desired future conditions, and land health standards. See Appendix 6 for a list of these facilities and the Sub-Regions they would be located in, and Appendix 4 for a map of locations of these facilities.

Alternative 3

This alternative includes the actions in the section headed "Management Common to Alternatives 2, 3, and 4".

Management Objectives
The objectives for this Alternative are to exceed Land Health Standards where possible, and maximize resource protection while providing a minimal level of travel opportunities and public access. Implementing the travel management support facilities in this alternative and the actions and design features in "Management Common to Alternatives 2, 3, and 4 would help achieve these objectives. Identified issues and concerns would be resolved with a focus on conserving natural values. Opportunities for motorized and mechanized travel would have greater restrictions and would be managed to meet the objectives for this alternative. Non-motorized/non-mechanized travel opportunities and quiet uses would be emphasized with more comprehensive restrictions and conditions on motorized and mechanized activities. See Appendix 4 for a map of designated routes in Alternative 3.

OHV Designation Changes

Implementing this alternative would result in the same changes to existing OHV designations as Alternative 2. See Appendix 2 for OHV designation acreages for this alternative.

Travel Management Plan

This alternative would identify and designate:

- 148 miles of routes in the Motorized Single-Track, ATV-2-Track, and 4WD-2WD travel use categories for motorized and non-motorized travel
- 3.4 miles of routes in the Specialized Trails travel use category for Technical 4WD and Motorized and Mechanized Trials bike uses
- 32 miles of Non-BLM routes would be available for authorized and legally permitted motorized and non-motorized travel that is not affected by decisions made in this TMP. These routes include County roads
- 87 miles of restricted non-motorized routes, consisting of 47 miles in the Non-Motorized & Non-Mechanical, Single Track travel use category for hiking and horseback riding, and 40 miles in the Non-Motorized Single-Track travel use category for hiking, horseback riding, and bicycle use
- 65 miles of routes in the Administrative Uses Only category that would be available for hiking and horseback riding, but not for motorized or mechanized uses by the public
- 369 miles of routes that would be closed to all motorized and mechanized modes of travel
- 14.5 miles of routes would not be available for use by any motorized or mechanized travel from December 1 through April 15, to decrease disturbance to wintering big game
- Approximately 3 miles of proposed route construction would occur.

See Table 2 for mileages in each Sub-Region for each of the Travel Use Categories. See Appendix 4 for a map of designated routes in Alternative 3.

Travel Management Support Facilities

The travel management support facilities would be implemented in selected Sub-Regions in this Alternative to support the travel management plan described above and help ensure its success in meeting the alternative objectives, desired future conditions, and land health standards. See Appendix 6 for a list of these facilities and the Sub-Regions they would be located in, for all alternatives and see Appendix 4 for a map of locations of these facilities.

Alternative 4

Management Objective

The objectives for this alternative are to strive to meet Land Health Standards with minimum required resource protection and an emphasis on multiple-use travel opportunities and public access. Identified issues and concerns would be resolved with a focus on providing a greater diversity and opportunity for motorized recreation uses and additional developed facilities. Increased motorized and mechanized

travel opportunities would be an important consideration when actions are implemented. Overall, restrictions on route usage would be less than any of the other alternatives. See Appendix 4 for a map of designated routes in Alternative 4.

OHV Designation Changes
Implementing this alternative would result in the same changes to existing OHV designations as Alternative 2. See Appendix 2 for OHV designation acreages for this alternative.

Travel Management Plan
This alternative would identify and designate:

- 519 miles of routes in the Motorized Single-Track, ATV-2-Track, and 4WD-2WD travel use categories for motorized and non-motorized travel
- 9 miles of routes in the Specialized Trails travel use category for Technical 4WD and Motorized and Mechanized Trials bike uses
- 32 miles of Non-BLM routes would be available for authorized and legally permitted motorized and non-motorized travel that is not affected by decisions made in this TMP.
- 46 miles of restricted non-motorized routes consisting of 29 miles in the Non-Motorized & Non-Mechanical, Single Track travel use category for hiking and horseback riding, and 17 miles in the Non-Motorized Single-Track travel use category for hiking, horseback riding, and bicycle use.
- 11.8 miles of routes in the Administrative Uses Only category that would be available for hiking and horseback riding, but not for motorized or mechanized uses, by the public.
- 118 miles of routes to be closed to all motorized and mechanized modes of travel.
- 8 miles of certain designated routes users would be permitted to travel off-route a distance no greater than 300 feet to camp or park. The centerline of these routes would be the point from which the 300 feet would be measured. See Appendix 4 for a map of locations of these routes in Alternative 4.
- Approximately 34 miles of proposed route construction would occur.

See Table 2 for mileages in each Sub-Region for each of the Travel Use Categories. See Appendix 4 for a map of designated routes in Alternative 4.

Travel Management Support Facilities

The travel management support facilities would be implemented in selected Sub-Regions in this Alternative to support the travel management plan described above and help ensure its success in meeting the alternative objections, desired future conditions, and land health standards. See Appendix 6 for a list of these facilities and the Sub-Regions they would be located in, for all alternatives and see Appendix 4 for a map of locations of these facilities.

SUMMARY & COMPARISON OF ALTERNATIVES

Table 4 below shows a comparison of the major travel management elements of each alternative.

Table 4
Summary & Comparison of Alternatives

Actions	Alternative 1	Alternative 2	Alternative 3	Alternative 4
OHV Designation Changes				
Open acres (Change from Alt. 1)	28,557 acres - See Footnote 1	0 acres (-28,557 acres)		
Closed	10,664	10,664	10,664	10,664
Limited to Designated Routes Yearlong (Change from Alt. 1)[1]	1,964 acres - See Footnote 1	0 acres (See Limited Designation Below)		
Limited to Designated Routes 4/30 to 12/1 (Change from Alt. 1)[1]	69,375 acres - See Footnote 1	0 acres (-69,375 acres)		
Designation Change – Limited to Designated Routes Yearlong or from 4/15 to 12/1 (Change from Alt. 1)	0 acres –not applicable to this alternative	99,896 acres (+99,896 acres)		
Miles of Designated Routes/Trails Each Travel Use Category[5]				
Non-Motorized/ Non-Mechanized Single Track	15.6	43.4	47	29
Non-Motorized Single Track	8.9	28.2	39.8	16.8
Motorized Single Track	See Footnote 1	42.2	11.8	67.2
ATV 2-Track	See Footnote 1	33.7	13.3	29.3
4WD/2WD - Open	645	230.3	123.2	422.2
Designated Specialized Routes – Technical 4WD and Mechanized and Motorized Trial Bikes	See Footnote 1	8.6	3.4	8.5
Designated Routes - Administrative Uses[2]	See Footnote 1	21	34	11
Designated Routes - Administrative Uses Only[3]	See Footnote 1	40.6	65	11.8
Designated Routes - Non-BLM Routes	32.3	32.3	32.3	32.3
Designated Routes - Closed	See Footnote 1	258.7	368.7	118.2
Total Miles all Routes Available to Public[4]	701.8	418.7	270.8	605.3
Other Actions				
Proposed Designated Routes[6]	None	16.3 miles	2.7 miles	33.6 miles
Restrictions - Seasonal Closures from 12/1 to 4/15	None	63 miles[5]	14.5 miles[5]	0 miles
Use of Motorized Vehicles, such as 2 & 4-wheel drive passenger vehicles, ATVs, motorcycles, technical 4WD vehicles, or snowmobiles	Authorized Yearlong except Camel Back WSA	Would be limited to designated routes[5], and identified on maps. Camel Back WSA would be closed to these modes of travel.		

Use of Mechanized Modes of Travel	Authorized Yearlong except Camel Back WSA	Would be limited to designated routes[5], and identified on maps. Camel Back WSA would be closed to these modes of travel.		
Cross-Country Travel Using Motorized or Mechanized Modes of Travel	Permitted throughout Planning Area except Camel Back WSA	Would not be authorized or permitted in Planning Area		
Use of Motorized Vehicles for Retrieving Game	Authorized cross-country travel yearlong except Camel Back WSA	Only authorized on designated routes.		
Use of Muscle-Powered Wheeled Carts or Wagons for Retrieving Game	Authorized yearlong, for any purpose, except in Camel Back WSA	Would be permissible only for retrieving downed big game from appropriate designated routes[5], & only during CDOW big game and mountain lion hunting seasons. Camel Back WSA would be closed to these modes of travel.		
Consideration of Special Recreation Use Permit applications	Yes	Would be considered, subject to approved TMP, designated routes, approved RMP, & appropriate environmental documentation.		
Parking	Authorized in all areas yearlong except Camel Back WSA	Allowed to park motorized or mechanized modes of travel immediately adjacent and parallel to available designated routes for any purpose. Parking would be limited to one vehicle-width from the edge of the designated route.		
Dispersed Camping	Authorized cross-country travel yearlong except Camel Back WSA	Some existing short spur routes that lead to popular dispersed campsites would be designated and identified. Dispersed camping would also be allowed in other areas, consistent with parking requirements.		
Proposed Travel Management Support Facilities				
Staging Areas	0	7	5	8
Upgrade Existing Staging Areas	0	1	1	1
Trailheads	0	8	5	4
Hardened Camping Areas	0	3	0	2
Interpretive Sites	0	0	0	1
Portal Signs	None	Yes	Yes	Yes

1. Route designations are still to be determined.
2. These routes would be available for motorized administrative use and to the public for a variety of other designated modes of travel (see maps in Appendix 4 for details)
3. These routes would be available for hiking and horseback riding only by the public but available for motorized admin. use
4. Mileages for Alternatives 2, 3, and 4 are for Primary uses in each Travel Use Category
5. Routes designated would be available either yearlong or seasonally
6. Mileages are included in travel use categories

IMPLEMENTATION AND MONITORING

A detailed, decision-specific implementation and monitoring plan would be completed following

approval of the Resource Management Plan (RMP) Amendment and Travel Management Plan (TMP). The implementation and monitoring plan would contain detailed schedules and frequencies necessary to monitor and implement all decisions in the RMP amendment and TMP. Cost estimates for the implementation of decisions would also be included. Several follow-on activity plans would be prepared during implementation of the RMP amendment and TMP, such as a weed management plan.

Monitoring data is used to assess resource conditions, identify resource conflicts, determine if resource objectives are being met and periodically refine and update desired future conditions and management objectives. The BLM planning regulations (43 CFR 1610.4-9) require monitoring of RMPs or RMP amendments on a continual basis with formal evaluations conducted at periodic intervals.

ADAPTIVE MANAGEMENT

As the Resource Management Plan (RMP) amendment and Travel Management Plan (TMP) decisions begin to be implemented and monitored, each one would be observed as to whether the desired future outcomes or outputs are being achieved over time. Determinations would be made based on these measurements or observations, and adjustments in implementation or monitoring would be made as needed in order to assure that desired future outcomes or outputs are being achieved. This is adaptive management, and this principle would be applied as the RMP amendment and TMP is being implemented. Monitoring is an essential component of the adaptive management strategy. Adaptive management also recognizes that sometimes there is incomplete data when managing natural resources and that through continued research and monitoring of the effects of implementing decisions and actions, new information will be developed. This information can be reevaluated and incorporated into the management plan, and practices can be adjusted accordingly. Thus, adaptive management is the "process of implementing policy decisions as scientifically driven management experiments that test predictions and assumptions in management plans and that use the resulting information to improve plans" (Noss and Cooperider 1994). Thus, the greatest hurdle to overcome in natural resource management is uncertainty. To mitigate uncertainty, the BLM will use adaptive management.

ALTERNATIVES CONSIDERED BUT NOT BROUGHT FORWARD

Other alternatives considered but not brought forward for analysis are listed below with rational for their not being considered.

1. An alternative with Open OHV designations. This alternative was not brought forward because a) in consultation with stakeholders, it was concluded that the desired future conditions (goals) and purpose of the document could not be met, b) the terrain of the planning area would not be conducive for Open areas, and c) because three existing Open areas are located on public lands less than an hour of the planning area. The existing Open area locations are: one is adjacent to the Gunnison Gorge National Conservation Area (NCA) near Montrose, one is within the NCA near Olathe, and one is near the City of Delta. These existing Open areas are considered to be premier OHV riding areas and all three are located near the same population concentrations as the planning area.

2. An alternative with Limited to All Existing Routes OHV designations. Many of the existing routes in the planning area are contributing to ongoing impacts that contribute to land health concerns, such as parallel routes with the same destination, the location of routes on unsuitable terrain and routes located near or on sensitive resources. Routes would potentially continue to be expanded in length and width beyond existing routes resulting in the potential for more resource impacts. This alternative was not brought forward because the purpose and desired future conditions (goals) for this document would not be met, even though the proliferation of additional user-created routes would be prohibited. Moreover, the Alternative 1 (No Action) analyzes the impacts of continuing to permit travel on all existing routes, as well as the potential increase in user-created routes.

Numerous other alternatives could have been developed for this Travel Management Plan because of the large number of existing routes. The three action alternatives, however, adequately address a range of alternatives, as required by NEPA. In addition, the alternatives brought forward in this Environmental Assessment (EA) cover a wide variety of options for many of the routes.

PLAN CONFORMANCE REVIEW

The alternatives are subject to and have been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: Uncompahgre Basin Resource Management Plan

Date Approved: July 26, 1989

Decisions: Amendment for the Standards for Public Land Health -- In January 1997, Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below.

RELATIONSHIP TO STATUTES, REGULATIONS OR OTHER PLANS

This RMP Amendment is being conducted in order to help meet *Standards for Public Land Health* within the Planning Area and to comply with the *Federal Land Policy and Management Act*. The Uncompahgre Field Office coordinated with the US Forest Service to ensure consistency with travel management on adjacent lands managed by the Uncompahgre National Forest. In addition, the field office coordinated and consulted with the US Fish and Wildlife Service, Colorado Division of Wildlife (CDOW), State Historical Preservation Office (SHPO), and the Southern Ute Tribal Council and the Ute Mountain Ute Tribal Council.

Other statutes, regulations and plans were identified and reviewed for consistency with this RMP Amendment, including: Federal Land Policy and Management Act, National Environmental Policy Act, BLM NEPA Handbook, H-1790, Standards for Public Land Health in Colorado; Recreation

Management Guidelines to Meet Public Land Health Standards on Bureau of Land Management Lands in Colorado; National Highway Safety Act of 1966 (23 USC 402, P.L. 89-564); Surface Transportation Assistance Act of 1978 as amended (23 USC 101a, 201-205, P.L. 95-599 and 97-424); Executive Order 11644 – Use of off-road vehicles on public lands; Code of Federal Regulations , including but not limited to 43 CFR Part 8340; H-1601-1, Land Use Planning Handbook – Appendix C, Section D; National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands; National Mountain Bicycling Strategic Action Plan; Colorado BLM Travel Management Guidance; and 8550- Interim Management Policy and Guidelines For Lands Under Wilderness Review & BLM Handbook 8550-1, Interim Management Policy For Lands Under Wilderness Review as well as other direction contained in Appendix 7.

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES:

This section summarizes the physical, biological, social, and economic environments of the planning area and the nearby lands and the effects of implementing each alternative on that environment. It also presents the scientific and analytical basis for the comparison of alternatives. The Uncompahgre Field Office has inventoried and mapped all existing routes for consideration. These include routes constructed by the BLM, and all motorized and non-motorized routes that have been created through public use. Also considered are public roads not under BLM jurisdiction, such County roads, although no actions would affect these roads.

The long-term effects discussed mean between 5-10 years, and short-term effects mean within 5 years.

The area of consideration for the effects discussed include: the lands in the planning area, the Cities of Montrose and Delta, the Town of Olathe, and other nearby communities.

Table 5 below displays a brief summary and comparison of the impacts that would potentially occur as a result of implementing the alternatives. Detailed information for impacts is discussed under each resource following the summary table.

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
Impacts on Transportation & Access	Existing environmental impacts, increasing maintenance and reconstruction needs, impacts to the management of the transportation system, user conflicts, and growing levels of motorized activity from increased use of poorly located and designed routes would steadily grow over time; Access to public lands would continue at current levels. A high potential would continue for new user-created routes to be developed by management policy of permitting continued yearlong, on-route and cross-country travel by all types of vehicles; The closure and rehabilitation of some routes would be required to mitigate severe resource impacts or conflicts with other uses.	Adopting this Travel Management Plan (TMP) and limiting travel to designated routes seasonally or yearlong would result in a reduction in environmental impacts by closing or reconstructing many poorly planned and located existing routes, or designating some existing routes for uses that are less impacting and planned regular maintenance, reconstruction, and new route construction as needed over time; An immediate need for additional route maintenance/improvements, more regulation enforcement, and additional recreation facilities would result to accommodate the TMP and increased recreation usage; outreach efforts would potentially result in partnerships with volunteers and user groups to help with managing, planning, constructing, and maintaining routes. Access to public lands would be somewhat reduced. 355 fewer miles of routes would be managed for motorized use and 47 more miles of routes would be managed for non-motorized use than under Alternative 1.	The TMP in this alternative would result in impacts similar to Alternative 2, but with more potential for reduction of existing environmental impacts as a result of no new route reconstruction, more route relocation, closing or changing uses on nearly all existing routes that would be designated and that are causing or have the potential to cause environmental impacts, and managing and designating 518 fewer miles of routes or motorized uses and 62 more miles of routes for non-motorized uses than under Alternative 1. Access to public lands would be reduced to a greater extent than under Alternatives 1, 2, or 4.	The TMP in this alternative would result in impacts similar to Alternative 2, but with less potential for reduction of existing environmental impacts as a result of many planned and newly constructed routes and designating more motorized routes, and permitting motorized uses on, but not closing, most of the existing poorly planned and located routes that are causing or have the potential to cause environmental impacts; potential for continued conflict would continue between users and incompatible uses. 152 fewer miles of routes would be managed for motorized use and 21 more miles of routes would be managed for non-motorized use than under Alternative 1. Access to public lands would be similar to that in Alternative 1.
Impacts on Air Quality	Unrestricted use on about 700 miles of existing motorized and non-motorized routes (848 acres of existing soil disturbance), cross-country travel on all public lands & from additional unplanned and undersigned routes would cause fugitive dust and pollution that would potentially adversely impact air quality on or as seen from neighboring private and BLM & NPS managed ands. These effects could result in violations of state air quality standards.	Risk of adverse air quality impacts is greatly reduced as result of prohibition on cross country travel & closing some existing routes. Closing 290 miles of routes would result in 350 fewer acres of disturbed soils and faster rehabilitation and re-vegetation, resulting in less fugitive dust	Risk of adverse air quality impacts is greatly reduced. Same as for Alternative 2, except closing 428 miles of routes would result in 518 fewer acres of soils disturbed and faster rehabilitation and re-vegetation, resulting in less fugitive dust	Risk of adverse air quality impacts is greatly reduced. Same as for Alternative 2, except closing 128 miles of routes would result in 128 fewer acres of soils disturbed and faster rehabilitation and re-vegetation, resulting in less fugitive dust

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
Impacts on Cultural Resources	Existing vehicular and other access availability, impacts, and potential impacts to historic properties would continue with unlimited and increasing off road & cross - country use that creates new routes that would continue to have a high potential to greatly impact known sites in existing roads & other eligible properties resulting in degradation of the resource value, loss of information, and long term irreversible, irretrievable impacts to major archaeological sites.	Major reduction to potential impacts to recorded and undocumented historic properties & previously un-impacted properties would occur by prohibiting all cross country vehicular travel, limiting travel to designated routes seasonally or yearlong, limiting use by vehicle types, & closure of 259 miles of existing routes.	Same as for Alternative 2, except 369 miles of existing routes would be closed, increasing the significance of the changes that would occur.	Similar to Alternative 2, except that approximately 118 miles of existing routes would be closed.
Impacts on Environmental Justice	Demands and impacts would continue to increase, but would not result in a disproportionate impact on minority or low income populations.			
Impacts on Farmlands (Prime and Unique)	More soil surface & stream channel disturbance & accelerated storm runoff and sediment yield would potentially affect some downstream & off-site farmlands and irrigation facilities as a result of increases in travel volume of use, unrestricted continued cross-country travel creating new routes and disturbance, about 700 miles of existing motorized and non-motorized routes that occupy about 848 acres of disturbed surface) , 73 miles of existing routes within 100 feet of stream channels (or 88 acres of existing soil and vegetation disturbance), 877 stream crossings on routes, 572 miles of routes on soils that have either a moderate or severe potential for erosion. Routine trail maintenance and other measures, such as seasonal and weather related route closures would not occur, causing further increasing deterioration of routes and continued impacts.	Amount of existing storm runoff and sediment production would be greatly reduced, & less erosion would occur on about 312 fewer disturbed acres from closing about 259 miles of all types of existing routes and 32 miles of existing routes within 100 feet of stream channels (results in 35 fewer existing acres of existing soil and vegetation disturbance, facilitating re-vegetation and rehabilitation), 389 fewer existing stream crossings on all types of existing routes, and 206 fewer miles of existing motorized and non-motorized routes, or 250 fewer acres, on soils that have either a moderate or potential for erosion. Accelerated sediment yield and storm runoff would be reduced with the prohibition of all off route travel and the implementation of the measures in this alternative.	Similar to Alternative 2 except: less erosion would occur from closing 369 miles of all types of existing routes (results in 447 fewer acres of existing disturbed surface) and 39 miles of existing routes within 100 feet of stream channels (results in 47 fewer acres of existing soil and vegetation disturbance), 492 fewer stream crossings on all types of routes, and closing 354 miles of existing motorized and non-motorized routes , resulting in 430 fewer acres of disturbance on soils that have either a moderate or potential for erosion, further reducing the potential affect on some downstream & off-site farmlands and irrigation facilities.	Similar to Alternative 2, with somewhat less potential for reductions in amount of existing storm runoff and sediment production, & erosion from closing 118 miles of all types of existing routes (143 fewer acres of existing disturbed surface) . An increase of 1 more mile of route (1 more acre of potentially disturbed surface) within 100 feet of stream channels and 54 more stream crossings along proposed Roubideau hiking and horse trail would result in minimal impacts to farmlands. 68 fewer miles of existing motorized and non-motorized routes, or 82 fewer acres, on soils that have either a moderate or potential for erosion would reduce impacts on these sensitive resources. Minimal impacts to farmlands adjacent to the area could potentially occur along Roubideau Creek horse trail in Camel Back WSA.
Impacts on Floodplains	Impacts from about 700 miles of existing motorized and non-motorized routes that occupy about 848 acres of disturbed surface) would be the same as for *Impacts on Farmlands* above. Potential impacts would increase as more user-created routes and increases in volume of travel use in this	Potential for floodplain disturbance would be greatly reduced by prohibiting all cross country travel, closing about 258 miles of existing routes (results in about 312 fewer disturbed acres) of all types of routes, 32 fewer miles of existing routes	Similar to those in Alternative 2, except compared to Alternative 1, less erosion would occur from closing 369 miles of existing routes (about 447 fewer acres of soil disturbance) of all types of routes, closing 39 miles of existing routes within 100 feet of stream channels (results in 47	Similar to Alternative 2except compared to Alternative 1, existing disturbance to floodplains would be reduced by closing 118 miles of all types of existing routes (results in 143 fewer acres of existing disturbed surface). An increase of 1 more mile (1.2 more acres) of route within 100

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
	sensitive resource occur. 73 miles of existing routes (or about 88 existing acres of soil and vegetation disturbance) within 100 feet of sensitive stream channels, 877 stream crossings on routes, and existing routes and new user created routes in sensitive floodplains would continue to affect these sensitive resources by removing vegetation and the soil surface & encroaching on active stream channels, restricting channel dynamics and migration. Loss of vegetation cover to prevent downstream erosion and sedimentation could occur from little or no routine trail maintenance, application of mitigation such as seasonal and weather related route closures, increases in new user created routes & incidental spills of petroleum-related products where motorized travel occurs.	within 100 feet of stream channels (or 35 fewer acres of existing soil and vegetation disturbance, facilitating re-vegetation and rehabilitation), and 389 fewer stream crossings on all types of existing routes in the WIZ. Slight potential to alter the floodplain function of these drainages through physical disturbance to alluvial soils and the stabilizing vegetation from 8.6 miles of rock crawling trails in the WIZ, with 102 stream crossings located primarily in ephemeral drainage channels. The impacts from this use would be minimized by implementing the measures in this alternative.	fewer acres of existing soil and vegetation disturbance), and 492 fewer stream crossings on all types of existing routes in the WIZ. There would be a lower potential for vegetation and soils to be altered in or on local floodplains, from fewer miles of routes and lower probability of petroleum contaminant spills. There would be less potential for alteration of floodplain functions through physical disturbance to alluvial soils and the stabilizing vegetation on about 3.4 miles of existing rock crawling trails in the WIZ, which includes 56 stream crossings, located primarily in ephemeral drainage channels. The impacts from this use would be minimized by implementing the measures in this alternative.	feet of stream channels and 54 more stream crossings along proposed Roubideau hiking and horse trail would potentially minimally impact floodplain functions in the planning area. There would be potential to alter the floodplain function of drainages containing rock climbing trails similar to that in Alternative 2.
Impacts on Invasive, Non-Native Species	Noxious weeds would continue to spread beyond the approximately 1,575 acres of existing infested public land in the area (about 10% of public land acres) as a result of motorized and non-motorized cross-country travel, new user-created routes, and over 700 miles of existing routes that would continue to be available for all motorized and non-motorized travel. All weeds on the state "A" and "B" lists, along with BLM species of concern, would be treated to keep them in containment, with spotted knapweed (800 acres along HWY 90), hoary cress (throughout PA), and Russian knapweed (Roubideau Canyon riparian area) being priorities. BLM would continue to partner with others to treat spotted knapweed to keep the infestation contained with a goal of shrinking the infestation. This alternative would not meet or be moving towards meeting Land Health Standard 2 for healthy plant and animal communities regarding noxious weed establishment and treatment.	The spread of noxious weeds would be slowed, weed surveys and treatments for existing infestations would be easier, and the likelihood of future infestations would be less by eliminating cross-country travel, preventing the creation of new, unplanned routes, and by the 37% reduction in total miles of existing routes being available and designated for motorized and non-motorized travel, and reduced route density. This alternative would be moving toward meeting Land Health Standard 2 for healthy plant and animal communities regarding noxious weed establishment and treatment.	Similar to Alternative 2, except that locating noxious weeds, keeping up treatments along routes, and re-surveying after treatment, would be easier and more efficient because of the 53% reduction in total miles of existing routes that would be available and designated in this alternative, and reduced route density. This alternative would be moving toward meeting Land Health Standard 2 for healthy plant and animal communities regarding noxious weed establishment and treatment.	Similar to Alternative 2 except that only a 17% reduction in total miles of existing and inventoried routes would occur. This alternative would not result in or assist in the reduction of noxious weeds, but it would allow for containment and control strategies to be put into place and for noxious weed advancement to be curbed. Trailheads and critical noxious weed species that impact economic and ecological factors of rangelands and that have the potential to spread or be easily transported to private and other public lands would be treated earlier by implementing a containment and control strategy and locating noxious weeds, keeping up treatments along routes, and re-surveying after treatment. This alternative would not meet or be moving towards meeting Land Health Standard 2 for healthy plant and animal communities regarding noxious weed establishment and treatment.

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
Impacts on Migratory Birds	Travel on about 700 miles of existing motorized and non-motorized routes may continue to have effects on18 potential migratory bird populations that could be present at varying seasons, and their associated habitat, similar to the effects on threatened and endangered species, aquatic wildlife, and terrestrial wildlife. These routes result in about 848 acres of disturbed surface in all types of this sensitive resource. Routes would continue to cut through migratory species habitat, especially sagebrush, pinyon-juniper and grassland habitat types, further increasing the potential for these impacts to occur.	Impacts to migratory bird habitat and to the key factors important for migratory bird species, especially by reducing destruction of nests of ground-nesting birds, would be reduced by a 37% reduction in the number of total miles of existing motorized and non-motorized routes, or about 258 fewer miles of motorized and non-motorized routes (& 312 fewer existing disturbed acres), that would be designated in this alternative, changing the existing OHV designations to "Limited to Designated Routes Seasonally or Yearlong", and by preventing new routes to be pioneered by cross-country travel. Large potential reductions in affects on migratory bird habitat and to the key factors important for migratory bird species would occur as a result of about 234 fewer miles of existing motorized and non-motorized routes traversing sagebrush, pinyon-juniper and grassland bird habitat in this alternative.	Similar to Alternative 2 except that there would be a about 53% fewer total miles of existing motorized and non-motorized routes, or about 369 fewer miles of routes (& 447 fewer existing disturbed acres), that would affect migratory bird habitat that would be designated in this alternative. About 360 fewer miles of existing motorized and non-motorized routes traversing sagebrush, pinyon-juniper and grassland bird habitat would be designated in this alternative.	Similar to Alternative 1, except that there would only be about 17% fewer total miles of existing motorized and non-motorized routes, or about 118 fewer miles of routes (& 143 fewer existing disturbed acres), that would affect migratory bird habitat that would be designated in this alternative. About 60 fewer miles of existing motorized and non-motorized routes traversing sagebrush, pinyon-juniper and grassland bird habitat would be designated in this alternative.
Impacts on Native American Religious Concerns	Some degree of unknown impacts would continue to traditional cultural properties (TCP) and sacred sites (SS), depending on their proximity to existing routes and available access, and no inventories would be conducted to identify and/or mitigate potential impacts.	Similar to those from No Action, except that the access and impacts to TCP and SS would be restricted to designated routes, and the potential impacts to both documented and undocumented TCP and SS would be decreased due to about 258 fewer miles of existing non-motorized and motorized routes designated, and the closure of some routes into sensitive areas, in this alternative. Prohibiting cross-country travel would reduce the potential for impacts to previously un-impacted properties, and reduce the impacts to sites currently being impacted. Under this alternative, some segments of some existing	Similar to Alternative 2, except that about 369 fewer miles of existing routes would be available for motorized and non-motorized use and limiting travel to designated routes, thereby eliminating some access to these sites and preventing cross-country travel.	Similar to Alternative 2, except that some level of reduction in access and impacts would be realized even with only about 118 fewer miles of existing routes that would be available for motorized and non-motorized use and limiting travel to designated routes, thereby eliminating some access to these sites and preventing cross-country travel.

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
		routes would remain available for motorized and non-motorized use, and impacts currently occurring would continue at current levels.		
Impacts on Threatened, Endangered, and Sensitive Species	New, unplanned, and poorly located cross country routes would potentially further impact sensitive habitat and/or the species in Table 13, relative to habitat fragmentation, patch size, edge to interior ratio, barriers to movement, facilitation of invasions of non-native and/or opportunistic species, mortality rates, noise and other disturbance factors. 151 miles of existing routes in federally listed species habitat is resulting in about 183 acres of existing disturbance in these sensitive resources.	Changing the existing designation to "Limited to Designated Routes Seasonally or Yearlong", would reduce potential impacts to wildlife and their habitat and to plant species (Federally listed and sensitive species), existing levels of disturbance and habitat fragmentation, and incidental crushing of sensitive plants adjacent to existing routes in varying degrees because of about 53 fewer miles of existing motorized and non-motorized routes (& 64 fewer existing disturbed acres) through Federally listed species, and many more through sensitive species habitat that would be designated and available for motorized and non-motorized travel, limiting travel to designated routes seasonally or yearlong, and preventing cross-country travel.	Similar to Alternative 2, except that more potential reductions in impacts to these species and their habitat would occur from a reduction of about 80 miles of existing routes (97 fewer existing disturbed acres) through Federally listed species, and many more fewer miles through sensitive species habitat.	Similar to Alternative 2, except that fewer potential reductions in impacts to these species and their habitat would occur from a reduction of about 22 miles of existing motorized and non-motorized routes (27 fewer existing disturbed acres) that would be located in Federally listed species habitat.
Impacts on Wastes, Hazardous or Solid	Hazardous and solid waste dumping and incidental spills would continue to occur to varying degrees and would be cleaned up and properly disposed of as an ongoing part of BLM land management. Alternative 1 contains the most available vehicular access and would thus potentially result in the most incidents, and Alternative 3 would contain the least amount of access and potentially would result in the fewest incidents. Eliminating cross country travel should also make it easier for law enforcement to recognized illegal activities, i.e. a vehicle off route is immediately in violation. If dumpers, respond by staying on the designated route system in order to not stand out, law enforcement patrols can concentrate on the designated route system (thereby greatly reducing their patrol acreage) perhaps therefore increasing the likelihood of finding violators.			
Impacts on Water Quality-Hydrology	Factors that result in impacts from miles of existing and potential routes, and from disturbed soils and vegetation on water quality and hydrology are essentially those that impact Farmlands, Floodplains, Riparian and Wetland areas, Aquatic Wildlife, and Soils in terms of mileages and acreages, Refer to those impacts in this table for acreage and mileage impacts. The continued use on 700 miles of existing routes and the incremental increase in new user created routes would continue to	Existing levels of sediment yield and potential contamination from petroleum products would be greatly less and associated existing impacts would be reduced as a result of all off-route travel being eliminated, about 259 fewer miles of existing motorized and non-motorized routes, being available and designated in this alternative (312 fewer existing disturbed acres), preventing cross-country travel, and restricting travel to	Similar to Alternative 2, but major improvement would be expected than from implementing Alternative 2 as a result of about 369 fewer miles of existing motorized and non-motorized routes (results in about 447 fewer existing disturbed acres) being available and designated in this alternative, 492 fewer stream crossings in the WIZ, and 39 fewer miles of routes (47 fewer disturbed acres) affecting streams in the WIZ. This alternative would meet the	Similar to Alternative 2, but somewhat more greater in degree that from implementing alternative 2 as a result of only about 118 fewer miles of existing motorized and non-motorized routes (143 fewer existing disturbed acres) being available and designated in this alternative, and only about 54 more stream crossings in the WIZ, and increase of 54 more miles of routes affecting streams in the WIZ. This alternative would meet the intent of Land Health Standard 5.

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
	contribute to the effects on water quality. . These 700 miles of existing routes result in about 848 acres of disturbed surface in the planning area, which contribute directly to impacts on water quality. To further describe these impacts, natural drainage patterns would continue to be altered, concentration and collection of water runoff would continue, potential addition of petroleum based contaminants from motorized forms of travel would continue, water runoff and sediment yield would continue to be accelerated with on-site and off-site impacts, in amounts depending on route location, existing vegetation, soil type, erodability, and degree of soil compaction on the route surface, and route design and maintenance. Impacts in the form of riparian and other vegetation removal, loss of aquatic life habitat in perennial streams, travel on soils with a severe erosion potential, potential impacts to farm or irrigation facilities, sediment flows potentially affecting downstream domestic and municipal water users and facilities, and more frequent maintenance of livestock water impoundments would continue Impacts affecting the Uncompahgre River would be added to the lower Gunnison River. This alternative would not meet Land Health Standard 5.	designated motorized and non-motorized routes seasonally or yearlong. Implementing this alternative would result in the same decreases in disturbed acres to the same analysis factors as shown for Farmlands, Floodplains, Riparian and Wetland areas, Aquatic Wildlife, and Soils. This alternative would meet the intent of Land Health Standard 5.	intent of Land Health Standard 5.	
Impacts on Wetlands & Riparian Zones	Major impacts to this sensitive resource would continue as a result of new cross country travel on public lands and continuing use on 700 miles of existing routes. The number of acres of riparian habitat currently being affected by existing and potential motorized or non-motorized routes (estimated 23 acres existing), weeds, livestock grazing channel alteration, sediment deposits onto vegetation, and increased erosion would likely increase, with increased severity. 9.4 miles of	Major reduction in potential impacts to Wetlands & Riparian Zones would occur by eliminating all cross country travel from sedimentation, erosion, and channel alteration, and as a result of closing routes, route maintenance, parking, camping, and game retrieval limitations, preventing cross-country travel, and restricting travel to designated motorized and non-motorized routes seasonally or yearlong. 11.1 fewer acres of	Similar to Alternative 2, except that 14 fewer acres of disturbed riparian vegetation and soils would result overall Alternative is consistent with the intent of Standard 2 of managing for streams in proper functioning condition. . Travel imitations on 98%, or 9.0 miles (19 disturbed riparian acres) of the existing routes in the riparian RIZ would reduce impacts to soils and vegetation in this sensitive zone.	Similar to Alternative 2, except that 1.7 fewer acres of disturbed riparian vegetation and soils would result overall. Overall, small improvements to riparian areas are anticipated from this alternative. Alternative 4 should improve ratings for Land Health Standard 2 for riparian health. These changes from current management represent an overall reduction of 4WD and 2WD routes in riparian areas with land health problems on routes that pass through the riparian RIZ.

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
	existing routes in riparian areas create 20.5 acres of disturbed soil and vegetation associated impacts. Some riparian reaches would potentially move from fully Meeting to Meeting with Problems, or even to Not Meeting Land Health Standard 2.	disturbed riparian vegetation and soils would result. Travel imitations on 82%, or 7.5 miles (16 disturbed riparian acres) of the existing routes in the riparian RIZ would reduce impacts to soils and vegetation in this sensitive zone. Limitations on travel would potentially reduce the amount of vehicular use on some routes, and would potentially result in the narrowing of the width of some of these routes from 10 or more feet to 5 feet or less, improving riparian habitat recovery. Riparian habitat and hydrologic functions recovery would be improved on closed routes and habitat would be sufficiently re-vegetated within 5 years. Compared with Alternative 1 these road closures, in combination with the prohibition of all cross country travel, and newly constructed, better designed routes would still represent a 3% reduction in route mileage, or 0.3 fewer miles, that pass through the riparian RIZ. When combined with the major reductions in existing and potential impacts to Farmlands, Floodplains, Aquatic habitat, and Soils, by prohibiting all cross country travel, and closing routes, impacts would be expected to be greatly improved within these sensitive resources. Alternative 2 is consistent with the intent of Standard 2 of managing for streams in proper functioning condition.	Alternative 3 is consistent with the intent of Standard 2 of managing for streams in proper functioning condition.	Alternative 4 is consistent with the intent of Standard 2 of managing for streams in proper functioning condition.
Impacts on Wild and Scenic Rivers	ORVs would be managed and protected to the extent possible until a suitability determination is made on the segments. Identified Outstandingly Remarkable Values (ORVs) could be degraded or	ORVs would be managed and protected until a suitability determination is made on the segments. Major reduction in the likelihood that ORVs would be	Same as Alternative 2.	Same as Alternative 2. Long term and cumulative impacts would include a higher risk of introduction and infestation of noxious weeds within Monitor Creek but mitigation would prevent long term and

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
	impacted as a result of impacts or changes from existing OHV designations of "Open" and "Limited to Designated Routes from 12/1 to 4/30" and current unrestricted cross country vehicular travel.	impacted by eliminating all cross-country travel. Specific route designations would not adversely affect identified ORVs. Overall, there would be no short term, long term or cumulative impacts to existing ORVs.		cumulative impacts.
Impacts on Wilderness	In the Camel Back WSA, 15.6 miles of routes, inc. a 6 mile motorized administrative use only route, would continue to be managed so as to comply with BLM's *Interim Management Policy for Lands Under Wilderness Review* and the Sub-Region B Desired Future Conditions. No public motorized vehicles or mountain bikes would be permitted. There would be no short term, long term or cumulative impacts to wilderness values	Same as Alternative 1, except that the WSA would contain a net 2.3 fewer miles of existing routes that could be rehabilitated. Approximately 12 miles of existing trail would be designated in the WSA for non-motorized, non-mechanized travel, five miles of hiking-horse trail would be constructed, using the minimum tool concept, and approximately three and one half miles of hiking trail would be closed. These changes would help reduce impacts and help enhance and protect wilderness values	Same as Alternative 2 except that in the WSA there would be a net 3.6 fewer miles of existing routes. , approximately 10.5 miles of existing trail would be designated for non-motorized/non-mechanized travel, one and one half miles of new trail would be built using the minimum tool concept, and about five miles of existing routes would be closed.	Same as Alternative 2 except that the WSA would contain a net 8.6 more miles of hiking or horse trails that would meet existing WSA management guidelines. Approximately 14 miles of existing trail would be designated for non-motorized/non-mechanized travel, 11.5 miles of trail would be constructed, using the minimum tool concept, and approximately one and one half miles of existing routes would be closed.
Impacts on Soils	Major and increasing impacts would continue as a result of off-route motorized travel continuing to be permitted in most of the area, 440 miles of existing routes on soils with a high potential to support Biological Soil Crusts, and 372 and 199 existing miles of routes or on soils having a moderate or severe potential for erosion, respectively. More soil erosion and sediment yield would occur overtime, with a decline in soil surface health with the soil being able to support less vegetation and BSC, and an increase of invasive plant species would occur on additional disturbed soils. This alternative would not meet the intent of Public Land Health Standard 1 regarding soils.	Major reduction in additional potential impacts to soils with high potential for BSC and moderate or severe erosion potential by eliminating all cross country travel. Major reduction in soil erosion and sediment yield overtime, and fewer instances of invasive plant species would occur as a result of off-route travel being eliminated, 169 fewer miles of routes on BSC soils (205 fewer acres BSC soils disturbed), 205 fewer miles of routes on soils having a moderate or severe potential for erosion, respectively or 248 fewer acres of moderate or severe erosion soils disturbed, and implementing the measures in this alternative. This alternative would meet the intent of Public Land Health Standard 1 for soils.	Similar to Alternative 2, except that 250 fewer miles of routes on soils with a high potential for supporting BSC (303 fewer acres of disturbance and 312 fewer miles of routes on soils having a moderate or severe potential for erosion, respectively, or 378 fewer acres of disturbance.. Implementation of this alternative would meet the intent of Public Land Health Standard 1 for soils.	Similar to Alternative 2, except 60 fewer miles of routes on soils with a high potential for supporting BSC (73 fewer acres of disturbance and 61 fewer miles of routes on soils having a moderate or severe potential for erosion, respectively, or 73 fewer acres of disturbance Implementation of this alternative would meet the intent of Public Land Health Standard 1 for soils.
Impacts on Vegetation	Alternative 1 is not consistent with lands moving toward meeting Land Health Standard 3. Increases in vegetation impacts	Alternative 2 is consistent with and complementary to other actions being taken to ensure lands meet Land	Alternative 3 is consistent with and complementary to other actions being taken to ensure lands meet Land Health	Similar impacts as with Alternative 2 are anticipated, except that Alternative 4 would result in minimal improvements to Land

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
	or removal from new user-created routes would add to the existing 1,661 acres of existing vegetation occupied by routes, resulting in more weed infestations and dominance, depressed vigor of vegetation adjacent to the route, and more impacts to route-side vegetation. Potential Conservation Area (PCAs) objectives for protecting these plant communities would continue to be a challenge to meet and vegetation impacts in all but one of these areas would increase from new user-created routes and cross-country travel. These levels of vegetation impacts from indirect route impacts would not be consistent with improving vegetation conditions and Land Health Standard 3 ratings, particularly since many of the problems relate to exotic species.	Health Standard 3. Reductions in route density, closing and rehabilitating routes, restrictions on seasons of use and vehicular uses, eliminating motorized and mechanical cross-country travel for any purpose, reducing over time some route widths, would result in result in 312 fewer existing disturbed acres of vegetation, recovery of vegetation over time, less sediment deposition, erosion, maintenance impacts, human-related vegetation destruction, weed introduction and spread, and substantial reductions of route-related impacts of vegetation in all of the PCAs except for one. These reductions are consistent with PCA objectives of protecting these plant communities. The reduced impacts and disturbance of vegetation and vegetation recovery in this alternative is consistent with and would support other actions being taken to improve vegetation conditions and Standard 3 ratings, particularly since many of the problems relate to exotic species.	Standard 3. Similar impacts as with Alternative 2 are anticipated, except that greater reductions in vegetation impacts (results in about 447 fewer existing disturbed acres of vegetation) would occur, reducing all associated impacts.	Health Standard 3 ratings, but is not fully consistent with lands meeting Land Health Standard 3.
Impacts on Wildlife, Aquatic	New, unplanned, and poorly located routes that result from continuing cross-country travel would potentially greatly increase impacts on habitat and/or the species in Table 13. Existing levels of travel on about 700 total route miles would continue to result in resource disturbance and habitat fragmentation, and to affect native fish habitat in perennial streams at 84 crossings and amphibian habitat in perennial and intermittent streams at 881 crossings. See Water Quality section for potential effects to sediment loads.	Restricting travel to designated routes would greatly reduce potential impacts to aquatic habitat & species by prohibiting new user-created routes and potential new crossings and disturbances on 70 miles of perennial streams. There would be major reductions in existing levels of associated soils, floodplains, water quality, riparian and other resource disturbance and habitat fragmentation, to amphibian habitat and Native fish habitat as a result of 461 fewer stream crossings in amphibian habitat (a 52%	Similar to Alternative 2, except that levels of disturbance and habitat impact would be reduced further by 619 fewer stream crossings in amphibian habitat (a 70% reduction) and 16 fewer crossings (19% reduction) in Native fish habitat from motorized use.	Similar to Alternative 2, except that levels of disturbance and habitat impact would not be as much due to a reduction in existing stream crossings of 92 fewer motorized use crossings in amphibian habitat (10% reduction) and an increase of 49 more non-motorized crossings in Native fish habitat (58% increase) from motorized use routes.

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
		reduction) and 3 more crossings in Native fish habitat from motorized routes. See Water Quality section for potential additional reductions to these habitats regarding sediment loads.		
Impacts on Wildlife, Terrestrial	Cross-country travel would continue to cut new routes resulting in major increases to habitat and species, including additional wintertime stress. Existing levels of travel on about 700 total route miles and 484 miles of existing motorized routes and 587 acres of disturbed vegetation in important habitat types would continue to result in resource disturbance and habitat fragmentation, and to affect species. This could result in increased winter mortality for some species and decreased species reproduction in the spring.	Restricting travel to designated routes would greatly reduce potential impacts to species and habitat by prohibiting new user created routes and potential new fragmentation. Existing levels of wildlife species & habitat disturbance and fragmentation would be reduced by closing 255 miles of 484 existing miles in wildlife habitat types, a 53% reduction, or 309 fewer acres of existing disturbance. Seasonal closures of 63 miles of routes would result in major reductions in wintering wildlife species disturbance and stress.	Similar to Alternative 2, except that implementing this alternative would result in the closure of about 353 of 484 miles of existing motorized routes in these habitat types, a 73% reduction, which would result in about 428 fewer acres of existing disturbed and fragmented wildlife habitat. Seasonal closures of 14.5 miles of routes would result in major reductions in wintering wildlife species disturbance and stress	Similar to Alternative 2, except that Implementing this alternative would result in the closure of about 65 of 484 miles of existing motorized routes in these habitat types, a 13% reduction, which would result in about 79 fewer acres of existing disturbed and fragmented wildlife habitat.
Impacts on Fire Management	Current ability of fire management personnel to access mechanical and prescribed fire projects, to patrol for, locate, and manage fire incidents, access private property and improvements and infrastructure, and to use routes as control lines that act as fuel breaks and engine positioning locations to improve control of burns would continue.	Locating and accessing ignitions may be slowed in areas that are more remote, supporting fires logistically would be more challenging due to decreased ability to move equipment and supplies into remote fires, and prescribed burns may be more difficult to manage due to the reduction of existing routes that would limit road access and subsequent inability to utilize engines for control on routes. The current limited number of human ignitions should be further reduced, or at a minimum, may become more concentrated in areas in which the public has access or is concentrated in, as a result of a nearly 50% reduction in existing routes that would be designated in this alternative. Because 85-90% of the area is available for Wildland Fire Use, the need and desire to manage fires more as natural processes on the	Similar to Alternative 2, except that greatly less access would be available and would make management of any fire more difficult both operationally and logistically, especially concerning private property, improvements, and infrastructure.	Similar to Alternative 2, except that more available and intensive access and management of fires would be possible.

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
		landscape may be increased as a result of fewer miles of existing routes that would be available for travel. Prescribed burn plans would need to be more closely planned to adjust to available routes.		
Impacts on Forest Management	The public would not be affected regarding forest product gathering. Vehicular access for these purposes would be according to BLM issued authorizations.	Similar to Alternative 1, and this alternative would only slightly affect the public's ability to gather forest products. If future forestry needs are considered after travel management has been implemented, Alternative 2 should have little impact on future treatments.	Similar to Alternative 1, except that a large number of existing routes would not be designated, and even fewer opportunities for gathering forest products would exist.	Similar to Alternative 1, and would provide the most opportunities for gathering forest products, due to the fact that most forest products are gathered close to open routes.
Impacts on Geology and Minerals	Current levels of soil erosion, compaction, and the pioneering of new unplanned and poorly located routes and trails would continue as a result of cross-country travel for miscellaneous rock collection.	Current levels of soil erosion, compaction, and the pioneering of new unplanned and poorly located routes and trails would be greatly reduced by implementing this alternative.	Similar to Alternative 2, except that the current levels of soil erosion, compaction, and the pioneering of new unplanned and poorly located routes and trails would be reduced further by the reduction in the number of existing motorized routes that would be designated.	Similar to Alternative 2.
Impacts on Hydrology / Water Rights	Vehicular travel on 700 miles of existing routes, continued cross-country travel on most public lands & additional user created routes would increase soil disturbance in sensitive areas such as the Water Influence Zone and on erodible soils. Many existing and anticipated future routes would receive little maintenance to ensure adequate drainage and minimize soil erosion**.** Accelerated sediment production and potential contaminant spills could impact fisheries presently protected with instream flow water rights as a result of motorized use on 10 miles of routes along perennial streams within the WIZ, and at 83 associated stream crossings. Accelerated sediment production potential spillages could impact fisheries presently	The potential for impacts (sediment and contaminant spills) to riverene values protected with instream flow water rights would be reduced because of closing about 259 miles of existing routes, limiting vehicular travel to designated routes, prohibiting or restricting all off-route vehicular travel, a 38% reduction in the number of existing perennial stream crossings (36 fewer crossings), and a 50% reduction in existing miles of routes in the WIZ along perennial streams, or 5 fewer miles, primarily in Sub-Regions A-D.. Across the area the sediment yield potentially intercepted by livestock ponds would be reduced by a 30% reduction in the number of miles of	Similar to Alternative 2, except that impacts (sediment and contaminant spills) to riverene values protected with instream flow water rights would be reduced further in this travel management plan by closing about 369 miles of existing vehicular routes, reductions in the number of existing perennial stream crossings (-18% or 15 fewer crossings) and 2 fewer miles of routes affecting perennial stream WIZs. Sediment yield potentially intercepted by livestock ponds would be reduced because of a 67% reduction in the number of existing miles of OVH routes that would be designated on soils with a severe erosion potential (0.4 fewer miles) and a 56% reduction (249 fewer miles) of route miles on soils with a high potential for supporting biological soils	Similar to Alternative 2, except that about 118 miles of existing vehicular routes would be closed, the number of perennial stream crossings and miles of routes affecting the WIZ along perennial streams would be increased by 59% (49 more crossings) and 30% (3 more miles), as the result of the Roubideau Creek horse trail, resulting in limited impacts to riverene values.

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
	protected with instream flow water rights. Anticipated increases in soil surface disturbance as a result of 200 miles of existing routes on soils with a severe potential for erosion, 440 miles of routes on soils with a high potential for supporting biological soil crusts, and the high likelihood of new user-created routes would potentially accelerate sediment production and increase maintenance requirements for livestock watering ponds.	routes on soils having a severe erosion potential, or 60 fewer miles, a 38% reduction in routes on soils with a high potential for supporting biological soil crusts, or 167 fewer miles, by implementing the measures in this alternative. prohibiting	crusts.	
Impacts on Law Enforcement	Existing travel management policy and regulations create difficulties for the public and Rangers in enforcing user compliance and in court proceedings and limits BLM's ability to effectively enforce the closures of user-created routes.	Ability of law enforcement personnel to enforce regulations and restrictions would be improved. This alternative would result in a greater need for user education, and more compliance and law enforcement actions, but would improve over time with use of the plan.	Similar to Alternative 2.	Similar to Alternative 2, but would require more law enforcement and compliance personnel initially due to the larger number of existing routes that would be designated in this alternative.
Impacts on Paleontology	The current level of potential impacts to important paleontological resources, and secondary impacts from fossil collection and erosion, would continue as a result of the current level of travel and management policies, especially from motorcycle and ATV use on steep clay slopes where fossils are eroding from the shale layers. Major impacts to irreplaceable fossil resources could result from increasing numbers of miles of routes which potentially make these resources more accessible.	Fossils and historic dinosaur quarries would be better protected as a result of more presence of regulatory enforcement personnel, and travel limitations, especially from restricting travel to designated routes, prohibiting cross-country motorized travel, and prohibiting the pioneering of new user created routes. Relocation and rehabilitation could assist further in preventing further erosion and disturbance on some routes.	Similar to Alternative 2, except that potential existing impacts to paleontological resources would be lessened to a greater degree because of the increased reduction of existing routes that would be designated in this alternative.	Similar to Alternative 2, except that slightly less protection would be afforded to paleontological resources from more existing routes being designated in this alternative.
Impacts on Noise	Noise levels would experience a slow but gradual increase throughout the planning area as a result of recreational motorized vehicle use and increasing development on adjacent private lands. The levels of noise from target shooting would generally remain the same but could experience slight increases from increased levels of recreational use in some areas.	Noise levels would be reduced sharply in Sub-Regions A and E from decreased route mileage and associated motorized vehicle use and noise. Overall, there would be an increase in the number and size of areas where low levels of noise are found, as well as some localized areas where noise levels would increase.	Noise levels in Sub-Region E, D, G, and F would drop sharply from decreased route mileage and associated motorized vehicle use and noise. Noise levels in Sub-Regions A and C would drop moderately. The anticipated overall increase in visitors would probably result in a moderate to high increase in noise levels on those routes that remain available for use and on adjacent Federal,	Similar to Alternative 1.

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
			State, and local roads.	
Impacts on Range Management	No change would occur to existing routes and user-created routes would continue to be pioneered, resulting in more livestock harassment and fewer areas being available for livestock for calving and caring for calves. Potential for vandalism and human disturbance to sheep camps in fall and winter would increase as additional user-created routes are developed, and the number of potential sheep camp locations would decrease.	Livestock and recreational user conflicts would be decreased as a result of implementing this travel management plan with designated routes that enhance recreation opportunities while eliminating the availability of some routes for motorized uses. Human pressure and associated vehicular and other noises near livestock during the calving seasons would be decreased, potential sheep dog and route and trail user conflicts in the fall would be reduced and the likelihood of human vandalism and disturbance at sheep camps would be reduced as a result of the reduction in the number of existing miles of routes that would be designated and available.	Similar to Alternative 2.	Similar to Alternative 1.
Impacts on Realty Authorizations	There would be no impact on existing private or public land status, realty authorizations, or access to public lands. The uses of existing routes and cross-country travel within the area would not be affected. Existing rights-of-way (ROW) uses, terms, and conditions, and the permitted access to authorized existing ROWs would not be affected.			
Impacts on Recreation Management	Existing travel issues would not be resolved, recreation experiences, settings, and opportunities would not be enhanced, recreation support facilities would not be built, desirable recreation destinations and other features would not be marketed or advertised, the current imbalance of routes for motorized and non-motorized uses would continue, user conflicts would continue, unrestricted cross-country motorized and non-motorized travel for all purposes would continue on most public lands, all available and existing routes would continue to be used for most types of vehicular use, and poorly located and planned existing routes would continue to be used as well as the new user-created routes, resulting in a continuation of associated impacts such as noise, and user conflict and safety concerns. Events	With this travel management plan and system of planned and designated routes, existing travel issues would not resolved, recreation settings, targeted recreation experiences and opportunities and benefits would be enhanced and sustained, and user conflicts would potentially be reduced. Impacts to soils, animals, and vegetation, and from littering, dumping and other illegal activities, and other impacts, such as noise, would be reduced. A balance of non-motorized and motorized recreation opportunities fully complying with BLM recreation guidelines would result. Opportunities would potentially be available for commercial and non-commercial SRPs for motorized and non-motorized activities such as	Similar to Alternative 2 except that not all targeted recreation opportunities and benefits would be enhanced or sustained as a result of fewer miles of motorized and non-motorized routes being designated, fewer newer routes and recreation facilities being built, and an imbalance between available non-motorized and motorized uses. The recreational opportunity goals in the DFCs would potentially be harder to achieve in Sub-Regions C, D, and E.	Similar to Alternative 2 except that not all targeted recreation opportunities and benefits would be enhanced or sustained, the factors that make a good travel plan and route system would only partially be incorporated, there would be an route and use imbalance favorable to all forms of motorized recreation opportunities and settings than providing a balance with non-motorized opportunities and quieter activities, such as hiking, horseback riding, and dispersed back-country activities, more user facilities would be constructed, and opportunities for dispersed car-camping, touring, and other vehicle-related recreation activities would be greater. Alternative 4 would reduce the miles of routes that would be available for motorized recreation compared to Alternative 1 but increase the miles of motorized compared to Alternative

Summary Comparison of Environment Consequences

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
	currently authorized by Special Recreation Permits (SRPs) would continue, assuming renewal of permits, opportunities for commercial outfitters offering motorized recreation activities would be potentially enhanced, but not for commercial non-motorized activities such as hunting, mountain biking, horseback riding, and hiking, as a result of the continuation of current management policies. The Desired Future Conditions for the Sub-Regions would not be achieved except in Sub-Region B (Camel Back WSA), and BLM recreation guidelines would not be adequately complied with.	hunting, mountain biking, horseback riding, and hiking. DFCs and niche characteristics for all Sub-Regions would be achieved. These changes would occur by implementing the actions and measures in this alternative.		2. This alternative would be compatible with all Sub-Region DFCs except in Sub-Regions A and E. Summary: Alternative 4 would moderately improve the transportation system for motorized and non-motorized recreation. Even considering the number of miles of routes would be designated and available, and the increased scope of recreation facility construction to support the proposed increase in routes, this alternative only partially incorporates those factors that make a good travel plan and route system. See Recreation Management and Implementation in the Affected Environment section above. This alternative would result in recreational opportunity goals potentially not being achieved in the DFCs for Sub-Regions A and E.
Impacts on Socio-Economics	No changes to local or regional population, employment, and income would result; Cross-country use, trespass onto private lands from public lands, creation of new routes, and uncontrolled motorized/mechanized play user conflicts, would increase as a result of continued management policies and few travel restrictions.	The local economy in Montrose County and particularly the City of Montrose, and in surrounding counties to some degree, would benefit from additional routes designated and managed for technical four wheel driving, ATV, mountain biking and hiking uses. Trespass onto private lands from public lands, new user-created routes, and unrestricted motorized and mechanized travel would be decreased under more intensive management and fewer miles of available routes, and travel restrictions that would mitigate existing levels of cross-country use.	Similar to Alternative 2, except that less beneficial impacts to the economy of Montrose County, particularly the City of Montrose, would occur as a result of many fewer existing routes being designated and available for technical four wheel driving, ATV, and mountain biking use.	Same as Alternative 2.
Impacts on Visual Resources	Over time existing VRM Class III objectives would not be met as a result of new and existing routes dominating many foreground and middle ground landscapes.	All VRM objectives would be met; visual impacts would be reduced in PA and scenic quality enhanced by about 259 fewer miles of existing routes and closing many routes. Scenic quality would be maintained	Same as Alternative 2 with more potential for reduction in visual impacts and enhanced scenic quality by eliminating and rehabilitating about 369 miles of existing routes and conducting reconstruction and regular maintenance.	Same as Alternative 2, but somewhat reduced potential for would for reduction in visual impacts and enhanced scenic quality by eliminating and rehabilitating only about 118 miles of existing routes and conducting reconstruction and regular maintenance.

Table 5 Summary Comparison of Environmental Consequences				
Resource or Resource Use	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
		by regular maintenance of and reconstruction of portions of many existing routes that would be designated under this alternative.		

CRITICAL ELEMENTS

Elements specified by statute, regulation, executive order, or the Standards for Public Land Health are described and analyzed in this section.

The following critical elements are considered. Those that could be impacted are brought forward for analysis. Any element not affected by the proposed action or alternatives will not be analyzed in this document; the reasons for no impact will be stated.

TRANSPORTATION AND ACCESS

Within the planning area the existing BLM road network consists primarily of low standard dirt routes that are linked to county roads. Many of the BLM routes were developed to serve needs for temporary or intermittent access and were not designed to serve sustained high levels of use. Most of the routes were developed to provide access for specific activities, such as: livestock grazing, harvesting forest products, constructing power transmission and telephone lines, constructing flood control "check dams", constructing irrigation ditches and pipelines, performing "chaining" operations, and suppressing wildfires.

In today's environment, BLM routes are needed to serve both functional and recreational needs. Over the years, some routes have been improved to accommodate changes in the types of vehicles using them and to respond to the growing use of the public lands for recreational activities. Routes are still needed for such purposes as access for power line maintenance, and building and maintaining fences for grazing, but they are also needed for serving a wide variety of recreational uses as well.

In preparing for this Travel Management Plan (TMP), one of the first tasks was to conduct an inventory of the existing routes. Whenever possible, the inventory utilized global positioning satellite (GPS) and geographic information system (GIS) technologies to accurately locate and accumulate information about the routes. In areas that could not be physically reached for utilizing GPS, other means were used to capture the routes, including aerial photo interpretation and the transference of existing transportation data from other reliable sources. Most routes included in the inventory were recorded using GPS.

The inventory identified a total of 701.8 miles of existing routes on BLM-managed public lands, which does not include routes on surrounding private lands or other ownerships that lead onto BLM lands. The total mileage includes 32.3 miles of non-BLM-managed roads that are managed under county jurisdiction, and which are not affected by decisions made in this plan and would remain open to the public under all of the alternatives and usage would be according to county statutes. Subtracting the non-BLM-managed mileage from the total miles leaves a balance of 669.5 miles of routes and trails managed by BLM on public lands. Certain routes have been temporarily closed to the public for motorized or mechanized use. These closures are located within Sub-regions D, E and F. These routes would be examined to determine if they would remain closed or if they would be made available for public use, and any applicable restrictions.

The mileages of existing routes by travel use categories are summarized in Table 1. The locations of the routes are displayed on maps in Appendix 4 and the definitions of the travel use categories are located in Appendix 1. When interpreting Table 1 it is important to understand that each Travel Use Category is

named for the type of use that it is primarily suited to accommodate. The other travel uses included in the category should be considered as secondary uses. This distinction is important so that it is recognized that just because secondary uses are allowed does not mean that all of the routes in the category are necessarily suitable for those uses. For example, routes included in the 4WD/2WD (Open) category are primarily intended for use with full-size motorized vehicles but they are also available for all other uses; including hiking and horseback riding. Many hikers and equestrians, however, would not consider these routes to be suitable for hiking and horseback riding because sharing routes with motorized vehicles does not offer the type of recreational experience that they would normally seek.

Routes impact soils, vegetation, water, air quality, wildlife habitat and facilitate the dispersal of noxious weeds. Poorly designed and improperly maintained routes promote erosion that degrades streams and wetlands. The construction of new routes increases the impacts to soils and watersheds by exposing more areas of bare soil that are subject to erosion.

The monetary costs associated with maintaining a given road or trail is directly related to the overall physical makeup of the route (soil type, slope, vegetative cover, aspect, etc.), as well as to the amount and type of traffic that occurs on it. Routes with high levels of traffic, and routes that are used for high-speed modes of travel that cause higher amounts of disturbance to traveling surfaces, require more maintenance than routes with low levels of use and that are used for slow- speed, low impact modes of travel.

Alternatives 2, 3, and 4 would implement a travel management plan with route designations (i.e., limit motorized and mechanized travel to designated routes seasonally or yearlong) that would require the expenditure of BLM funds from various sources to perform the task commensurate to the needs of the alternative. Such tasks include:

- Providing management presence and enforcing travel designations
- Installing and replacing travel management signs
- Maintaining existing routes
- Reconstructing new routes
- Reconstructing or improving existing routes
- Retro-fitting or converting routes (reducing widths of existing travel ways to fit designated travel uses, such as converting a jeep road to a bicycle trail)
- Installing and maintaining closure devices (gates, boulders, earthen berms, etc.)
- Decommissioning abandoned routes
- Constructing and maintaining trailhead facilities
- Preparing travel maps and brochures
- Monitoring and evaluating use and implementing needed travel management changes

Environmental Consequences

Impacts from Alternative 1

Under Alternative 1, the existing BLM transportation system would be unaltered. Use and travel, on-routes and cross-country, by motorized and non-motorized vehicles, such as mountain bikes, and horseback and foot travel would be allowed in all the Sub-Regions except, where motorized and non-motorized travel would not continue to be permitted. Decisions in the current Resource Management

Plan for the Uncompahgre Field Office restrict motorized travel in certain parts of the area to designated routes from December 1 through April 30 annually or yearlong. See Appendix C, Maps 1 and 2, pages 49 and 50, RMP. However, no routes have been designated on the ground via travel management planning, which would implement these seasonal or yearlong route designations and restriction decisions. In this alternative, these decisions would continue to not be implemented until further travel management planning was completed, resulting in continued, yearlong, on-route and cross-country travel. A high potential exists for new user-created routes to be developed through use by visitors and others.

The "Open" OHV designations on approximately 28,731 acres of public land, which would allow for cross country travel using all modes of travel and the "Limited" designations on 71,544 acres of public land would also continue, being managed primarily as lands open to OHV use. The current policies allowing the use of bicycles and other mechanized vehicles off existing routes and driving motorized vehicles off routes to park, camp, or retrieve game would be unchanged.

Currently 701.8 miles of motorized and non-motorized routes are located in the area that is recognized as existing, legal routes. Approximately 645 miles of these are managed for motorized use, and 24.5 miles are managed for non-motorized use. For a complete summary of the mileages by the individual travel use categories for each alternative, see Table 1 and Table 2 located at the front of this document.

Under Alternative 1, the environmental impacts from the increased use of poorly located and designed routes would steadily grow over time. Conflicts resulting from the incompatible uses of routes would also steadily increase. Existing routes that currently have low levels of motorized and mechanized use would steadily experience growing levels of activity, resulting in greater impacts to the resources and an increase in user created routes will continue to increase over time.

Under Alternative 1, the impacts to the management of the transportation system would also steadily grow over time. A need for route maintenance would result from this alternative. However, as recreation uses on Public Lands increase with frequency, the number of miles of routes that would require regular maintenance would also gradually increase. Increased reconstruction and maintenance efforts would be needed to mitigate the deterioration of routes that were not designed for sustained or high levels of use, but experience increased amounts of traffic. The closure and rehabilitation of some routes would also be required where severe resource impacts or conflicts with other uses occur.

Impacts from Alternative 2

The implementation of Alternative 2 would establish a travel management plan with a system of routes with designated travel uses and seasons of use that would generally benefit the overall management of the transportation system for planning construction and maintenance needs. All existing OHV designations would be changed to "Limited to Designated Routes Either Seasonally or Yearlong". The existing BLM transportation system would be modified with additional routes and the use of motorized vehicles would be limited to designated routes. Additionally, the use of bicycles and other mechanized vehicles would be limited to designated routes. Camel Back WSA would continue to be closed to motorized and mechanized vehicles and devices.

Under Alternative 2, 418.8 miles of motorized and non-motorized routes would be designated, available,

and managed for public use. Of these, approximately 347 miles would be available for motorized use, and 72 miles for non-motorized use only. Under Alternative 2, 330 fewer miles of routes would be managed for motorized use and 47 more miles of routes would be managed for non-motorized use than under Alternative 1. For a complete summary of the mileages by the individual travel use categories for each alternative, see Table 1 and Table 2 located at the front of this document.

Under Alternative 2 many of the existing routes that are causing or have the potential to cause environmental impacts because they are poorly located and designed, would either be closed, reconstructed, or designated for travel uses that are less impacting to the environment.

Most of the existing routes with user conflicts or the potential for user conflicts would also be closed or be designated for the appropriate uses. Many existing routes that are experiencing or that would potentially experience environmental impacts from increasing recreation use would be designated for the appropriate uses. New trails would be constructed as to not negatively impact the resources in the affected areas.

The impacts to some aspects of transportation management would increase under Alternative 2, including the construction of several new routes and the closure or restriction of motorized travel uses on many existing routes. Alternative 2 would generate the immediate need for additional maintenance and improvements to support the designated travel management system. Additional signage would be needed to designate the allowable travel uses on most designated routes, excluding Non-BLM routes. The installation of gates, barricades, and other closure devices would be needed to reinforce the travel restrictions. The construction of user facilities, such as parking areas, staging areas, camping areas, and trailhead facilities would be made to accommodate increased recreation usage.

In the short term, the management of the designated routes planned in Alternative 2 would require additional maintenance efforts, particularly for replacing signs that are likely to be removed or vandalized during the first few years after it has been implemented. In the long term, however, the removal and vandalism of signs should decrease as users become familiar with the new system. Also, one of the positive outcomes of a designated travel management system is that specialized user groups are generally willing to adopt routes that identify with their own interests. Thus, as various user groups develop a sense of ownership for their favorite routes and volunteer to adopt and maintain them, the need to utilize BLM funds for maintaining many of these routes could decline over time.

The scheduled maintenance of BLM routes with heavy equipment would be slightly affected by this alternative. Most of the new routes that are proposed for construction under this alternative are trails. Also, none of the routes that are currently being maintained would be closed or restricted by Alternative 2 but would continue to be included in the scheduled road maintenance program.

Impacts from Alternative 3

By implementing this alternative, a travel management plan with a system of routes with designated travel uses that would generally benefit the overall management of the transportation system for planning construction and maintenance needs would be adopted. All existing OHV designations would be changed to “Limited to Designated Routes Either Seasonally or Yearlong”. The existing BLM transportation system would not be modified by additional routes, but the use of motorized vehicles

would be limited to designated routes. In addition, the use of bicycles and other mechanized vehicles would be limited to designated routes.

Under Alternative 3, 270.8 miles of motorized and non-motorized routes would be designated, available, and managed for public use. Of these, approximately 184 miles would be available for motorized use and 86.8 miles for non-motorized use. Under Alternative 3, 493 fewer miles of routes would be managed for motorized use and 62 more miles of routes would be managed for non-motorized use than under Alternative 1. For a complete summary of the mileages by the individual travel use categories for each alternative, see Table 1 and Table 2 located at the front of this document.

Under Alternative 3 nearly all of the existing routes that are causing or have the potential to cause environmental impacts to resources because they are poorly located and designed, would either be closed or designated for travel uses that are less impacting to the environment. Most of the existing routes with user conflicts or the potential for user conflicts would also be closed or be designated for the appropriate uses. Many existing routes that are experiencing or that would potentially experience environmental impacts from increasing recreation use would be designated for the appropriate uses. New trails would be constructed as to not negatively impact the resources in the affected areas.

Of the three action alternatives (2, 3, and 4), the impacts to transportation management would increase the least under Alternative 3. The impacts to some aspects of transportation management, however, would increase under Alternative 3, in that many more existing routes would have restricted travel conditions, and more would be closed to travel. Alternative 3 would generate the immediate need for additional signage to designate the allowable travel uses on most designated routes. The installation of gates, barricades, and other closure devices would be needed to reinforce the travel restrictions.

In the short term, the management of the designated routes proposed in Alternative 3 would require additional maintenance efforts, particularly for replacing signs that are likely to be removed or vandalized during the first few years after it has been implemented. In the long term, however, the removal and vandalism of signs should decrease as users become familiar with the new system. Also, as various user groups develop a sense of ownership for their favorite routes and volunteer to adopt and maintain them, the need to utilize BLM funds for maintaining many of the routes could decline over time.

The need for scheduled maintenance of BLM routes with heavy equipment would be reduced by this alternative.

Impacts from Alternative 4

The implementation of Alternative 4 would establish a travel management plan with a system of routes with designated travel uses that would generally benefit the overall management of the transportation system for planning construction and maintenance needs. All existing OHV designations would be changed to “Limited to Designated Routes Either Seasonally or Yearlong”. Under Alternative 4 the existing BLM transportation system would be modified by additional routes and the use of motor vehicles and mechanized vehicles and devices would be limited to designated routes, seasonally or yearlong.

Under Alternative 4, 605 miles of motorized and non-motorized routes would be designated, available, and managed for public use. Of these, approximately 560 miles would be available for motorized use and 46 miles for non-motorized use. Under Alternative 4, 118 fewer miles of routes would be managed for motorized use and 21 more miles of routes would be managed for non-motorized use than under Alternative 1. For a complete summary of the mileages by the individual travel use categories for each alternative, see Table 1 and Table 2 located at the front of this document.

Under Alternative 4 most of the existing routes that are causing or have the potential to cause environmental impacts to resources because they are poorly located and designed, would be designated for motorized travel uses that would result in fewer impacts to the environment. Most of the existing routes with user conflicts or the potential for user conflicts would also be closed or be designated for the appropriate uses. Many existing routes that are experiencing or that would potentially experience environmental impacts from increasing recreation use would be designated for the appropriate uses. New trails would be constructed as to not negatively impact the resources in the affected areas.

This alternative, however, includes the construction of many new routes and allows motorized travel uses on the most miles of existing and additional routes. Consequently, of the three action alternatives, Alternative 4 would have the greatest impact on the management of the transportation system. Alternative 4 would generate the immediate need for additional maintenance and improvements to support the designated travel management system. Additional signage would be needed to designate the allowable travel uses on most designated routes. The installation of gates, barricades, and other closure devices would be needed to reinforce the travel restrictions. The construction of user facilities, such as staging areas, parking areas, and other trailhead facilities would be needed to accommodate increased recreation usage.

In the short term, the management of the designated routes planned in Alternative 4 would require additional maintenance efforts, particularly for replacing signs that are likely to be removed or vandalized during the first few years after it has been implemented. In the long term, however, the removal and vandalism of signs should decrease as users become familiar with the new system. Also, as various user groups develop a sense of ownership for their favorite routes and volunteer to adopt and maintain them, the need to utilize BLM funds for maintaining many of the routes could decline over time.

The need for scheduled maintenance of BLM routes with heavy equipment would be increased by this alternative.

Cumulative Effects

In addition to growth in recreational travel, reasonably foreseeable actions that may affect transportation over the next 10 years on private and public lands including continued residential growth, mechanical and prescribed fire fuels reduction/habitat projects, county road maintenance and upgrades, utility corridor maintenance and upgrades, and new road rights-of-way. Other future activities on public lands in the travel planning area that could also potentially impact transportation and require mitigation include Forest Service planning and projects, Uncompahgre Plateau Project activities, local land use planning, soil research, BLM Uncompahgre Field Office Resource Management Plan revision, continued population growth, vegetation treatments, county road upgrades, special recreation permits

and activities, and utility rights of way and corridors. The cumulative impacts to transportation from all action alternatives will be dispersed and long-term and require on-going monitoring and mitigation by BLM and partners.

AIR QUALITY

The quality and condition of the air within the planning area and as seen from nearby lands is governed primarily at any one time by the amount and intensity of vehicular traffic on dry, un-surfaced routes or those that do not receive dust abatement treatment. Wildfires also contribute to the quality and condition of the air quality. During winters with enough snowfall, motorized snowmobile and other winter vehicle recreation use results in emissions such as nitrogen oxides, hydrocarbons, fine particulate matter, and carbon monoxide. Conflicts arise when this recreation use occurs alongside non-motorized recreation pursuits, where clean-smelling air is desirable. As more people venture onto the forest during winter months, air quality may become a localized issue where concentrated motorized use conflicts with non-motorized uses.

Air quality is defined by ambient air concentrations of specific pollutants determined to be of concern with respect to the health and welfare of the general public. Under the Clean Air Act Amendments of 1990, the US EPA-established National Ambient Air Quality Standards six "criteria pollutants:" lead, ozone, sulfur dioxide, oxides of nitrogen, carbon monoxide, and particulate matter smaller than 10 microns in diameter (PM10). New standards for particulate matter smaller than 2.5 microns in diameter (PM2.5) have been proposed and policies to implement the standards are in development. Areas that exceed a federal air quality standard are designated as non-attainment areas. Air quality monitoring data for some pollutants are available for Montrose and Delta. Delta and Montrose counties are in attainment with the National Ambient Air Quality Standards (EPA 2002a).

The air quality of the planning area is good and is believed to be typical of undeveloped regions in the western US; ambient pollutant levels are usually near or below measurable limits. Locations vulnerable to decreasing air quality from development include the location population centers Montrose and Delta. Emissions from vehicle use and small engines used in a variety of construction, industrial and farm applications affect local air quality. On an individual basis off-road engines and OHV equipment emit much higher levels of criteria pollutants than passenger vehicles. Standards have been adopted to reduce the emissions from newly manufactured small non-road engines and OHV equipment (EPA 2002b, 2002c).

Montrose County treats the three main County roads that carry the highest amount of traffic within and through the planning area with magnesium chloride to prevent excessive dust and to help prevent deterioration and wear and tear on the roads. This has had a positive effect on the amount of fugitive dust and particulates coming from the planning area.

Vehicle emissions include nitrogen oxides, hydrocarbons, fine particulate matter, and carbon monoxide. Travel on un-surfaced routes in the planning area, the focus of the analysis , does increase concentrations of fine particulate matter in the air. Vehicle emissions and fine particulate matter stirred up by vehicle travel over unpaved road surfaces have not been identified as a major air quality issue in the planning area. To date, overall air quality, visibility, or fine particulate matter in Camel Back WSA

or nearby sensitive areas or population centers has not been affected as a result of vehicle emissions, or by dust created by travel on unpaved routes.

Road dust typically becomes an issue related to on-route motorized vehicular travel through the planning area to access Forest Service-managed or private lands on three main routes, or during agency resource management activities, land use permit implementation, mineral material and forest product gathering, livestock grazing management, hunting, or recreational uses, and especially when there is concentrated travel by large vehicles on unpaved roads. These situations conducted under agency permits or land use authorizations can be remedied through project-specified mitigation under the terms and conditions of permits.

Particulate matter concentrations are expected to be higher near towns because of local combustion sources and unpaved routes. Suspended particles are probably due to fugitive dust that is primarily windblown. Although there is no gaseous pollutant monitoring in the planning area, levels are estimated to be low and within standards. Ozone levels in the Rocky Mountain West are relatively high but of unknown origin. Occasional peak concentrations of carbon monoxide and oxides of nitrogen may be found in the immediate vicinity of combustion equipment. When prescribed burns or wild fires are burning in the vicinity of the planning area, air quality could be decreased during the short term.

Environmental Consequences

Mileage figures used in impact analyses are approximate. Different route types and the uses and combinations of uses that could occur on different route types may impact resources differently. As a result, mileages shown that depict relative mileage impacts from the same route type(s) may vary from resource to resource. For instance, motorized routes could include all motorized uses, or ATV use only, or full-size passenger vehicle uses, or all of these uses.

Impacts Common to All Alternatives

Magnesium chloride or other environmentally acceptable dust abatement chemicals would continue to be applied to major County roads in the planning area, helping maintain the air quality in the planning area.

Most effects of wintertime motorized recreation would be localized and temporary. Because of the anticipated limited change in winter motorized recreation between the alternatives, overall air quality impacts of winter-motorized recreation would not change by alternative.

Impacts from Alternative 1

The impacts of road dust from unpaved roads depend on factors such as the amount of travel, size and speed of the vehicle, climatic conditions, and geology. Compared to all other alternatives, the No Action alternative would account for the greatest density and mileage of motorized routes and trails (700 existing miles of motorized routes and an estimated 870 acres of existing soil disturbance*), as well as the highest amount of traffic. Anticipated increases in motorized and mechanized cross-country travel would create new user created routes, and the growth in unrestricted cross-country traffic on all dry soils could eventually result in generation of PM10 that could be seen from the Black Canyon National Park.

Given the unconfined and incrementally increasing extent of user created routes, and assuming growth in recreational use over a 5-10 year period, the No Action alternative could result in violations of air quality standards because of the immediate short-term nature of the activities that would have a high potential for generating increasing amounts of fugitive dust and adversely impacting air quality over the entire planning area for part of the year. Under Alternative 1, fugitive dust and pollution would be expected to increase in all Sub-Regions and could potentially reach intensities that impact air quality on or as seen from neighboring private, BLM-managed lands, and other federal lands in the immediate short-term.

> * 870 acres estimate is calculated as follows: 700 miles X 5,280 ft/Mile X 10 feet average width of all routes ÷ 43,560 sq. ft./acre

Urbanization and resort development near the planning area bring additional impacts on localized air pollution, such as wood-burning stoves and de-icing of winter roads. Wildfires, fire management activities on public lands, and private landowners burning fields and ditch vegetation in the spring would also affect air quality in the immediate short-term when their smoke inundates communities and other sensitive areas.

Impacts Common to Alternatives 2, 3, and 4

These alternatives would greatly reduce from current conditions the risk of adverse air quality impacts from motorized and mechanized travel in the planning area. The greatest decrease in this risk would come from the banning of all cross-country travel that would incrementally reduce the amount of surface disturbed that could result in fugitive dust. The next greatest decrease in the risk would occur from closing some existing routes in these alternatives. Air quality impacts from roads and motorized trails are based not only on miles but also on the amount of traffic each receives, surface composition, and moisture content of each route. Closing routes would result in faster rehabilitation of soils and vegetation, resulting in less fugitive dust. When compared to Alternative 1, Alternatives 2, 3, and 4 would all result in some level of route and vegetation recovery and greatly reduced fugitive dust to localized areas as motorized travel is restricted to designated routes and cross-country travel is prohibited. The greatest reduction in existing traffic and resulting fugitive dust emissions, compared to Alternative 1, would occur in Alternative 3 (428 fewer miles of motorized routes and 518 acres of disturbed soils), the next comparative reduction would occur by implementing Alternative 2 (decrease of 290 miles of motorized routes and 351 acres of disturbed soils), and the least reduction would occur by implementing Alternative 4 (decrease of 106 miles of motorized routes and 128 acres of disturbed soils). However, the routes selected for designation in each of these alternatives includes some of the most heavily traveled and popular routes in the planning area.

Alternatives 2 and 4 are most similar in their total motorized mile figures compared to alternative 3, which has the fewest miles available for motorized travel. These alternatives would greatly reduce the risk of short-term or long-term adverse air quality impacts from road travel, compared to Alternative 1. When comparing impacts to air quality between Alternatives 2, 3, and 4, total acreage of surface disturbance from motorized use, geographic reach of traffic and density of routes, and planning area distribution of fugitive dust would be expected to be greatest in Alternative 4 and very similar for Alternatives 2 and 3. These differences would result from the difference in the number of miles of motorized routes that would be available in these alternatives. However, air quality impacts from roads

and motorized trails would be based not only on miles of motorized routes, but also on the amount of traffic each receives, surface conditions, and moisture content of each route.

Road impacts on air quality can be seen more from the actual road where the dust occurs, and where sustained vehicle traffic creates dusty, low-visibility conditions on the road itself. Dust abatement can be applied to roads where chronic dusty conditions create a nuisance and potential safety issue.

Cumulative Effects

In addition to growth in recreational travel, reasonably foreseeable actions that may affect air quality over the next 10 years on private and public lands including continued residential growth, mechanical and prescribed fire fuels reduction/habitat projects, county road maintenance and upgrades, utility corridor maintenance and upgrades, and new road rights-of-way. Future activities on public lands that could also potentially impact air quality, require mitigation, but cannot be specified in terms of time and place in current analysis include special recreation events and vegetation treatments. Over the next 10 years, dust, smoke, and pollution from these and other sources, including local industries and from traffic on county roads, cumulative to recreational travel on BLM routes, are expected to have long-term, low intensity/impact air quality.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

There are currently no areas of critical environmental concern within the project area and none proposed or considered in this EA.

Environmental Consequences

There would be no environmental impacts resulting from implementing any alternative in this EA.

CULTURAL RESOURCES

The Dry Creek Travel Management Planning Area is located on the east side of the Uncompahgre Plateau. The Dry Creek Basin, located within the planning area, is contained within the larger Uncompahgre Plateau archaeological context, as delineated and studied by the UPP project (Reed and Gebauer 2004). The Dry Creek Basin is known for its high concentrations of recorded archaeological sites, with some of the highest concentrations seen in the entire larger Uncompahgre Plateau. Over 1200 individual historic properties are known with roughly 88% of the known sites represented as open artifact scatters. Aboriginal site types include, but are not limited to, open camps, chipped stone manufacturing and processing sites, open and sheltered architectural locales, and isolated artifacts and features. The density of National Register Eligible properties varies from less than one site per section in the upland areas to a high of over 10 sites per section in the canyon areas. Eligible historic properties include sheltered occupations, rock art, lithic procurement sites and historic Ute encampments. Sites that date to the historic period include mines, homesteads and ranches, as well as many other locations of past human activity. Routes themselves are often of historic age and are occasionally eligible for nomination to the National Register of Historic Places.

Cultural Resources

Historically, unregulated travel has left National Register and register Eligible sites vulnerable to impacts. Cross-country travel has, in many known cases, compromised the National Register character of sites, leading to irreversible, irretrievable loss of integrity and the destruction of valuable scientific data concerning the human past of the area. Route proliferation occurs as part of current management. The amount of cross-country travel will almost certainly increase and would continue into less accessible areas.

Information on archeological sites including number and location of sites is confidential and cannot be made public. There are known National Register- Eligible sites within existing routes, but the actual number is unknown since, a) there are still at least 300 miles of un-evaluated routes and, b) there are more known sites in routes that still need a National Register evaluation. Known sites within current travel corridors, routes are found in all studied sub-areas, with the highest densities being found in sub-regions C and D though these sites densities may be artificially high since those regions have received the most inventory. Site conditions within existing routes are deteriorating due to continued use of the routes.

Cultural Resource inventories of the existing routes have not yet been completed. Of the more than 700 miles of known routes, over 50% (about 400 miles of routes) have been inventoried at a Class Three level. There are many hundreds of archaeological sites in the vicinity of the known/existing routes. There are also known sites which may be susceptible to secondary impacts arising from accessibility. Any or all of these sites may be tested for National Register eligibility, and a recommendation would be made as to the potential for secondary impacts. BLM's preferred option, as recommended by the Cultural Resource Handbook and SHPO, is to avoid continued impacts to cultural sites by designating routes as closed to vehicular traffic in order to protect and preserve cultural resource values. In those cases where road closures are impractical or undesirable, BLM would implement the appropriate mitigation measures after consultation with SHPO and Ute Tribal authorities.

Authority for the methodology used herein is contained in Addendum 1 to the Colorado protocol executed on 19 October 2006. The agreement relieves BLM of the requirement to perform 100% inventory in the areas of potential effect. Under the protocol amendment, any designations that allow continued use of existing routes and provide for open travel may require some degree of Class III inventory, depending on such factors as limitations to travel, degree of potential for National register eligible sites, increase in travel usage, etc. Any designations that impose limitations on travel, close an open area or close a route are unlikely to adversely affect cultural resources, and field inventory of such undertakings is not required or may be limited. In this planning process inventory was completed in areas of high archaeological probability, where use was expected to increase the potential for resource impacts, where new routes have historically proliferated, and in randomly chosen segments of low-use routes. BLM archaeologists made the decision as to where intensive inventory was and is necessary based on information collected during literature reviews focused on the vicinity of the routes in question, on topographic factors, on the knowledge of the staff, and on research questions formulated in the most current statewide historic context documents. Where BLM determined that Class III inventory is not necessary, Class II (reconnaissance) inventories have been and would continue to be conducted and documented.

When determining the order of future inventories, BLM would place the greatest emphasis on the routes

for which the type of use is most likely to adversely affect historic properties. For example, if the use of a particular road in an area of known site concentration might greatly increase as a result of other routes nearby being closed, it would receive greater attention than a road or trail in a remote location, for which use is already limited and would not change.

Environmental Consequences

Common to All Alternatives

Routes would be closed, if necessary, to help prevent impacts to known eligible archeological sites.

Impacts from Alternative 1

In addition to known sites in existing roads, the continuation in the increase in the rate of unlimited off road travel, resulting in the potential for even more user created routes, has a high potential for impacting other sensitive resources, including eligible cultural properties situated in previously untraveled areas resulting in degradation of the resource value and long term irreversible, irretrievable impacts to major archaeological sites. Route proliferation would continue due to the population growth and increase in the rate of recreational OHV travel into less accessible areas, leading to potential secondary impacts to eligible properties. Under this alternative there would be no reduction in the increase in the amount of cross-county travel and no reduction of the existing impacts and potential impacts that could occur on or along some of the 700 miles of existing routes to historic properties. More intensive inventories would likely be required.

Impacts from Alternative 2

Overall, fewer archeological properties would be impacted under this alternative than under Alternative 1 due to all cross-country travel being prohibited, limiting all motorized and mechanized travel to designated routes, and closing some routes. Prohibiting all cross-country motorized and mechanized travel would result in major increases in the potential for the preservation of the National Register character of some sites, prevent irreversible and irretrievable loss of integrity and the destruction of valuable scientific data concerning the human past of the area, and greatly reduce the potential impacts to recorded and undocumented historic properties. Restricting and limiting motorized and non-motorized mechanized travel to 375 miles of non-administrative routes (See Table 1), and closing 259 miles of existing routes would greatly reduce the level of anticipated impacts to these sensitive resources from OHV travel. This alternative would result in the elimination of all cross-country travel to or near these resources, and is a reduction of 53% in the number of miles of existing non-administrative routes that would be available for motorized or mechanized travel. Limiting travel to designated routes seasonally or yearlong would reduce the potential for impacts to previously un-impacted properties, and limiting travel on some routes to specific types of travel would reduce the impacts to sites currently being impacted. Continued impacts to currently impacted sites would be reduced or eliminated.

Impacts from Alternative 3

The potential impacts to archeological properties from implementing this alternative would be similar to Alternative 2 but greatly fewer than those from implementing Alternative 1, due to the fewer number

of miles of motorized and mechanized designated routes in this alternative (224 miles, 486 fewer miles than Alternative 1, and 111 fewer miles than Alternative 2). Approximately 369 miles of existing routes would be closed in this alternative. The routes selected for closure are those in the least desirable locations or those that are parallel routes to other routes. Fewer intensive inventories would likely be required as a result of less traffic and travel.

Impacts from Alternative 4

The potential impacts from implementing this alternative would be similar to Alternative 2 and greatly less than those from implementing Alternative 1, due to the number of miles of motorized and mechanized designated routes in this alternative (576 miles, 124 fewer miles than Alternative 1, and 201 more miles than Alternative 2). Approximately 118 miles of existing routes would be closed in this alternative. The routes selected for closure are those in the least desirable locations or those that are parallel routes to other routes. More intensive inventories and site specific mitigation would likely be required.

Cumulative Effects

Cumulative effects on historic properties cannot be specifically identified until cultural resources inventories are completed and historic properties have been identified. In general, however, erosion caused by vehicle travel, depending on its proximity to a site, could have long-term negative impacts on both buried sites as well as those with standing structures. Failure to regulate off-road travel is likely to result in a cumulative effect of long term, irreversible, irretrievable adverse effects to cultural resources.

ENVIRONMENTAL JUSTICE

Presidential Executive Order 12898 mandates that high and/or adverse environmental impacts resulting from federal actions will not be disproportionately borne by minority or low income populations. Disproportionate impacts are those that would affect minority or low-income populations at levels appreciably higher than effects to non-minority or non-low income groups. Minority populations include those of Hispanic or Native American ethnicity.

Census data from 2006 shows that non-Hispanic whites comprised 83.1% of the population in Montrose, San Miguel, Ouray, and Delta counties, which is higher than the Colorado average of 72%. Native Americans represented 1.1% of the populations in the same counties, the same as the Colorado average of 1.1%. The Hispanic population represented 13.9% of the counties, below the Colorado average of 19.7%.

In 2004, 10.7% of the populations in Montrose, San Miguel, Ouray, and Delta counties earned incomes below the federal poverty level compared to a Colorado average of 10.2% (U.S. Census Bureau, 2007).

Environmental Consequences

Impacts from Alternative 1

This alternative would not change existing uses. Although demands and impacts would continue to increase, it is not anticipated this alternative would result in a disproportionate impact on minority or low income populations

Impacts from Alternatives 2, 3, and 4

These alternatives were developed based on resource conditions, and increasing demands and impacts; each designate routes and uses, using different restrictions and protections. The entire area would be open to horse riding and hiking. Although dispersed camping and overnight camping in proposed developed sites is included in these alternatives, these activities would not be in competition with other existing camping opportunities in the planning area or nearby communities. None of these alternatives would have a disproportionate impact on minority or low income populations.

Cumulative Effects

Cumulative impacts that would be measurable would not likely occur as a result of implementation of any alternative.

FARMLANDS, PRIME OR UNIQUE

There are no Prime or Unique Farmlands within the planning area. However, much of the land along the northeastern boundary of the planning area in Shavano Valley, and between Dry Creek and Roubideau Creek have been determined to be Prime Irrigated or Irrigated (Not Prime) Lands of statewide importance (USDA Soil Conservation Service 1980). Additionally, many of the ephemeral drainages that drain on to these lands, headwater on the planning area. Historically, flood events originating on public lands within the planning area have resulted in impacts to farmland and associated facilities (canals and laterals operated by the Uncompahgre Valley Water Users Association). Two flood control retention structures, one in Shavano Valley and the other on the Roatcap Drainage west of Olathe, presently function within the planning area to help mitigate flood impacts to the valley bottom farmland. Although these two facilities provide flood protection from their respective drainages, several drainages on the plan area remain free flowing. The hydrologic condition of these watersheds within the planning area does influence the amount of runoff and sediment produced from flood events. Soil surface disturbance from existing travel routes and off route travel, especially in close proximity to drainage channels or located on erodible soils has the potential to accelerate the levels of runoff and sediment produced during storm events. Additionally, many of the exiting travel routes receive little or no maintenance to ensure adequate drainage occurs.

At present, the planning area has 73 miles of routes that occur within 100 feet of stream channels, including 877 stream crossings (Table 17). The 73 existing miles of routes is estimated to equate to 88 acres of soil and vegetation disturbance within this sensitive zone.

Environmental Consequences

Please see the impacts on Floodplains for estimates of acreage impact figures that are relative to the impacts from Alternative 1.

Impacts from Alternative 1

At present the area contains 73 miles of routes within 100 feet of stream channels, and 877 stream crossings (Table 17). The 73 existing miles of routes is estimated to equate to 88 acres of soil and vegetation disturbance within this sensitive stream zone. There are 572 miles of routes that occur on soils that have either a moderate (372 miles) or severe (200 miles) potential for erosion (Table 17). Under Alternative 1, motorized and mechanized vehicle travel on all routes and cross-country, except within Sub-Region B, would continue. Consequently, additional user created routes would become established and more soil surface and stream channel disturbance would occur due to the unrestricted travel. Additionally, routine trail maintenance and other mitigation such as seasonal and weather related route closures would not occur. Thus, both accelerated storm runoff and sediment yield could affect some of the off-site farmlands and irrigation facilities that receive drainage from the subject public lands.

Impacts from Alternative 2

All cross country off route travel would be prohibited except for horseback or foot travel, resulting in a major decrease in the potential downstream farmland sedimentation impacts and for soil erosion and surface runoff, especially on routes located on soils with moderate and severe erosion potential. The potential for this reduction in accelerated sediment yield and storm runoff would be due to the combination of prohibiting all cross country motorized and mechanized travel and by closing and rehabilitating 258 miles of existing routes. The closures would result in a 44% reduction in the number of existing route stream crossings, or 389 fewer crossings, and a 44% reduction in existing miles of routes in the WIZ, or 32 fewer miles, which would reduce the amount of existing storm runoff and sediment production. This reduction in the number of miles of routes in this sensitive resource would eliminate use and further disturbance on approximately 35 acres of the approximate 88 acres of existing soil and vegetation disturbance within the zone, facilitating agency and natural floodplain re-vegetation and rehabilitation. Closing routes would also result in a 40% and 30% reduction in miles of routes on soils with moderate and severe erosion potential, or a total of 206 fewer miles (about 250 fewer acres) which would result in less soil erosion, runoff and sedimentation.

Impacts from Alternative 3

Impacts to Prime or Unique Farmlands from implementing this alternative would be similar to Alternative 2. Compared to Alternative 1, this alternative would result in a major potential to reduce accelerated sediment yield and storm runoff, especially on soils with moderate and severe erosion potential, due to the combination of prohibiting all cross country motorized and mechanized travel, and by closing and rehabilitating 369 miles of existing routes. The route closures would result in a 56% reduction in the number of route stream crossings (492 fewer crossings), and a 53% reduction in miles of routes in the WIZ, or 39 miles, which would reduce the storm runoff and sediment production, similar to Alternative 2. The reduction and rehabilitation of routes in the floodplains would eliminate use and further disturbance on approximately 47 acres of the approximate 88 acres of existing soil and vegetation disturbance within the zone, approximately 12 more acres than in Alternative 2, which would facilitate rehabilitation. By closing routes and allowing rehabilitation to occur, there would also be a 59% and 67% reduction in miles of routes on soils with moderate and severe erosion potential, or a total

of 354 fewer miles (about 430 fewer acres) which would result in less soil erosion, runoff and sedimentation. Other impacts would be similar to those in Alternative 2.

Impacts from Alternative 4

All cross country off route travel would be prohibited except for horseback or foot travel, resulting in a major decrease in the potential downstream farmland sedimentation impacts and for soil erosion and surface runoff, especially on routes located on soils with moderate and severe erosion potential. The potential for this reduction in accelerated sediment yield and storm runoff would be due to the combination of prohibiting all cross country motorized and mechanized travel and by closing and rehabilitating 118 miles of existing routes. Compared to Alternative 1, the impacts to Prime or Unique Farmlands from implementing Alternative 4 would be similar to Alternative 2, but with a somewhat lower potential for reducing accelerated sediment yield and storm runoff .

Route designations under Alternative 4 would result in a 6% increase in the total number of route stream crossings, or 54 more crossings, and a 1% increase in miles of routes in the WIZ, or one more mile, compared to Alternative 1. This increase is primarily a result of the Roubideau Creek horse and hiking trail, which increases the miles of WIZ and perennial stream crossings in the Camel Back Wilderness Study Area (Sub-Region B) by 133% and 144%, respectively (see Table 22). Since this trail is limited to horse and foot traffic, impacts to farmlands adjacent to the area would be minimal. There would be a 17% and 2% reduction in miles of routes on soils with moderate and severe erosion potential, or 68 fewer miles (about 80 fewer acres) total. Because of motorized and mechanical vehicle travel being limited to designated to designated routes either seasonally or yearlong, accelerated sediment yield and storm runoff would be reduced from the existing situation, even considering the increases in the number of stream crossings and miles of routes in the WIZ in this alternative, compared to Alternative 1. Other impacts would be similar to those in Alternative 2.

Cumulative Effects

Cumulative impacts that would be measurable would not likely occur as a result of implementation of any alternative.

FLOODPLAINS

The streams in the planning area are mostly low order, and ephemeral or intermittently flowing. The few higher order perennially flowing streams include Roubideau, Potter, Dry, and Spring Creeks. Floodplains associated with the higher order channels are more developed than the lower order channels, and commonly are defined by the extent of the riparian zone bordering the channel, in reaches that are not incised. The floodplain width on these stream systems is partially determined by the degree of valley confinement, but even at the downstream locations within the planning area, floodplains typically extend less than 50 feet from the active channel banks. The typical, first and second order channels have little to no defined floodplain, are highly confined and commonly incised. None of the floodplains on the planning area's streams have been delineated as such.

At present, the planning area has 73 miles of routes that occur within 100 feet of stream channels,

including 877 stream crossings (Table 17). The 73 existing miles of routes is estimated to equate to 88 acres of soil and vegetation disturbance within this sensitive zone.

Environmental Consequences

Impacts from the Alternative 1

Under the No Action Alternative additional numbers of user-created routes would continue to be established, especially since the volume and rate of cross country travel on public lands throughout the planning area would continue, and some of this travel and these new routes would occur in the floodplain influence zone (e.g. technical 4WD routes and motorcycle use). At present, the area has 73 miles of routes that occur within 100 feet of stream channels, including 877 stream crossings (Table 17). The 73 existing miles of routes is estimated to equate to 88 acres of soil and vegetation disturbance within this sensitive zone. Over the life of the analysis period, a major increase in soil disturbance and vegetation disturbance and or removal in this zone would occur due to the anticipated increase in population growth and OHV use in the planning area. Motorized or non-motorized mechanized routes poorly located and established in these locations affect the functionality of floodplains and stream channels by physically disturbing vegetation and the soil surface. Routes in floodplains can also encroach on active stream channels, restricting the natural processes of channel dynamics and migration. Since floodplains dissipate stream flow energy during high flows, floodplain function can be compromised when routes encroach or isolate floodplains. Disturbance to vegetation within floodplains could also occur from spills of petroleum related products where motorized travel occurs, potentially resulting in less vegetation to prevent downstream erosion and sedimentation. Additionally, routine trail maintenance and other mitigation such as seasonal and weather related route closures would not occur with frequency. Thus, the potential impacts to floodplains described above would be expected to increase over time due to the existing routes in this sensitive area and the high potential for additional increases in OHV use and the creation of more user created routes as more travel use occur.

Impacts Alternative 2

Overall, the disturbances to sensitive floodplains would be greatly reduced in this alternative, compared to the No Action alternative, because of the prohibition of off-route travel which would result in no additional user created routes in the WIZ. Closing and rehabilitating 258 miles of existing routes would result in a 44% reduction in the number of existing route stream crossings, or 389 fewer crossings, and a 44% reduction in miles of routes in the WIZ, or 32 fewer miles, which would reduce the potential for floodplain disturbance. This reduction in the number of miles of routes in this sensitive resource would eliminate use and further disturbance on approximately 35 acres of the approximate 88 acres of existing soil and vegetation disturbance within the zone, facilitating agency and natural floodplain re-vegetation and rehabilitation. Approximately 8.7 miles of technical 4WD trails primarily in ephemeral stream WIZ and drainage channels would have the potential to slightly alter the floodplain function of these drainages through physical disturbance to alluvial soils and the stabilizing vegetation.

Impacts from Alternative 3

Overall, the disturbances to sensitive floodplains would be greatly reduced in this alternative, compared to the No Action alternative, because of the prohibition of all cross country travel on public lands in the

planning area. Impacts within this sensitive resource from implementing Alternative 3 on public lands in the planning area, compared to Alternative 1, would be greatly reduced. The impacts from Alternative 3 would be very similar to those in Alternative 2, but with more potential for reducing or eliminating disturbances to the function of sensitive floodplains by eliminating all cross-country motorized and non-motorized mechanized travel and by closing and rehabilitating 369 miles of existing routes. These actions would result in a 56% reduction in the number of route stream crossings (492 fewer crossings), and a 53% reduction in miles of routes in the WIZ, or 39 fewer miles, which would reduce disturbance to floodplains somewhat more than Alternative 2, and to a much greater extent than with Alternative 1. The reduction and rehabilitation of routes in the floodplains would eliminate use and further disturbance on approximately 47 acres of the approximate 88 acres of existing soil and vegetation disturbance within the zone, approximately 12 more acres than in Alternative 2, which would facilitate rehabilitation. The elimination of all cross country motorized and/or mechanized travel and the reduction in the number of miles of existing routes would lower the probability of contaminant spills that could alter both vegetation and soils on local sensitive floodplains. Approximately 3.4 miles of technical 4WD trails in the WIZ, which includes 56 ephemeral stream crossings and drainage channels would have the potential to slightly alter the floodplain function of these drainages through physical disturbance to alluvial soils and the stabilizing vegetation.

Impacts from Alternative 4

Overall, even with increases in the number of stream crossings and miles of routes in the sensitive WIZ, disturbance to floodplains would be greatly reduced in this alternative, compared to the No Action alternative, because of the prohibition of off- route travel and the implementation of measures in this alternative. Compared to Alternative 1, implementing this alternative in the planning area would result in a 6% increase in the number of existing route stream crossings (54 more crossings), and an overall 1% increase in miles of existing routes in the WIZ (one more mile). This increase in stream crossings and mileages, as compared to Alternative 1, is primarily a result of the proposed Roubideau Creek horse and hiking trail in Sub-Region B, which would increase the density of routes in the WIZ and the density of the existing perennial stream crossings in the WIZ in the Camel Back Wilderness Study Area by 133% (four more miles of routes) and 124% (51 more perennial stream crossings), respectively (see Table 22). These density values above and in Table 22 are expressed as the percentage change between this alternative and Alternative 1 for the number of perennial stream crossings per square mile of area in the WIZ, and miles of routes affecting perennial streams in the WIZ per square mile of area in the WIZ. This trail would be located on the ground so as to minimize the number of actual stream crossings, and since this trail would be limited to horse and foot traffic, impacts to floodplain function would be minimal. Implementing Alternative 4 would result in impacts similar to those in Alternative 2, but with more potential for disturbing the function of local floodplains, because of the fewer number of routes that would be closed and rehabilitated (118 miles). The closure and rehabilitation of routes in this sensitive zone would eliminate use and further disturbance on approximately 47 acres of the approximate 88 acres of existing soil and vegetation disturbance within the zone, approximately 12 more acres than in Alternative 2, which would facilitate rehabilitation. Approximately 8.5 miles of proposed technical 4WD trails in the ephemeral WIZ and drainage channels would have identical impacts as in Alternative 2.

Cumulative Effects

Population growth and residential development of surrounding private lands, along with other resource impacting trends, will occur throughout the greater region that will result in increased amounts of recreational usage on public lands. The cumulative effects of providing a high number of additional routes to meet growing recreational demands would add to very predictable impacts to the watersheds within the Dry Creek TMP. Increases in the miles of routes would create additional acres of semi-permeable and non-permeable surfaces that would result in increased amounts of runoff, erosion, and drainage changes.

INVASIVE, NON-NATIVE SPECIES (includes findings on Standard 3)

Invasive Species are considered to be "any species of insects, animals, plants and pathogens, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem; and whose introduction does or is likely to cause economic or environmental harm or harm to human health" (http://weeds.hotmeal.net/). Some, if not all, weeds are transported and spread by a number of means, including with equipment, companion animals, recreational vehicles, and clothing.

The planning area encompasses approximately 110,500 acres of public land. In 2002-2004 a systematic weed survey was completed of the existing routes, trailheads, vegetation manipulations, range improvements, and other high use areas. The results of the survey showed that approximately 1,575 acres were infested with noxious weeds, a conservative estimate because not all drainages and trails were completely surveyed, and four years have passed since the survey was completed. Weeds were classified into linear infestations (isolated, patchy, scattered, continuous), points (isolated patches less than 1/10 of an acre), and polygons (for areas greater than 1/10 of an acre). The following table depicts the miles of routes, number of points (each point is not considered one acre), acres of polygons infested and total number of acres infested with noxious weeds by Sub-Region.

Table 6
Weed Infestations by Sub-Region in the Dry Creek Travel Management Planning Area

Sub-Region	**Miles of Routes**	**Points**	**Polygon Acres**	**Grand Total of Acres Infested**
A	26	39	81.4	113.9
B	3.4	6	258.2	261.7
C	52.6	106	143.6	211.9
D	45.1	108	439	476.6
E	19.1	2	11.4	33
F	11.1	109	459.4	427
G	2.6	375	17.5	50.3
Grand Total	745	160	1,410.50	1,574.4

*Note: points and polygons will not add up to the total acres because of the buffering effect of points and linear infestations. This table is for comparison purposes and may not representative of the total number of noxious weed infestations in the planning region.

The Colorado Noxious Weed Act (Colorado Statutes §§35-5.5-101 through 119, C.R.S. (2003)) categorizes weeds into three separate lists, A, B, and C. List “A” weeds are designated for elimination on all lands. List “B” weeds include plants whose continued spread will be stopped. List “C” weeds are those selected or recommended for control/containment methods. This list along with the BLM noxious weed species of concern, Uncompahgre Field Office (UFO), Gunnison Gorge National Conservation

Area (GGNCA) Weed management Strategy completed in 2007, the Programmatic Environmental Impact Statement - Vegetation Treatments on Bureau of Land Management Lands in 17 Western States, guide the way in which the UFO/GGNCA prioritizes and treats weed infestations.

In the Dry Creek Planning region there are several high priority weeds that are on the state list and the BLM noxious weed species of concern along with the local office plan. These weeds are listed below by Sub-Region.

Table 7
Noxious Weeds present by Sub-Region

	A	B	C	D	E	F	G	Potential	Summary
Russian knapweed	X	X	X	X	X	X	X		Spread throughout PA, various size infestations
Burdock	X		X	X	X	X	X		Light infestations throughout especially around water.
Whitetop	X	X	X	X	X	X	X		Very small amount in Sub-Region B, spread throughout other Sub-Regions in varying sizes of infestations
Plumeless thistle	X		X	X	X	X	X		Small isolated infestations, most likely through all Sub-Regions
Spotted knapweed				X		X	X		The main infestation is ~ 800 acres with varies densities of polygons. Field office actively treating.
Canada thistle	X	X	X	X	X	X	X		Small infestations around water commonly associated with wetter areas and can be associated with disturbances in drier areas such as vegetation treatments, and woodcuts.
Halogeton	X		X	X	X				Associated with routes and disturbed areas in the lower elevations.
Tamarisk	X	X	X	X	X	X	X		Associated with drainages and around water sources.
Cocklebur	X		X				X		Associated with water sources, more than likely small infestation throughout Sub-Regions
Diffuse knapweed			X	X		X			These small infestations have not been verified.
Oxeye daisy				X		X		X	This is an Early Detection Rapid Response (EDRR) species for all Sub-Regions. There is an infestation of this on the forest above Escalante creek.
Hounds tongue				X		X			Usually seen at higher elevations, but have small infestations throughout all Sub-Regions. An Early Detection Rapid Response species.
Bull thistle	X	X	X	X	X	X	X		Throughout Sub-Regions, especially associated with disturbance, treatments and higher precipitation areas. Has had the potential to cycle out, but treated when necessary.
Musk thistle	X	X	X	X	X	X	X		Throughout Sub-Regions, especially associated with disturbance, treatments and higher precipitation areas. Has the

Table 7 Noxious Weeds present by Sub-Region									
	A	**B**	**C**	**D**	**E**	**F**	**G**	**Potential**	**Summary**
									potential to cycle out.
Jointed goatgrass								X	This grass has been on the increase. Early Detection Rapid Response for all Sub-Regions. Disturbed areas especially along routes.
Common mullein				X			X		This plant is seen throughout all Sub-Regions, usually not a problem, except in disturbed areas.
Russian knapweed	X	X	X	X	X	X	X		Associated with routes, disturbed areas, and water sources.
Yellow toadflax								X	Seeing this plant pop-up in several areas. Infestation on forest off 25 Mesa Rd. Early Detection Rapid Response Species in all Sub-Regions. Associated with higher water requirements.
Purple loosestrife								X	Wetland plant not in the Sub-Regions as far as we know. Early Detection Rapid Response species.
Sulfur cinquefoil								X	Not in the Sub-Regions as far as we know. Infestations on the forest around planning region. Early Detection Rapid Response species for all Sub-Regions.
Russian olive			X	X	X	X			More than likely throughout all Sub-Regions, associated with water sources.

*Note this is not a complete list of species, nor all the EDRR species.

Spotted knapweed is on the state "B" list, and a management goal for this species is to stop the continued spread of this plant. It is on the BLM species of concern list and is one of the top priorities in the UFO. Spotted knapweed has infested approximately 800 acres along HWY 90 and the rim road. The infestations have reached the containment stage with eradication almost impossible. The BLM is actively partnering with Montrose County, WAPA, Tri-State and the Palisade Insectary to treat this infestation and will keep it contained with a goal of shrinking the infestation. There are several routes through this infestation and education will be critical in the reduction of its spread. Whitetop, a.k.a. hoary cress, is also on the state "B" list and is another UFO priority. The plant is found in small infestations throughout the area. Russian knapweed is another state "B" listed species and is another top priority. It is found with a high water table and where disturbance has occurred, including in several riparian and pond areas. The Roubideau Canyon riparian area is one of riparian area being affected. The BLM is and has been actively treating this weed not only in the Roubideau Canyon riparian area but throughout the planning area. All weeds on the state "A" and "B" lists, along with BLM species of concern, will be actively treated, with the above mentioned three species being priorities. Monitoring and inventory include an early detection and rapid response strategy aimed at the eradication of small infestations of new and established weeds before they reach the stage where only containment is possible and treatment costs go up substantially.

Environmental Consequences

Impacts Common to All Alternatives

There would continue to be existing routes at varying levels in all alternatives. Thus, all alternatives would continue to spread weeds from motorized and non-motorized activities. All alternatives except Alternative 1 would help to decrease the spread of noxious weeds, not only in the Planning Area, but on and to other public and private lands through reductions in the number of miles of routes.

Impacts from Alternative 1

700 miles of routes would continue to be available for motorized and mechanized travel. In addition, this alternative does not address the proliferation of user-created routes in the future, leaving the area open and limited to existing routes, from a growing urban area where the population is encouraged to enjoy their public lands. Thus, under this alternative weeds would have the opportunity to spread without checks and balances. In the United States there is about 3,310 non-native species occurring in natural areas (Duncan and Clark, 2005). Of these, there are approximately 60 species that are considered a major economic and ecological threat to rangelands (Duncan and Clark, 2005). In this planning region we have approximately 6 of the 60 that would have detrimental impacts to rangeland, with more species on the periphery of the Planning Area. This alternative would not meet or be moving towards meeting Standard 2 for healthy plant and animal communities.

Impacts from Alternative 2

Major reductions would occur in the likelihood of new weed invasions as a result of prohibiting all cross country travel. The outcome of Alternative 2 is to implement the Travel Management Plan and a designated route system described in the Description of the Alternatives. This alternative leaves approximately 60% of the routes, or 420 miles, available for motorized and non-motorized travel. This represents a 40% reduction of available route miles, or 281 miles and a large difference in route densities. This alternative would greatly reduce the spread of noxious weeds by preventing the creation of new user created routes that are unplanned routes and by decreasing the number and mileage of existing routes available. In addition, limiting travel to designated routes would result in easier weed surveys and treatments for already established weed infestations and decrease future establishment of noxious weeds. This alternative would be moving toward Standard 2 for healthy plant and animal communities in terms of noxious weed establishment and treatment.

Impacts from Alternative 3

Major reductions would occur in the likelihood of new weed invasions as a result of prohibiting all cross country travel. This alternative leaves approximately 39% of the routes, or 270 miles, available for motorized and non-motorized travel. The limitations on these designated routes would be identified by different travel use categories. This alternative is the most restrictive in terms of route densities and has a 61% reduction in routes from alternative 1, or 431 fewer miles. Early Detection - Rapid Response which includes locating noxious weeds, keeping up treatments along routes, and re-surveying in subsequent years, would be easier and more efficient because of the reduction in miles of routes and route density. Thus, this alternative would be best suited for weed management. This alternative would be moving toward Standard 2 for healthy plant and animal communities in terms of noxious weed establishment and treatment.

Impacts from Alternative 4

Major reductions would occur in the likelihood of new weed invasions as a result of prohibiting all cross country travel. Alternative 4 designates 605 miles of routes for motorized and mechanized travel, or 86% of the existing inventoried routes, compared to 96% of existing routes being available for travel in Alternative 1, and 60% in alternative 2. This is a reduction of 13%, or 96 miles, when compared to alternative 1. Compared to Alternative 1, route densities would be decreased, and measures in Alternative 4 would be implemented to curb noxious weed advancement. This alternative would not result in or assist in the reduction of noxious weeds, but it would allow for containment and control strategies to be put into place. The containment and control strategy would focus mainly on treating trail head areas and Early Detection Rapid - Response of critical noxious weed species that play a major role in the economic and ecological demise of rangelands, and that have the potential to spread or be easily transported to private and other public lands. This alternative would marginally move toward meeting Standard 2 for healthy plant and animal communities.

Finding on the Public Land Health Standard for plant and animal communities: This alternative would marginally move toward meeting Standard 2 for healthy plant and animal communities.

Partial; See also impacts on Wildlife, Aquatic and Wildlife, Terrestrial; and Vegetation.

Cumulative Effects

In addition to growth in recreational travel, reasonably foreseeable actions that may effect invasive and noxious weed spread over the next 10 years on private and public lands include livestock grazing, residential growth, new road construction on private lands, fuels reduction projects, utility corridor maintenance and upgrades, and new buried utility rights-of-way. Other future activities on public lands in the travel planning area that could also potentially impact the occurrence and spread of noxious weeds and require mitigation include special recreation events, and Forest Service planning and projects, Uncompahgre Plateau Project activities, local land use planning, soil research, BLM Uncompahgre Field Office Resource Management Plan revision, continued population growth, vegetation treatments, county road upgrades, special recreation permits and activities, and utility rights of way and corridors. The cumulative impacts to noxious weed spread from all action alternatives will be dispersed and long-term and require on-going monitoring and mitigation by BLM and partners.

MIGRATORY BIRDS

The plant communities in the planning area provide a variety of nesting habitats for a large number of different migratory bird species. For the purposes of this analysis, the U.S. Fish and Wildlife Service list of Birds of Conservation Concern was used as a tool to complete the analysis for this EA (USFWS 2002, Table 16, pg 39 BCR 16 [Southern Rockies/Colorado Plateau]).

Table 8 below contains the bird species used for this analysis, their habitat within the area, and their status (resident, breeding, wintering or not present) within the Uncompahgre Field Office (UFO), and whether they are expected within the Planning Area.

Migratory Birds

Table 8 USFWS list of Birds of Conservation Concern for the Uncompahgre Field Office and the Dry Creek Travel Management Planning Area				
Common Name	**Scientific Name**	***Habitat***	***Range within UFO***	***May be Present in Planning Area***
Northern Harrier	*Circus cyaneus*	Agriculture, grassland and wetland areas	Resident	Yes
Swainson's Hawk	*Buteo swainsoni*	Agriculture, grassland, lowland riparian woodland and cultivated land	Breeding	Yes
Ferruginous Hawk	*Buteo regalis*	Grassland, shrub-steppe	Winter	Yes
Golden Eagle	*Aquila chrysaetos*	Open woodland, nests in both trees and on cliffs, in most habitat types in W. CO	Resident	Yes
Peregrine Falcon	*Falco peregrinus*	Generalist but pure cliff nester, mostly associated with pinyon-juniper woodland and ponderosa pine habitat types	Breeding	Yes
Prairie Falcon	*Falco mexicanus*	Annual, grassland; Also a pure cliff nester, in open country below 10,000 ft.	Resident	Yes
Gunnison Sage-Grouse	*Centrocercus minimus*	Sagebrush obligate species, also uses mountain shrub, and grassland areas	Resident	Yes
Snowy Plover	*Charadrius alexandrinus*	Range does not extend to the UFO.	--	--
Mountain Plover	*Charadrius montanus*	Range does not extend to the UFO.	--	--
Solitary Sandpiper	*Tringa solitaria*	Range does not extend to the UFO.	Migration	--
Marbled Godwit	*Limosa fedoa*	Riparian	Migration	--
Wilson's Phalarope	*Phalaropus tricolor*	Riparian	Breeding	Yes
Yellow-billed Cuckoo	*Coccyzus americanus*	Riparian lowlands or agricultural areas, esp. with hardwoods	Breeding (unconfirmed)	Yes
Flammulated Owl	*Otus flammeolus*	Open ponderosa pine, aspen, also Douglas fir, lodgepole, and some mountain shrub	Breeding	No
Burrowing Owl	*Athene cunicularia*	Grassland, an open country obligate, associated with prairie dogs, short vegetation	Breeding	Yes
Short-eared Owl	*Asio flammeus*	Generalist	Winter	Yes
Black Swift	*Crypseloides niger*	Nests behind or next to waterfalls and wet cliffs and occasionally in limestone caves. Nest site persistence and tenacity almost absolute	Breeding	No
Lewis's Woodpecker	*Melanerpes lewis*	Open woodland; open pine forests, burned over areas, pinyon-juniper woodland, and riparian areas with decadent cottonwoods	Resident	Yes
Williamson's Sapsucker	*Sphyrapicus thyroideus*	Mixed woodland, ponderosa pine, conifer and aspen habitats	Breeding	Yes
Gray Vireo	*Vireo vicinior*	Pinyon juniper, open juniper/grassland areas	Breeding	Yes
Pinyon Jay	*Gymnorhinus cyanocephalus*	Pinyon juniper woodland	Resident	Yes
Bendire's Thrasher	*Toxostoma bendirei*	Range does not extend to the UFO.	--	--
Crissal Thrasher	*Toxostoma crissale*	Range does not extend to the UFO.	--	--
Sprague's Pipit	*Anthus spragueii*	Range does not extend to the UFO.	--	--
Virginia's Warbler	*Vermivora virginiae*	Breeding, dry woodland, oak, followed by mountain shrub, pinyon-juniper woodland, and ponderosa pine	Breeding	Yes
Black-throated Gray Warbler	*Dendroica nigrescens*	Prefers mature pinyon-juniper woodland; may be in adjacent oak or	Breeding	Yes

Table 8 USFWS list of Birds of Conservation Concern for the Uncompahgre Field Office and the Dry Creek Travel Management Planning Area				
Common Name	**Scientific Name**	***Habitat***	***Range within UFO***	***May be Present in Planning Area***
		sagebrush		
Grace's Warbler	*Dendroica graciae*	Mixed woodland; prefers ponderosa with oak understory	Breeding	No
Sage Sparrow	*Amphispiza belli*	Shrub steppe; low elevation big sagebrush or big sagebrush-greasewood	Breeding	No
Chestnut-collared Longspur	*Calcarius ornatus*	Annual, grassland	Migration	Yes

Table 9 below shows the number of miles of various kinds of routes within 12 habitat types important to migratory birds, in each alternative. Table 41, in the Vegetation section, shows essentially these same habitat types expressed as existing vegetation types, the existing acreages within each habitat type, and the acreages in these habitat types affected by existing routes (acreages shown in Table 41were calculated assuming a width of 6 meters for all route types). Table 41 shows that a total of approximately 100,402 acres of important migratory bird habitat - almost all the public lands – are located within the planning area. Approximately 1,523 acres of these habitat types are currently occupied by motorized or non-motorized mechanized routes throughout the planning area, which has resulted in the removal of vegetation and the disturbance or movement of soils on these acres. The disturbed acreage represents about 1.5 % of the total acreage of migratory bird habitat in the planning area.

The Planning Area contains the Roubideau Landscape Health Assessment (LHA) area (approx. 104,000 acres), a small portion (7264.7 acres) of the Escalante LHA area (Monitor Creek and the ridge between Cottonwood and Monitor creeks) and a very small portion (137.3 acres) of the Colona LHA area. The Roubideau Landscape Health Assessment analysis (2006) indicated that several neo-tropical migratory bird species showed population trend declines, or data is not available for making trend determinations in the Western Colorado region (Kingery, H.E. ed. 1998 *in* BLM 1995) based on National Breeding Bird Survey information. Fourteen species show population trend declines in both the 10 and 26 year population trend Breeding Bird Survey datasets. All of these species have high "importance of area" (IA) rankings; indicating a high proportion of their habitat in this region provides essential breeding habitats.

Five of these species, Vesper Sparrow, Swainson's Hawk, Say's Phoebe, Rock Wren, and Loggerhead Shrike have very low abundance ratings, indicating they are the species' of highest concern and associated landscapes. The nine remaining species, Horned Lark, Common Nighthawk, Killdeer, Northern Flicker, Western Wood-Pewee, Chipping Sparrow, Sage Thrasher, Brewer's Sparrow and Mourning dove have moderate to good abundance ratings, making them species of second highest concern. Species for which inadequate data are available to make status determinations with a high degree of certainty are considered third priority species (northern harrier, savannah sparrow, common poorwill, gray flycatcher, gray vireo, long-eared owl, bank swallow, Swainson's thrush). The Escalante (1999) and Colona (2008) Landscape Health Assessments show similar results. The Planning Area is part of the larger overall landscape that provides habitat for all these species, which is important for their long-term sustainability.

Migratory Birds

Environmental Consequences

Analysis of effects to migratory birds is handled in a similar manner as explained in the Threatened, Endangered, and Sensitive Species (TES) section. See the TES section for general discussion of OHV-related effects to terrestrial and aquatic wildlife, fish, and plants. See the Wetlands and Riparian Zones section for effects on habitat for riparian migratory bird species.

OHV activities may have effects to migratory bird populations similar to those described in the TES, Aquatic Wildlife, and Terrestrial Wildlife sections of this document. Measuring indicators of all these factors for the numerous species of interest would be an excessively difficult task. In addition, for most of the species of interest, the relationships between these factors and population dynamics are not well understood. Because of these difficulty in measuring potential impacts to migratory bird populations, BLM assumes that any reduction in existing routes, or a reduction in the level or class of vehicular use (i.e., from motorized to non-motorized use) would, in general, improve migratory bird habitats.

As described above, migratory birds utilize many habitats for their life functions. Changes and differences in proposed actions among the four alternatives result in changes in the miles of routes that would be ultimately available for various uses in various wildlife habitats, and thus in the degree to which these habitats would be affected. Each alternative, because of the different actions regarding travel use conditions and routes that would be available for motorized and non-motorized mechanized travel, also directly affects the amount of disturbed soil and vegetation in these habitat types, resulting in varying degrees of impacts or removal of important migratory bird habitat.

Table 9
Miles of Routes Affecting Wildlife Species Habitat, by Alternative, Within the Planning Area

Wildlife Habitats	Route Types	Alternative 1 (Miles of Existing Routes)	Alternative 2			Alternative 3					Alternative 4				
			Desig. Routes (Miles)	Δ 1[3]		Desig. Routes (Miles)	Δ 2[4]		Δ 1[3]		Desig. Routes (Miles)	Δ 2[4]		Δ 1[3]	
				%	Miles		%	Miles	%	Miles		%	Miles	%	Miles
Agriculture	All[1]	5.7	3.8	-34%	-1.9	3.3	-12%	-0.5	-42%	-2.4	5.2	+37%	+1.4	-10%	-0.5
	Motorized Only [2]	4.5	2.2	-51%	-2.3	1.7	-23%	-0.5	-62%	-2.8	3.1	+41%	+0.9	-31%	-1.4
Aspen	All[1]	0.1	0.1	0%	0.0	0.1	0%	0.0	0%	0.0	0.1	0%	0.0	0%	0.0
	Motorized Only [2]	0.1	0.1	0%	0.0	0.1	0%	0.0	0%	0.0	0.1	0%	0.0	0%	0.0
Barren and Rock	All[1]	2.5	1.7	-35%	-0.8	1.5	-10%	-0.2	-40%	-1.0	2.3	+36%	+0.6	-11%	-0.2
	Motorized Only [2]	2.2	1.3	-41%	-0.9	0.9	-31%	-0.4	-59%	-1.3	1.6	+23%	+0.3	-27%	-0.6
Desert Shrub	All[1]	92.7	53.3	-43%	-39.4	36.0	-32%	-17.3	-61%	-56.7	78.8	+48%	+25.5	-15%	-13.9
	Motorized Only [2]	92.0	50.7	-45%	-41.3	25.9	-49%	-24.8	-72%	-66.1	74.7	+47%	+24.0	-19%	-17.3
Grassland	All[1]	114.7	60.5	-47%	-54.2	44.9	-26%	-15.6	-61%	-69.8	98.6	+63%	+38.1	-14%	-16.1
	Motorized Only [2]	110.6	54.2	-51%	-56.4	30.2	-44%	-24.0	-73%	-80.4	91.0	+68%	+36.8	-18%	-19.6
Mountain Shrub	All[1]	3.3	2.5	-25%	-0.8	1.4	-46%	-1.1	-58%	-1.9	3.0	+20%	+0.5	-10%	-0.3
	Motorized Only [2]	3.2	2.1	-34%	-1.1	1.0	-52%	-1.1	-69%	-2.2	2.8	+33%	+0.7	-13%	-0.4
Pinyon-Juniper	All[1]	194.7	131.4	-33%	-63.3	85.5	-35%	-45.9	-56%	-109.2	178.7	+36%	+47.3	-8%	-16.0
	Motorized Only [2]	181.0	95.4	-47%	-85.6	44.9	-53%	-50.5	-75%	-136.1	156.8	+64%	+61.4	-13%	-24.2
Ponderosa pine	All[1]	0.3	0.2	-6%	-0.1	0.2	-19%	0.0	-33%	-0.1	0.2	0%	0.0	-6%	-0.1
	Motorized Only [2]	0.3	0.1	-67%	-0.2	0.1	0%	0.0	-67%	-0.2	0.2	+100%	+0.1	-33%	-0.1
Rangeland	All[1]	1.0	0.7	-29%	-0.3	0.4	-42%	-0.3	-60%	-0.6	1.0	+40%	+0.3	0%	0.0
	Motorized Only [2]	1.0	0.6	-40%	-0.4	0.3	-50%	-0.3	-70%	-0.7	0.9	+50%	+0.3	-10%	-0.1
Riparian	All[1]	3.9	3.7	-4%	-0.2	3.2	-15%	-0.5	-18%	-0.7	4.5	+20%	+0.8	+15%	0.6
	Motorized Only [2]	1.8	0.9	-50%	-0.9	0.7	-22%	-0.2	-61%	-1.1	1.7	+89%	+0.8	-6%	-0.1
Sagebrush	All[1]	276.0	158.6	-43%	-117.4	92.8	-41%	-65.8	-66%	-183.2	229.9	+45%	+71.3	-17%	-46.1
	Motorized Only [2]	273.9	137.0	-50%	-136.9	76.9	-44%	-60.1	-72%	-197.0	223.7	+63%	+86.7	-18%	-50.2
Shrub/Grass/Forb	All[1]	2.0	1.0	-49%	-1.0	0.3	-73%	-0.7	-85%	-1.7	1.6	+53%	+0.6	-22%	-0.4
	Motorized Only [2]	2.0	1.0	-50%	-1.0	0.2	-80%	-0.8	-90%	-1.8	1.5	+50%	+0.5	-25%	-0.5

Table 9
Miles of Routes Affecting Wildlife Species Habitat, by Alternative, Within the Planning Area

Wildlife Habitats	Route Types	Alternative 1 (Miles of Existing Routes)	Alternative 2			Alternative 3					Alternative 4				
			Desig. Routes (Miles)	Δ 1[3]		Desig. Routes (Miles)	Δ 2[4]		Δ 1[3]		Desig. Routes (Miles)	Δ 2[4]		Δ 1[3]	
				%	Miles		%	Miles	%	Miles		%	Miles	%	Miles
Grand Totals	All[1]	696.8	417.4	-40%	-279.5	269.5	-35%	-147.9	-61%	-427.4	603.8	+45%	+186.4	-13%	-93.1
	Motorized Only [2]	672.5	345.6	-49%	-327.0	182.9	-47%	-162.7	-73%	-489.7	558.1	+61%	+212.5	-17%	-114.5

[1] Miles of routes available to the public for all types of vehicles, & hiking & horseback travel, & includes county roads
[2] Miles of motorized routes only that would be available
[3]Change from Alternative 1 in routes that would be available
[4]Change from Alternative 2 in routes that would be available

Migratory Birds

Impacts Common to all Alternatives

There would continue to be routes of all types at varying levels in all alternatives. Thus, implementing any alternative would continue to have some degree of impacts to migratory bird populations and habitat from motorized and non-motorized mechanized travel, in the form of habitat fragmentation, changes to patch size, edge to interior ratio, and barriers to movement, the facilitation of invasions of non-native and/or opportunistic species, species or habitat mortality rates, noise, and other disturbance factors.

Impacts Common to Alternatives 2, 3 and 4

Changing the existing OHV designations in Alternative 1 to "Limited to Designated Routes Seasonally or Yearlong" would prohibit all cross-country travel within the planning area, eliminating additional user created routes, and greatly reducing impacts to migratory bird species and habitat, especially by largely eliminating additional destruction of ground nesting bird nests and soil and vegetation disturbances to the migratory bird habitat types in Table 9 and Table 41. Implementing the travel management plans in Alternatives 2, 3, and 4 would also enhance these habitats for migratory birds by proposing varying degrees of closures and rehabilitation of existing routes through migratory bird habitat types, as well as from other actions that would be taken, such as implementing conditions of use on travel. Combined, the proposals in these alternatives would result in major improvements to migratory bird species and habitat types by reducing habitat fragmentation, improving patch size, edge to interior ratios, and barriers to movement, the facilitation of invasions of non-native and/or opportunistic species, species or habitat mortality rates, noise, and other disturbance factors. Administrative routes were not considered in the analysis of impacts because of the infrequency of use that would occur.

Impacts from Alternative 1

Implementing this alternative would result in the continuation of additional user created routes being created throughout the planning area, due to the anticipated population growth and increase in the demand for access to public lands in the planning area by motorized and non-motorized uses. Combined with the existing levels of soil and vegetation disturbance (approximately 1,523 acres), the incremental increase in the number of miles of routes in this alternative would result in major effects over the life of this analysis period to migratory bird habitat by increasing or worsening current habitat fragmentation, patch size differences, changes in edge to interior ratios and barriers to movement, the facilitation of invasions of non-native and/or opportunistic species, species or habitat mortality rates, noise, and other disturbance factors.

Impacts from Alternative 2

Impacts to migratory birds and their habitat would be greatly reduced in this alternative by changing OHV designations, eliminating all cross country, off-route, motorized and non-motorized mechanized travel, closing and rehabilitating routes, limiting this travel to specific designated routes seasonally or yearlong, and implementing the other actions in this alternative.

The primary benefit of this alternative would occur by the prohibition on all cross country travel using motorized vehicles or mechanized vehicles, which would eliminate the creation of new user created routes throughout the planning area. This action would prevent the incremental increase in new disturbances to soils and vegetation in migratory bird habitat. The 1,523 acres of soil and vegetation disturbance occurring from existing routes within all migratory bird habitat types would be reduced by approximately 40%, or approximately 608 acres, by closing 279.5 miles of existing routes (40% of existing mileage) and permitting rehabilitation to occur. See Table 9 for more detail. Overall, compared to the approximately 700 miles of existing routes currently available for all forms of travel in Alternative 1, Alternative 2 reduces the total number of miles that would be designated and available for motorized and non-motorized mechanized travel by 325 miles, a 46% reduction. The number of miles that would be available in this alternative for motorized travel only across all habitats would be reduced by 49%, or 327.0 fewer miles that in Alternative 1. The greatest proportion of all designated routes in this alternative would traverse the sagebrush, pinyon-juniper and grassland habitat types. Reductions in this alternative in the number of miles of all types of existing routes in the sagebrush habitat would be 43%, or 117.4 miles; reductions of 33%, or 63.3 miles in the pinyon-juniper habitat, and reductions of 47%, or 54.2 miles, in the grassland habitat. When considering only the number of fewer miles of motorized routes in this alternative, compared to Alternative 1, the following reductions of miles would occur in certain habitat types: sagebrush -50%, or 136.9 fewer miles; pinyon-juniper -47%, or 85.6 fewer miles; and grassland -51%, or 56.4 fewer miles).

In this alternative, major improvements in land health and all disturbance factors affecting migratory bird species and habitat would occur (habitat fragmentation, patch size, edge to interior ratio, barriers to movement, facilitation of invasions of non-native and/or opportunistic species, mortality rates, and noise and other disturbance factors). The improvements would occur as the result of changing existing OHV designations, prohibiting all cross country motorized and mechanized travel, closing some routes, implementing conditions of use on routes, such as limiting travel to hiking or horseback use on some routes, and implementing the other actions in this alternative.

Impacts from Alternative 3

Impacts from implementing this alternative would be major and very similar in nature and degree to those in Alternative 2.

The 1,523 acres of soil and vegetation disturbance occurring from existing routes within all migratory bird habitat types would be reduced by approximately 53%, or approximately 800 acres, by closing approximately 369 miles of existing routes (53% of existing mileage) and permitting rehabilitation to occur. The total number of miles that would be designated and available for motorized and non-motorized mechanized travel would be reduced by 477 miles, a 68% reduction. Compared to Alternative 1 (Table 9), implementing this alternative would result in a reduction in available miles of all route types of 61%, or 427.4 miles, and a general decrease in levels of disturbance and habitat fragmentation to migratory bird species and their habitat. Similar to the reductions in Alternative 2, the greatest proportion of all designated routes in this alternative would traverse the sagebrush, pinyon-juniper and grassland habitat types. Reductions in the number of miles of all designated route types in the sagebrush habitat would be 66%, or 183.2 fewer miles; reductions of 56% or 109.2 fewer miles in the pinyon-juniper habitat, and reductions of 61%, or 69.8 fewer miles, would occur in the grassland habitat. The greatest changes in the number of miles of available designated motorized and

mechanized routes between Alternative 2 and Alternative 3 occurred in shrub/grass/forb (-73%, 0.7 fewer miles), mountain shrub (-46%, 1.1 fewer miles) and rangeland (-42%, 0.3 fewer miles) habitat typess. Considering designated motorized routes only, the greatest changes would occur in shrub/grass/forb (-80%, 0.8 fewer miles), pinyon-juniper (-53%, 50.5 fewer miles), and mountain shrub (-52%, 1.1 fewer miles) habitat types.

Impacts from Alternative 4

Impacts from implementing this alternative would be very similar in nature and degree to those in Alternative 2 as a result of prohibiting all cross country motorized and non motorized mechanized travel, even considering the differences in the number of miles of designated routes in this alternative.

The 1,523 acres of soil and vegetation disturbance occurring from existing routes within all migratory bird habitat types would be reduced by approximately 37%, or approximately 260 acres, by closing 118 miles of existing routes (17% of existing mileage) and permitting rehabilitation to occur. In general, existing levels of soil and vegetation disturbance and habitat fragmentation from implementing this alternative would be much less than those from Alternative 1 and more than in Alternative 2 (45% more available miles of all types of routes, or, 186.4 more miles). See Table 9 for more detail.

The greatest decreases in the total number of miles of existing routes between Alternatives 1 and 4 are within shrub/grass/forb (-22%, 0.4 fewer miles), sagebrush (-17%, 46.1 fewer miles) and desert shrub (-15% 13.9 fewer miles) habitat types. In this alternative, for designated motorized routes only, the greatest decreases in the number of existing miles in Alternative 1 would occur within the ponderosa pine (-33%, 0.1 fewer miles), agriculture (-31%, 1.4 fewer miles) and barren/rock (-27% 0.6 fewer miles) habitat types.

Comparing Alternative 4 to Alternative 2, increases in the number of miles of available, existing routes would occur within the grassland (+63%, +38.1 miles), shrub/grass/forb (+53%, +0.6 miles), and desert shrub (+48%, +25.5 miles) habitat types. Comparing Alternatives 4 and 2, for motorized routes only, the greatest increases in the number of miles of available designated routes would occur within the ponderosa pine (+100%, +0.1 miles), riparian (+89%, +0.8 miles) and grassland (+68%, +36.8 miles) habitat types.

Impacts to Migratory Bird species and habitats from implementing Alternative 4 would generally be less than those from implementing Alternative 1. However, more miles of routes would be available to the public for all types of vehicles, hiking & horseback travel within and through the riparian habitat type. This would occur as a result of the proposed Roubideau hiking and horseback trail in the Camel Back Wilderness Study Area.

Cumulative Effects

In addition to growth in recreational travel, other reasonably foreseeable actions that could effect migratory bird habitat over the next 10 years on private and public lands include residential growth, new road construction on private lands, fuels reduction projects, utility corridor maintenance and upgrades, and new buried utility rights-of-way. Activities on public lands in the travel planning area

that could also potentially impact migratory bird habitat and require mitigation include Forest Service planning and projects, Uncompahgre Plateau Project activities, local land use planning, soil research, BLM Uncompahgre Field Office Resource Management Plan revision, vegetation treatments, continued population growth, county road upgrades, special recreation permits and activities, and utility rights of way and corridors. Some of these activities may benefit migratory birds and their habitat. Refer to the main Cumulative Impacts section of this document for a more detailed description of these activities and their potential impacts.
The cumulative impacts from these activities to migratory bird habitat from all action alternatives will be long-term and most adverse in Alternatives 1 and 4, dispersed and long-term in Alternatives 2 and 3.

NATIVE AMERICAN RELIGIOUS CONCERNS

Native American religious concerns center around the landscape concept and traditional cultural property, defined as:

"....one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in the community's history, and (b) are important in maintaining the continuing cultural identity of the community" (NRB 38:1).

McBeth (1999) identifies traditional cultural properties (TCPs) as locations where wild foods or medicines are gathered, or are landforms associated with aboriginal traditions or beliefs. She also notes that locations with "intangible spiritual attributes" (ISAs) and contemporary use areas (CUAs) are known in Colorado.

Unless specifically identified by Native Americans, many TCPs, ISAs and CUAs are extremely difficult or impossible for a field archaeologist to recognize. Such sites, often considered sacred, include mountain tops, waterfalls, river and trail confluences, the headwaters of streams, ecotones, clay sources, "origin places", anthropomorphic and zoomorphic rock formations and springs. More readily identifiable are rock art, sweat baths, battle sites, sun dance arbors, vision quest sites, and medicine wheels (McBeth 1999: 342-345).

In compliance with regulations interpreting the National Historic Preservation Act of 1966, amended 1992, specifically 36 CFR 800.2(c)(3)(i)-(vi), BLM consulted Indian tribes that might have an interest in the planning area including the Northern Ute Tribe, the Southern Ute Tribe and the Ute Mountain Ute Tribe. Officials from the Northern Ute Tribe have an expressed interest in the Uncompahgre area, and the tribe's cultural office has been engaged in ongoing conversation. In addition, the tribe will assist the BLM in determining appropriate mitigation and treatment procedures for adversely affected historic and traditional cultural properties.

Environmental Consequences

Impacts from Alternative 1

Native American Religious Concerns

Sites of Native American Religious Concern are impacted in many different ways depending on their proximity to existing routes. In some cases, these properties correspond with known historic and prehistoric sites, though this correlation is by no means automatic. Until site specific surveys are completed, the extent of TCP's and impacts would remain unknown. Under this alternative, impacts to TCPs and Sacred sites would continue at current levels, and no inventory work would be scheduled to identify and/or mitigate potential impacts.

Impacts from Alternative 2

The impacts from implementing this alternative would be similar to those from implementing Alternative 1, except that the impacts would be restricted to designated routes, and the potential impacts to both documented and undocumented TCP's and Sacred Sites would be decreased due to the lower number of available designated routes and the closure of certain routes into sensitive areas. Prohibiting cross-country travel would greatly reduce the potential for impacts to previously un-impacted properties, and reduce the impacts to sites currently being impacted. Under this alternative, some segments of some existing routes would remain available for motorized and mechanized use, and impacts currently occurring would continue at current levels.

Overall, under Alternative 2, the potential impacts to sites of Native American Religious Concern would be lessened due to the lesser number of available routes and the closure of some routes into sensitive areas.

Impacts from Alternative 3

The potential impacts from implementing this alternative to eligible properties would be considerably fewer than from implementing Alternative 1, and would be somewhat fewer than under Alternative 2 , due to the smaller number of designated routes and limitation of routes to specialized or permitted travel. Continued impacts to currently impacted sites would be reduced or eliminated.

Impacts from Alternative 4

The potential impacts would be higher than Alternative 2 due to the greater number of designated routes. Some level of reduction in impacts would be realized due to restriction on types of travel allowed on certain designated routes. Overall, greatly fewer properties would be impacted under this alternative than under the current conditions due to the designation of the area as closed to cross-country travel and limiting all travel to existing routes.

Cumulative Effects

Cumulative effects on sites of Native American religious concern cannot be specifically identified until cultural resources inventories are completed and such locales have been identified. In general, however, erosion caused by vehicle travel, depending on its proximity to a site, could have long-term negative impacts on both buried sites as well as those with surface phenomena. The introduction of routes into an area might also increase the potential for vandalism and looting.

THREATENED, ENDANGERED, AND SENSITIVE SPECIES (includes finding on Standard 4)

Within the planning area, there are several species listed as threatened or endangered, as well as species that are candidates for listing under the Endangered Species Act (as amended). A list of those federally listed species evaluated for this document, is located in the Uncompahgre Field Office (UFO). Based on this list, the inventory data maintained by the UFO, Colorado Division of Wildlife Natural Diversity Information Source (NDIS) and inventory data available from the Colorado Natural Heritage Program (CNHP), the special status species shown in Table 10 below are found or are potentially found within the analysis area.

Table 10

Potential Special Status Species - Dry Creek Travel Management Planning Area

Common Name	Scientific Name	Status[1]	Occurrence	Within Species Range	Occupied or Potential Habitat	Designated Critical habitat	Species Present
Clay-Loving Wild Buckwheat	*Eriogonum pelinophilum*	FE	Not known in the area, confined to nearby Mancos Shale badlands.	Y	N	N	N
Black-footed Ferret	*Mustela nigripes*	FE, SE	Not known to occur, but prairie dog host is present in the analysis area.	Y	N	N	N
Bonytail Chub	*Gila elegans*	FE, SE	Occupied and critical habitat downstream of analysis area in Colorado R.	Y	Y	N	N
Razorback Sucker	*Xyrauchen taxanus*	FE, SE	Occupied and critical habitat downstream of analysis area in the lower Gunnison River.	Y	Y	N	N
Colorado Pikeminnow	*Ptychocheilus lucius*	FE, ST	Occupied and critical habitat downstream of analysis area in the lower Gunnison River.	Y	Y	N	N
Humpback Chub	*Gila cypha*	FE, ST	Occupied and critical habitat downstream of analysis area in Colorado R.	Y	Y	N	N
Canada Lynx	*Lynx canadensis*	FT	Not known to occur, but LAU exists and habitat is adjacent.	Y	Y	N	N
Uinta Basin Hookless Cactus	*Sclerocactus glaucus*	FT	Present within the area at the northern end (Sub-Region A), usually in salt desert shrub communities	Y	Y	N	Y

Table 10

Potential Special Status Species - Dry Creek Travel Management Planning Area

Common Name	Scientific Name	Status[1]	Occurrence	Within Species Range	Occupied or Potential Habitat	Designated Critical habitat	Species Present
Mexican Spotted Owl	*Strix occidentalis*	FT, ST	Not known to occur in the area.	Y	N	N	N
Yellow-billed Cuckoo	*Coccyzus Americanus*	FC, BLMS	Potential habitat along the lower elevation cottonwood gallery riparian communities.	Y	Y	N	P
Gunnison prairie dog[3]	*Cynomys gunnisoni*	FC, BLMS	Montane habitats not found	Y	Y	--	N
Sensitive Birds							
Bald Eagle	*Haliaeetus leucocephalus*	BLMS[2]	Winter foraging and some concentrations along the Uncompahgre River.	Y	W, F	N	W
Peregrine Falcon	*Falco peregrinus anatum*	BLMS	Known to breed in Roubideau Canyon.	Y	Y	--	Y
Ferruginous Hawk	*Buteo regalis*	BLMS	Present during migration, no nesting.	Y	M,W, F	--	M, W, F
Gunnison Sage Grouse	*Centrocercus minimus*	BLMS	May occur in the extreme southeastern end of this area on Sims Mesa. Elsewhere in the area, historic habitat is possible	Y	Y	N	H
Sensitive Mammals							
River Otter	*Lutra canadensis*	BLMS	Not known to occur within the area.	Y	N	--	N
Townsend's Big Eared Bat	*Corynorhinus townsendii*	BLMS	May roost in cliffs in the area; forage throughout the area.	Y	Y	--	P
Spotted bat	*Euderma maculatum*	BLMS	May roost in cliffs in the area; forage throughout the area.	Y	Y	--	P
Big Free-tailed Bat	*Nyctinomops macrotis*	BLMS	PA outside of the known range of the species.	N	N	--	N
Fringed Myotis	*Myotis thysanodes*	BLMS	May roost in cliffs in the area; forage throughout the area.	Y	Y	--	P
Yuma Myotis	*Myotis yumanensis*	BLMS	PA outside of the known range of the species.	N	N	--	N
Sensitive Fish							

Table 10

Potential Special Status Species - Dry Creek Travel Management Planning Area

Common Name	Scientific Name	Status[1]	Occurrence	Within Species Range	Occupied or Potential Habitat	Designated Critical habitat	Species Present
Flannelmouth Sucker	*Catostomas latipinnis*	BLMS	Found in the Uncompahgre River and some tributary streams.	Y	P	--	P
Roundtail Chub	*Gila robusta*	BLMS	Found in the Uncompahgre River and some tributary streams.	Y	P	--	P
Bluehead Sucker	*Catostomus discobolus*	BLMS	Found in the Uncompahgre River and some tributary streams.	Y	P	--	P
Trout, Colorado River cutthroat	*Oncorhynchus clarki pleuriticus*	BLMS	Found in the Uncompahgre River and some tributary streams.	Y	P	--	P
Sensitive Herps							
Midget Faded Rattlesnake	*Crotalus verities concolor*	BLMS	Present in PJ, rocky areas, greasewood/sage and sagebrush/rabbitbrush	Y	P	--	P
Northern Leopard Frog	*Rana pipiens*	BLMS	Ponds and irrigation canals.	Y	Y	--	P
Canyon Tree Frog	*Hyla arenicolor*	BLMS	Major canyon bottoms	Y	Y	--	P
Sensitive Invertebrates							
Great basin silverspot	*Speyeria nokomis nokomis*	BLMS	Found in streamside meadows and open seepage areas with an abundance of violets (*Viola nephrophylla*) in generally desert landscapes.	Y	Y	--	P
Sensitive Plants							
Grand Junction milkvetch	*Astragalus linifolius*	BLMS	Sparsely vegetated habitats. Known occurances in Sub-Regions A and B.	Y	Y	--	Y
San Rafael milkvetch	*Astragalus rafaelensis*	BLMS	Not known in the area, but potential habitat is present. Known occurrence in adjacent area to the southeast.	Y	Y	--	P
Rocky Mountain thistle	*Cirsium perplexans*	BLMS	Not known in the area, but potential habitat is present. Known occurrences	Y	Y	--	P

Table 10
Potential Special Status Species - Dry Creek Travel Management Planning Area

Common Name	Scientific Name	Status[1]	Occurrence	Within Species Range	Occupied or Potential Habitat	Designated Critical habitat	Species Present
			to the east				
Montrose bladderpod	*Lesquerella vicina*	BLMS	Known occurrences in the southern portion of the area.	Y	Y	--	Y
Colorado desert parsley	*Lomatium concinnum*	BLMS	Not known in the area, but potential habitat is present. Known occurrences to the east	Y	Y	--	P
Eastwood monkey-flower	*Mimulus eastwoodiea*	BLMS	Not known in the area, but potential habitat is present. Known occurrences to the northeast	Y	Y	--	P

Y = yes; N = no; A = adjacent; F = foraging habitat; M = Migratory; W = winter; P = possible; H = historically present, current status uncertain

1 Status is as follows: FE = Federally Endangered; FT = Federally Threatened; FP = Federal Proposed for listing; FC = Federal Candidate for listing; BLMS = BLM Sensitive Species
2 On June 28, 2007, Secretary of the Interior Dirk Kempthorne announced the removal of the bald eagle from the list of threatened and endangered species.
3 Gunnison prairie dogs are not currently classified as sensitive by the BLM. However, on February 5, 2008, U.S. Fish and Wildlife Service announced a 12-month finding on a petition to list the Gunnison's prairie dog that determined that montane populations are warranted for listing under the Act but precluded by higher priority actions.

United States Fish & Wildlife Service Species

Six Endangered, three Threatened, and two Candidate species occur on the United States Fish & Wildlife Service (USFWS) list of potential species for Montrose County, Colorado (USFWS 2008) (Table 10). Of the federally listed species, only the Uinta basin hookless cactus is known to occur or is likely to occur. Canada lynx (Threatened), and yellow-billed cuckoo (Candidate) habitat occurs within the area.

Uinta basin hookless cactus is found in the northern portion of the planning area in Sub-Region A. Currently there are approximately 30 miles of routes in Sub-Region A and 2 miles of routes in Sub-Region C that are within ½ mile of known cactus locations (Table 11).

Canada lynx Lynx Analysis Units (LAU) intersect with 25 Mesa, Traver Mesa and Spring Creek LAUs for a total of 596 acres of LAU (Table 11). The Spring Creek LAU contains 50.2 acres of non-habitat at the very southern end of Sub-Region G. Denning/wintering habitat is found adjacent to the area (Sub-Region G) on National Forest lands. 25 Mesa LAU is adjacent to and to the south of Sub-Region A and Traver Mesa LAUs are adjacent to and to the south of Sub-Region B. Neither 25 Mesa nor Traver Mesa LAUs have denning, winter, or linkage habitats within or adjacent to the area. The closest denning, winter, or linkage habitat in these two LAUs is greater than 1.5 miles away.

Yellow-billed cuckoos have been reported in the nearby North Fork and Nucla areas on several occasions during the last 5 years, but breeding has not been confirmed (Rocky Mountain Bird

Observatory data). Surveys of the lower Gunnison and Uncompahgre Rivers did not find any breeding individuals. Breeding bird surveys also did not confirm breeding in this area. Although the riparian corridor of Roubideau Creek and Dry Creek provides suitable habitat for yellow-billed cuckoo, the species has not been confirmed to nest in the area (Colorado Breeding Bird Atlas, 1998). The planning area does contain potential habitat adjacent to many of the existing routes (Table 11).

White-Tailed Prairie Dogs Although white-tailed prairie dogs are known to occur (see terrestrial wildlife section below), Gunnison's prairie dogs have not been confirmed here from past surveys, and are not believed to be in the area (A. Segland, CDOW, personal communication). Gunnison's prairie dog montane population segments are currently under consideration for listing (i.e., a candidate species) under the Endangered Species Act. Listing at this time is "warranted but precluded" by higher priority actions to amend the lists of endangered and threatened wildlife and plants (USFWS 2008a; Federal Register 2008). Portions of the area have been classified by the USFWS as "montane habitat" for Gunnison's prairie dog. However, this mapping, as intended by USFWS, represents species and population ranges and was not designed for project-level analysis (personal communication with Al Pfister, USFWS). In other words, areas which occur within the mapped montane habitat are not necessarily occupied by Gunnison's prairie dogs. There are three historic prairie dog towns (active 1976; approx. 140 acres) located in Sub-Region E. It appears that fluctuations in prairie dog numbers have resulted in abandonment of historical colonies, and that there has likely been a general reduction in the total number of prairie dogs living in the area. This perception is based on biologist observations and a re-inventory of prairie dog colonies on BLM which were first inventoried in the 1970s and 1980s. This showed most of the original colonies had been abandoned, although no quantitative data analysis has been carried out. It is likely that much of this apparent trend is due to bubonic plague, although other factors such as shooting and habitat fragmentation and development may also have contributed.

Table 11
Potential habitat for Federally Listed species in the Dry Creek Travel Management Planning Area by Sub-Region

		Sub-Region						
Species		A	B	C	D	E	F	G
Uinta Basin Hookless Cactus	Potential Habitat (acres)	19,448.6	10,830.4	8,817.5				
Canada Lynx	LAU (acres)	7.2	0.6	0.0	0.0	0.0	50.2	538.0
	Non-habitat (acres)	0.0	0.0	0.0	0.0	0.0	0.0	66.3
Yellow-billed Cuckoo	Potential habitat (acres) within 1/2 mile of road		60.2	1,797.6	7,637.9	414.0	1,805.2	3,043.8

No other Threatened, Endangered or Candidate species or suitable habitats were detected or known within the area. While the planning area does contain approximately 70 miles of perennial streams, none of the listed fish are expected to be present in these smaller tributaries of the Gunnison River. Bonytail, humpback chub, Colorado pikeminnow and razorback sucker may be found downstream in the Uncompahgre and lower Gunnison Rivers.

Black-footed ferrets depend on prairie dogs for food and shelter. For the UFO, this includes Gunnison's and white-tailed prairie dogs. Based on bioenergetics, the basic requirements for suitable ferret habitat include prairie dog towns 200 acres or greater in size with an average density of 8 active burrows/acre. Some white-tailed prairie dog populations on private lands in the vicinity of the area appear to be thriving, but not on public lands. In general, prairie dog communities have either been abandoned or reduced in size in or in the vicinity of the area over the past 10 years. There have been no recorded black-footed ferret sightings anywhere in the general area since 1988 when one was reported north of Ridgway (CNHP data). It is unlikely black-footed ferrets could survive due to the small size of extant prairie dog locations. The black-footed ferret is believed to have been extirpated from the nearby area.

No habitat exists for the **Mexican spotted owl** or the **clay-loving wild buckwheat**; therefore this species will not be addressed.

BLM Sensitive Species

From early December through early April, wintering **bald eagles** forage throughout the region. Helicopter and ground surveys, conducted by BLM in the early 1980's, did not locate communal night roost sites within this area. There are no known nest sites on public land. Winter range for the bald eagle is essentially the entire area. There is no winter concentration or communal roost habitat.

Two **peregrine falcon** nest sites exist in lower Roubideau Canyon. These nests are the only known nests in the region; however, there is additional suitable habitat in other portions of the canyon. It is possible that more nest sites are located in Roubideau Canyon, but have not yet been detected. There are currently approximately 4 miles of routes within ½ mile of the known peregrine sites, and approximately 9.4 miles of routes within ½ mile of potential cliff habitat.

Ferruginous hawks are known to occur in the region during migration, but there is no evidence that this species nests or over-winters here. Ferruginous hawks forage in open country, primarily prairies, plains and badlands; sagebrush, saltbush-greasewood shrubland, periphery of pinyon-juniper and other woodland, desert.

Historic and potential habitat for the **Gunnison sage grouse** exists. Sage grouse habitat is located in the Sims Mesa area, in the southern portion of the planning area. Sims Mesa was historically active habitat for the sage grouse, but the current status in unknown. Very little to no current use by grouse is suspected based on recent work by CDOW. There are approximately 380.3 acres of potential Gunnison sage grouse habitat within Sub-Region F.

Sensitive bat species, **Townsend's big-eared bat**, **spotted bat** and **fringed myotis**, are expected to roost in the cliffs and forage broadly feeding on insects and utilizing the existing water resources of the area.

Roundtail chub is the only sensitive fish species known within the area (Roubideau Creek). **Flannelmouth sucker**, **bluehead sucker** and **Colorado River cutthroat trout** may also be present but have not been confirmed. There are potentially 70 miles of perennial stream habitat

available for sensitive fish habitat (Table 12). Non-native fish are present in Roubideau Creek and the East and West forks of Dry Creek, and may impact the ability of special status fish to utilize this river system. Roundtail chub has been negatively impacted by the incision of stream channels in the area, and the establishment of tamarisk and Russian knapweed. Upstream water diversions and livestock grazing impacts on the lower portion of Roubideau Creek are potentially impacting sensitive fish (BLM 1995).

Table 12.
Miles of stream by Sub-Region in the Dry Creek Travel area

Sub-Region	*Intermittent*	*Perennial*	*Artificial**	*Grand Total*
A	76.9	22.8	0.5	100.2
B	22.4	18.8	0.04	41.2
C	159.8		1.0	160.7
D	85.1	21.8	0.3	107.2
E	27.0	0.3		27.3
F	55.6		0.4	55.9
G	28.9	6.6	0.1	35.6
Grand Total	455.6	70.2	2.3	528.2

*(e.g., flowline thru river)

Midget faded rattlesnakes, **canyon tree frogs**, **northern leopard frogs** and **Great Basin silverspot butterfly** may be present, but no population health or trend data is available. The distribution of midget faded rattlesnakes is uncertain and may or may not be present. There is potentially 70 miles of perennial and 455 miles of intermittent stream habitat available for canyon tree frog, northern leopard frog and Great Basin silverspot butterfly habitat (Table 12)

San Rafael milkvetch may only be found in the southern portion in Sub-Regions C-G). **Grand Junction milkvetch** and **Eastwood monkey-flower** may only be found in the northern portion in Sub-Regions A and B. **Rocky Mountain thistle, Montrose bladderpod,** and **Colorado desert parsley** are expected. There are 21 known locations of Grand Junction milkvetch within Sub-Regions A and B.

Environmental Consequences

Impacts Common to All Alternatives

Ecosystems of the west are especially vulnerable to OHV-related activities on unpaved (gravel or dirt) routes due to the travel effects on soils and vegetation, which may take centuries to recover (Webb, 1982; Lovich and Bainbridge, 1999). Impacts of OHV activities on wildlife and their habitats are numerous and well documented (Ouren 2007). Networks of routes fragment habitat, reduce patch size, and increase the ratio of edge to interior. This may have serious consequences for sensitive species (those that cannot carry out certain aspects of their life cycles without large blocks of habitat or corridors linking habitat patches), predator-prey relationships, and overall population dynamics. In particular, fragmentation and edges created by OHV routes may have strong effects on animal movement patterns. Precluding or inhibiting animal movements effectively diminishes dispersal to and re-colonization in other areas, thus increasing the likelihood of local extirpations. Overall, studies demonstrate that even narrow routes (paved and

unpaved) can represent major barriers to movement of animals. Reluctance to cross even narrow trails similar in width to routes created by OHV travel may alter or preclude the movements of various species. The cumulative effects of OHV-route networks proliferating across the landscapes may have serious ecological consequences for species reluctant to cross OHV routes.

OHV routes also generate conditions unlikely to occur in environments unaffected by OHV activity; in turn, these conditions can facilitate range extensions and invasions of non-native and/or opportunistic species. OHVs can contribute directly to mortality (and possible population declines) of wildlife species through direct collisions with vehicles, nest destruction, and collapsing of burrows. Noise generated by OHVs may alter animal behaviors, breeding populations, the abilities of some species to detect predators (through auditory cues), and can stimulate estimating animals to emerge from their underground burrows at inappropriate times. Noise, lights, and other disturbances associated with OHV activities also have the potential for eliciting stress responses from a broad spectrum of wildlife taxa. Indeed, studies have shown that ungulates, birds, and reptiles all experience accelerated heart rates and metabolic function during disturbance events; in turn, animals may be displaced and experience reproductive failure and reduced survivorship.

Direct wildlife mortality can result from vehicular impact, removing individuals from populations; thus, habitats containing routes may represent population sinks for any species that commonly attempts to move from one habitat fragment to another by crossing routes. If mortality rates exceed rates of reproduction and immigration, wildlife populations decline (Beier, 1993; Bruinderink and Hazebrook, 1996; Moore and Mangel, 1996; Forman and Alexander, 1998). Mortality rates vary widely according to habitat and road or route characteristics. Even where the frequency of wildlife mortality is relatively low most of the year, it may increase during certain seasons or when traffic frequency increases. Furthermore, population dynamics can be altered if low mortality rates nonetheless cause disproportionate mortality among specific sex and/or age classes. Another indirect effect of OHV activity on wildlife mortality is the proliferation of routes that provide greater access to remote places by hunters, poachers, and people seeking several forms of non-consumptive recreation, including flushing animals off nests; unnecessary energy expenditures; and displacement of animals from food, shelter, and other vital resources.

In summary, OHV activities may have effects to wildlife, fish and plant populations in the following areas: habitat fragmentation, patch size, edge to interior ratio, barriers to movement, facilitation of invasions of non-native and/or opportunistic species, mortality rates, noise and other disturbance factors. Measuring indicators of all these factors for the numerous species of interest would be an excessively difficult task. In addition, for most of the species of interest, the relationships between these factors and population dynamics are not well understood. Because of these difficult to measure potential impacts to sensitive wildlife and plant populations, we assume that any reduction in routes, or reduction in class of use (from motorized to non-motorized) would in general improve wildlife, fish and plant habitats in the area.

Because distributions of sensitive plants are poorly understood, BLM has made the assumption, based on CNHP data, that San Rafael milkvetch may be found within Sub-Regions C, D, E, F and G, Grand Junction milkvetch and Eastwood monkey flower may be found within Sub-

Regions A and B; and Rocky Mountain thistle, Montrose bladderpod, and Colorado desert parsley may be found throughout the Dry Creek area. For this analysis BLM quantified and compared the change in miles of routes between Alternative 1 and Alternative 2, between Alternative 2 and Alternatives 3 and 4 (see Table 13). To look at impacts to native fish, BLM quantified changes in number of stream crossings by alternative.

Table 13
Change in Route Densities by Alternative for Threatened, Endangered, Candidate or Sensitive Species

Species and Units of Measure	Route Types	Alternative 1 Desig. Routes[3]	Alternative 2			Alternative 3					Alternative 4				
			Desig. Routes[3]	Δ 1[4]		Desig. Routes[3]	Δ 2[5]		Δ 1[4]		Desig. Routes[3]	Δ 2[5]		Δ 1[4]	
				%	Miles		%	Miles	%	Miles		%	Miles	%	Miles
Uinta Basin Hookless Cactus known occurrences (miles)	All[1]	52.6	31.9	*-39%*	-20.7	31.0	*-3%*	-0.9	*-41%*	-21.6	42.1	*+32%*	+10.2	*-20%*	-10.5
	Motorized Only[2]	52.6	29.0	*-45%*	-23.6	19.8	*-32%*	-9.2	*-62%*	-32.8	36.9	*+27%*	+7.9	*-30%*	-15.7
Canada Lynx LAU (miles)	All[1]	1.26	1.25	*-1%*	-0.01	1.25	*0%*	0	*-1%*	-0.01	1.25	*0%*	0	*-1%*	-0.01
	Motorized Only[2]	1.25	0.92	*-26%*	-0.33	0.02	*-98%*	-0.9	*-98%*	-1.23	1.25	*+36%*	+0.33	*0%*	0
Yellow-billed Cuckoo potential habitat (miles)	All[1]	97.0	64.7	*-33%*	-32.3	38.3	*-41%*	-26.4	*-61%*	-58.7	85.5	*+32%*	+20.8	*-12%*	-11.5
	Motorized Only[2]	97.0	54.8	*-43%*	-42.2	26.3	*-52%*	-28.5	*-73%*	-70.7	82.9	*+51%*	+28.1	*-14%*	-14.1
Peregrine Falcon known sites (miles of routes w/in ½ mile of known sites)	All[1]	4.0	2.8	*-30%*	-1.2	2.7	*-5%*	-0.1	*-33%*	-1.3	4.4	*+56%*	+1.6	*+8%*	+0.4
	Motorized Only[2]	2.1	1.2	*-43%*	-0.9	0.0	*-100%*	-1.2	*-100%*	-2.1	1.8	*+47%*	+0.6	*-16%*	-0.3
Peregrine Falcon potential habitat (miles of routes w/in ½ mile of habitat)	All[1]	8.6	7.2	*-16%*	-1.4	6.8	*-7%*	-0.4	*-21%*	-1.8	8.8	*+22%*	+1.6	*+3%*	+0.2
	Motorized Only[2]	7.2	4.0	*-45%*	-3.2	1.5	*-61%*	-2.5	*-79%*	-5.7	6.9	*+75%*	+2.9	*-4%*	-0.3
Gunnison Sage Grouse potential habitat (miles)	All[1]	2.9	2.2	*-25%*	-0.7	2.4	*+12%*	+0.2	*-17%*	-0.5	2.6	*+20%*	+0.4	*-10%*	-0.3
	Motorized Only[2]	2.9	0.1	*-97%*	-2.8	0.1	*0%*	0.0	*-97%*	-2.8	2.6	*+2600%*	+2.5	*-10%*	-0.3
Cutthroat Trout (HUC) (miles)	All[1]	698.9	418.7	*-40%*	-280.2	270.7	*-35%*	-148.0	*-61%*	-428.2	605.3	*+45%*	+186.6	*-13%*	-93.6
	Motorized Only[2]	674.5	347.1	*-49%*	-327.4	183.9	*-47%*	-163.2	*-73%*	-490.5	559.5	*+61%*	+212.4	*-17%*	-115.0
Native Fish Units are number of perennial stream crossings)	All[1]	84	87	*+4%*	+3	68	*-22%*	-19	*-19%*	-16	133	*+53%*	+46	*+58%*	+49
	Motorized Only[2]	24	10	*-58%*	-14	6	*-40%*	-4	*-75%*	-18	22	*+120%*	+12	*-8%*	-2
Amphibians (Units are number of intermittent and perennial stream crossings	All[1]	881	420	*-52%*	-461	262	*-38%*	-158	*-70%*	-619	789	*+88%*	+369	-10%	-92
	Motorized Only[2]	799	348	*-56%*	-451	158	*-55%*	-190	*-80%*	-641	666	*+91%*	+318	-17%	-133
San Rafael milkvetch in Sub-Regions C, D, E, F, & G (miles)	All[1]	589.3	346.2	*-41%*	-243.1	209.1	*-40%*	-137.1	*-65%*	-380.2	502.9	*+85%*	+156.7	-15%	-86.4
	Motorized Only[2]	589.2	311.0	*-47%*	-278.2	165.1	*-47%*	-145.9	*-72%*	-424.1	491.6	*+105%*	+180.6	-17%	-97.6
Grand Junction	All[1]	109.5	72.6	*-34%*	-36.9	61.6	*-15%*	-11.0	*-44%*	-47.9	102.6	*+56%*	+30.0	-6%	-6.9

milkvetch, Eastwood monkey flower in Sub-Regions A and B (miles)	Motorized Only[2]	85.3	36.0	*-58%*	-49.3	18.8	*-48%*	-17.2	*-78%*	-66.5	67.9	*+136%*	+31.9	-20%	-17.4
Rocky Mountain thistle, Montrose bladderpod, Colorado desert parsley throughout PA, no routes for this category (miles)	All[1]	698.9	418.7	*-40%*	-280.2	270.7	*-35%*	-148.0	*-61%*	-428.2	605.3	*+80%*	+186.6	*-13%*	-93.6
	Motorized Only[2]	674.5	347.1	*-49%*	-327.4	183.9	*-47%*	-163.2	*-73%*	-490.6	559.5	*+108%*	+212.4	*-17%*	-115.0

[1] Routes available for motorized and non-motorized uses located within 1/4 mile of species, habitat, or occurrences
[2]Routes available for motorized use only
[3] Miles of designated routes or other units of measure (see units under "Species" column) - includes county roads
[4] Percent change from Alternative 1. Units are either miles or stream crossings
[5] Percent change from Alternative. Units are either miles or stream crossings

There would continue to be routes at varying mileage levels in all alternatives. Thus, all alternatives would continue to have varying degrees of impacts to wildlife, fish and plant populations from activities relative to habitat fragmentation, patch size, edge to interior ratio, barriers to movement, facilitation of invasions of non-native and/or opportunistic species, mortality rates, noise and other disturbance factors.

Impacts Common to Alternatives 2, 3, and 4

Changing the existing OHV designation to "Limited to Designated Routes Seasonally or Yearlong", thereby eliminating all cross country vehicular travel by restricting motorized and non-motorized travel to specific designated routes, and adopting a plan for travel management, would greatly reduce existing and potential impacts to these sensitive resources. Sensitive plants are generally not located on existing routes. By limiting travel to specific, designated routes, incidental crushing of sensitive plants adjacent to existing routes would be greatly reduced.

Impacts from Alternative 1

Existing routes and management would continue along with existing levels of associated resource disturbance and habitat fragmentation. New user-created routes would continue potentially further impacting habitat and/or the species in Table 13 relative to habitat fragmentation, patch size, edge to interior ratio, barriers to movement, facilitation of invasions of non-native and/or opportunistic species, mortality rates, noise and other disturbance factors. Routes would continue to cross perennial streams at 84 stream crossings (See Water Quality section for potential effects to sediment loads).

Federally Listed Species:
Motorized and non-motorized uses would continue on public lands, on routes and cross-country, that cut through Federally listed Uinta Basin hookless cactus (52.6 existing miles), Canada lynx (1.26 existing miles), and yellow-billed cuckoo (97 existing miles) habitat.

Sensitive Species:
The current motorized and non-motorized activity would also affect peregrine falcon known (4 miles of existing, affecting routes) and potential cliff habitat (8.6 miles of existing, affecting routes), Gunnison sage grouse (2.9 existing miles in potential habitat), and Cutthroat trout (698.9 existing miles of affecting routes) habitat (Table 13). Existing routes would continue to affect native fish habitat in perennial streams at 84 crossings and amphibian habitat in perennial and intermittent streams at 881 crossings. See Water Quality section for potential effects to sediment loads.

Existing motorized and non-motorized routes would continue to cross or traverse San Rafael milkvetch (589.3 existing miles), Grand Junction milkvetch/Eastwood monkey flower (109.5 existing miles), and Rocky Mountain thistle/Montrose bladderpod/Colorado desert parsley (698.9 existing miles) habitat.

Impacts from Alternative 2

Existing levels of disturbance and habitat fragmentation would be reduced in varying degrees,

because of the large reductions in miles of existing routes through listed and sensitive species habitat that would be designated and available for motorized and non-motorized travel. By reducing overall motorized and non-motorized route mileages, limiting use to designated routes, and changing permitted uses on some routes to non-motorized travel only, effects from habitat fragmentation, patch size, edge to interior ratio, barriers to movement, facilitation of invasions of non-native and/or opportunistic species, mortality rates, noise and other disturbance factors would reduce impacts to wildlife, fish and plants (Table 13).

Federally Listed Species:
New routes would not be established or constructed through habitat for federally listed species. Implementing the travel management plan in this alternative would have no adverse effect on the Threatened Uinta hookless cactus, or Canada lynx, and would not contribute toward the need to list the Candidate yellow-billed cuckoo. Reducing the number of existing motorized and non-motorized routes by a total of approximately 80 miles or an average of 47%, through habitat for these three listed species would result in a large reduction in potential impacts from OHV activities.

Compared to Alternative 1 – No Acton, Alternative 2 would result in large reductions in the number of miles of existing routes that pass through Uinta Basin hookless cactus (-39% or 20.7 fewer miles), Canada lynx LAU (-1%, or 0.01 fewer miles), and yellow-billed cuckoo (-33% or 32.3 fewer miles) habitat (Table 13). Considering only the number of miles of motorized routes that would be designated in this alternative, there would be even larger reductions in the number of miles of existing routes that would be available for travel through Uinta Basin hookless cactus (-45%, 23.6 fewer miles), Canada lynx LAU (-26%, 0.33 fewer miles), and yellow-billed cuckoo (-43%, 42.2 fewer miles) habitat.

Sensitive Species:
Alternative 2 would generally have a beneficial impact on BLM Sensitive species. There may still be impacts to individual BLM Sensitive species, but implementing this alternative would not likely result in a trend toward federal listing or loss of viability, or would not greatly or adversely impact the continued existence of a BLM Sensitive species.

Compared to Alternative 1 – No Acton, Alternative 2 would result in reductions in the number of miles of existing routes that pass through peregrine falcon known (-30%, or 1.2 fewer miles) and potential (-16%, or 1.4 fewer miles) habitat, Gunnison sage grouse (-25%, or 0.7 fewer miles), Cutthroat trout (-40%, or 280.2 fewer miles), and amphibian (-52%, or 461 fewer stream crossings) habitat (Table 13). This alternative would result in slight increases in the number of stream crossings in native fish habitat, compared to Alternative 1 (+4%, or 3 more stream crossings); however when considering stream crossings along motorized routes only, there would be a large decrease in the number of crossings (-58%, or 14 fewer crossings) from Alternative 1 to Alternative 2 (See Water Quality section for potential effects to sediment loads).

Compared to Alternative 1 – No Acton, Alternative 2 would result in reductions in the number of miles of existing routes that pass through San Rafael milkvetch (-41%, or 243.1 fewer miles), Grand Junction milkvetch/Eastwood monkey flower (-34%, or 36.9 fewer miles), and Rocky Mountain thistle/Montrose bladderpod/Colorado desert parsley (-40%, or 280.2 fewer miles) habitat from Alternative 1. In this alternative, there would be even larger reductions in the

number of existing miles of motorized routes that would be available and designated and that would pass through San Rafael milkvetch (-47%, or 278.2 fewer miles), Grand Junction milkvetch/Eastwood monkey flower (-58%, or 49.3 fewer miles) and Rocky Mountain thistle/Montrose bladderpod/Colorado desert parsley (-49%, or 327.4 fewer miles) habitat types.

Impacts from Alternative 3

By implementing this alternative, the types of disturbance and habitat fragmentation regarding threatened, endangered, and sensitive species would be similar to those from implementing Alternative 2; however, by implementing the Travel Management Plan in this alternative, the adverse impacts to the described species and habitat would be reduced to a greater degree to some species and habitat than from implementing any of the other alternative. The reduction in impacts would result in fewer effects from habitat fragmentation, patch size, edge to interior ratio, barriers to movement, facilitation of invasions of non-native and/or opportunistic species, mortality rates, noise and other disturbance factors would reduce impacts to wildlife, fish and plants.

Federally Listed Species:
Compared to Alternative 1 – No Acton, implementing Alternative 3 would result in large reductions in the number of miles of existing motorized and non-motorized routes that would pass through Uinta Basin hookless cactus (-41%, or 21.6 fewer miles), Canada lynx LAU (-1%, or 1.23 fewer miles), and yellow-billed cuckoo (-61%, or 58.7 fewer miles) habitat. Considering only the number of miles of motorized routes that would be designated in this alternative, there would be even larger reductions in the number of miles of existing routes that would be available for travel through Uinta Basin hookless cactus (-62%, or 32.8 fewer miles), Canada lynx LAU (-98%, or 1.23 fewer miles), and yellow-billed cuckoo (-73%, or 70.7 fewer miles) habitat (Table 13).

Compared to Alternative 2 – Proposed Acton, implementing Alternative 3 would result in no change to Canada lynx LAU (0%, or 0 fewer miles), however would result in additional reductions in the number of miles of motorized and non-motorized routes that would be designated and pass through Uinta Basin hookless cactus (-3%, or 0.9 fewer miles), and yellow-billed cuckoo (-41%, or 26.4 fewer miles) habitat (Table 13). Considering only the number of miles of motorized routes that would be designated in this alternative, there would be even larger reductions in the number of miles of existing routes that would be available for travel through Uinta Basin hookless cactus (-32%, or 9.2 fewer miles), Canada lynx LAU (-98%, or 0.9 fewer miles), and yellow-billed cuckoo (-52%, or 28.5 fewer miles)

Sensitive Species:
Compared to Alternative 1 – No Acton, implementing Alternative 3 would result in reductions in the number of miles of existing motorized and non-motorized routes that pass through peregrine falcon known (-33%, or 1.3 fewer miles) and potential (-21%, or 1.8 fewer miles) habitat, Gunnison sage grouse (-17%, or 0.5 fewer miles), Cutthroat trout (-61%, or 428.2 fewer miles), native fish (19%, or 16 fewer stream crossings), and amphibian (-70%, or 619 fewer stream crossings) habitat. Compared to Alternative 1 – No Acton, implementing Alternative 3 would result in reductions in the number of miles of existing motorized only routes that pass through peregrine falcon known (-100%, or 2.1 fewer miles) and potential (-79%, or 5.7 fewer miles),

Gunnison sage grouse (-97%, or 2.8 fewer miles), Cutthroat trout (-73%, or 490.5 fewer miles), native fish (75%, or 18 fewer crossings), amphibian (-80%, or 641 fewer stream crossings) habitat.

Compared to Alternative 1, implementing Alternative 3 would result in reductions in the number of miles of existing motorized and non-motorized routes that would pass through San Rafael milkvetch (-65%, or 380.2 fewer miles), Grand Junction milkvetch/Eastwood monkey flower (-44%, or 47.9 fewer miles), and Rocky Mountain thistle/Montrose bladderpod/Colorado desert parsley (-61%, or 428.2 fewer miles) habitat. In this alternative, there would be large reductions in the number of existing miles of routes in Alternative 1, that would be available and designated for motorized use only and that would pass through San Rafael milkvetch (-72%, or 424.1 fewer miles), Grand Junction milkvetch/Eastwood monkey flower (-78%, or 66.5 fewer miles) and Rocky Mountain thistle/Montrose bladderpod/Colorado desert parsley (-73%, or 490.6 fewer miles) habitat types.

Implementing Alternative 3 would have similar effects to BLM sensitive species as those from implementing Alternative 2. There would be varying changes in the number of miles of designated and available motorized and non-motorized routes that would pass through peregrine falcon known (-5%, or 0.1 fewer miles) and potential (-7%, or 0.4 fewer miles), Gunnison sage grouse (+12%, or 0.2 more miles), Cutthroat trout (-35%, or 148.0 fewer miles), native fish (-22%, or 19 fewer stream crossings) and amphibian (-38%, or 158 fewer stream crossings). The slight increase in the number of miles of routes in sage grouse habitat would slightly increase the potential disturbance effects for this species for this alternative. In this alternative, compared to Alternative 2, there would be larger reductions in the number of miles of routes that would be available and designated for motorized use only and that would pass through peregrine falcon known (-100%, or 1.2 fewer miles) and potential (-61%, or 2.5 fewer miles), Cutthroat trout (-47%, or 163.2 fewer miles), native fish (-40%, or 4 fewer stream crossings), and amphibian (-55%, or 190 fewer stream crossings) habitat (Table 13).

Compared to Alternative 2, Alternative 3 would result in additional reductions in the number of miles of designated routes that pass through San Rafael milkvetch (-40%, or 137.1 fewer miles), Grand Junction milkvetch/Eastwood monkey flower (-15%, 11.0 fewer miles), and Rocky Mountain thistle/Montrose bladderpod/Colorado desert parsley (-35%, 148.0 fewer miles) habitat. In this alternative, compared to Alternative 2, there would be even larger reductions in the number of miles of routes that would be available and designated for motorized use only and that would pass through San Rafael milkvetch (-47%, or 145.9 fewer miles), Grand Junction milkvetch/Eastwood monkey flower (-48%, or 7.2 fewer miles) and Rocky Mountain thistle/Montrose bladderpod/Colorado desert parsley (-47%, or 163.2 fewer miles) habitat (Table 13).

Compared to Alternative 1, implementing Alternative 3 would result in a reduction of 16 stream crossings affecting native fish habitat, which is three more crossings than would result if Alternative 2 were implemented.

Impacts from Alternative 4

Implementing Alternative 2 would result in far fewer potential impacts to most species and

habitat types when comparing Alternative 4 to Alternative 2 and Alternative 1. By implementing Alternative 4, the types of disturbance and habitat fragmentation regarding threatened, endangered, and sensitive species would be much less overall than that from implementing Alternative 1, and greater in most respects than those from implementing Alternatives 2 and Alternative 3. Implementing the Travel Management Plan in this alternative, compared with implementing Alternative 1, would result in many more non-motorized stream crossings affecting native fish habitat, slightly more miles of routes potentially affecting peregrine falcon nests or potential peregrine falcon habitat, and slightly fewer miles of motorized and non-motorized routes within Gunnison sage grouse habitat. Compared to implementing Alternative 2, impacts to all habitat types would be greater in this alternative in varying amounts and degrees. These differences in impacts would result in more effects to wildlife, fish and plant species and habitat from habitat fragmentation, patch size, edge to interior ratio, barriers to movement, facilitation of invasions of non-native and/or opportunistic species, mortality rates, noise and other disturbance factors.

Federally Listed Species:
Compared to Alternative 1, implementing Alternative 4 would result in varying degrees of reductions in the number of miles of existing motorized and non-motorized routes that would pass through Uinta Basin hookless cactus (-20%, or 10.5 fewer miles), Canada lynx LAU (-1%, or 0.01 fewer miles), and yellow-billed cuckoo (-12%, or 11.5 fewer miles) habitat. Considering only the number of miles of motorized routes that would be designated in this alternative, compared to the miles of existing routes in Alternative 1, there would be no change in Canada lynx LAU (0%, or 0 fewer miles), however there would be larger reductions in the number of miles of existing routes that would be available for travel through Uinta Basin hookless cactus (-30%, or 15.7 fewer miles), and yellow-billed cuckoo (-14%, or 14.1 fewer miles) habitat (Table 13).

Compared to Alternative 2, implementing Alternative 4 would result in increases in the number of miles of designated motorized and non-motorized routes that would pass through Uinta Basin hookless cactus (+32%, or 10.2 more miles), Canada lynx LAU (+45%, or 186.6 more miles), and yellow-billed cuckoo (+32%, or 20.8 more miles) habitat. Compared to Alternative 2 , implementing Alternative 4 would result in varying degrees of increases in the number of miles of motorized only routes that would be designated and pass through Uinta Basin hookless cactus (+27%, or 7.9 more miles), Canada lynx LAU (+61%, or 212.4 more miles), and yellow-billed cuckoo (+51%, or 28.1 more miles) habitat (Table 13). Some of these increases could result in more impacts to listed plant and wildlife habitat and species.

Sensitive Species:
Compared to Alternative 1, implementing Alternative 4 would result in increases in or decreases in the impacts from motorized and non-motorized travel through peregrine falcon known (+8%, or 0.4 more miles), peregrine falcon potential habitat (+3%, or 0.2 more miles), native fish (+58%, or 49 more perennial stream crossings), amphibian (-10%, or 92 fewer perennial and intermittent stream crossing), Cutthroat trout (-13%, or 93.6 fewer affecting miles) sensitive species habitat. These mileage increases would consist of more non-motorized routes for hiking, horseback and bicycle uses that would be designated in these habitat types (See Water Quality section for potential effects to sediment loads). These differences, overall, would result in fewer potential impacts to all habitat types, comparing these two alternatives. Compared to Alternative

1, implementing Alternative 4 would result in reductions of the number of miles of motorized routes passing through peregrine falcon known (-16%, or 0.3 fewer miles), peregrine falcon potential (-4%, or 0.3 fewer miles), Gunnison sage grouse (-10%, or 0.3 fewer miles), Cutthroat trout (-17%, or 115.0 fewer affecting miles), native fish (-8%, or 2 fewer perennial stream crossings), and amphibian (-17%, or 133 fewer perennial stream crossings) habitat (Table 13).

Compared to Alternative 1, implementing Alternative 4 would result in reductions in the number of miles of existing motorized and non-motorized routes that would be designated and that would pass through San Rafael milkvetch (-15%, or 86.4 fewer miles), Grand Junction milkvetch/Eastwood monkey flower (-6%, or 6.9 fewer miles), and Rocky Mountain thistle/Montrose bladderpod/Colorado desert parsley habitat (-13%, or 93.6 fewer miles) sensitive species habitat. Compared to Alternative 1, implementing Alternative 4 would result in reductions in the number of miles of existing motorized only routes that would be designated and pass through San Rafael milkvetch (-17%, or 97.6 fewer miles), Grand Junction milkvetch/Eastwood monkey flower (-20%, or 17.4 fewer miles), and Rocky Mountain thistle/Montrose bladderpod/Colorado desert parsley (-17%, or 115.0 fewer miles) habitat (Table 13).

Compared to implementing Alternative 2, implementing Alternative 4 would result in varying degrees of increases in the number of miles of designated and available motorized and non-motorized routes that would pass through peregrine falcon known (+56%, or 1.6 more miles), potential peregrine falcon (+22%, or 1.6 more miles), Gunnison sage grouse (+20%, or 0.4 more miles), Cutthroat trout (+45%, or 186.6 more affecting miles), native fish (+53%, or 46 more perennial stream crossing), and amphibian (+88%, or 369 more perennial and intermittent stream crossings) sensitive species habitat (Table 13). Compared to implementing Alternative 2, implementing Alternative 4 would result in varying and larger increases in the number of miles of routes that would be available and designated for motorized use only that would pass through peregrine falcon known (+47%, or 0.6 more miles), peregrine falcon potential (+75%, or 2.9 more miles), Gunnison sage grouse (+2600%, or 2.5 more miles), cutthroat trout (+61%, or 212.4 more affecting miles), native fish (+120%, or 12 more perennial stream crossings), and amphibian (+91%, or 318 more stream perennial and intermittent crossing) sensitive species habitat (Table 13).

Compared to Alternative 2, implementing Alternative 4 would result in increases in the number of miles of existing motorized and non-motorized routes that would be designated and pass through San Rafael milkvetch (+85%, or 156.7 more miles), Grand Junction milkvetch/Eastwood monkey flower (+56%, or 30 more miles), and Rocky Mountain thistle/Montrose bladderpod/Colorado desert parsley (+80%, or 186.6 more miles) sensitive species habitat. Compared to Alternative 2, implementing Alternative 4 would result in larger increases in the number of miles of existing motorized only routes that would be designated and pass through San Rafael milkvetch (+105%, or 180.6 more miles), Grand Junction milkvetch/Eastwood monkey flower (+136%, or 31.9 more miles) and Rocky Mountain thistle/Montrose bladderpod/Colorado desert parsley (+108%, or 212.4 more miles) sensitive species habitat (Table 13).

Finding on the Public Land Health Standard for Threatened & Endangered species:
OHV-related activities have impacts to a wide variety of wildlife, fish and plant species.

Networks of routes fragment habitat, reduce habitat patch size, increase the ratio of edge to interior habitat, create barriers to movement of animals, facilitation range extensions and invasions of non-native and/or opportunistic species, and can contribute directly to mortality. Noise generated by OHVs may alter animal behaviors, breeding populations, and abilities of some species to detect predators. Any reduction in routes, especially motorized routes, would improve habitat conditions for many wildlife species. However, because endemic and special status wildlife are typically restricted in their range and have more specific habitat requirements, route reductions in these habitats could have major effects in facilitating the continued existence of these species. The habitat types described in the Affected Environment section of this EA and currently being impacted would be expected to improve under Alternative 2 and Alternative 3.

Generally, Alternative 3, compared to all alternatives, would result in the greatest decrease in number of affecting route miles and densities of all types of routes, for most species types and habitats.

Alternative 4, compared to Alternatives 2 and 3, would result in the fewest reductions in the number of affecting route miles and densities of all types of routes, for most species types and habitats. Comparing Alternatives 2, 3, and 4, Alternative 4 would result in the least amount of potential improvement in species and habitat conditions. Compared to Alternative 2, Alternative 4 would result in greater increases in route miles and density within Gunnison sage grouse, native fish, and sensitive plant habitats. Implementing Alternative 4 would also result in increases in the number of existing route miles and route density within peregrine falcon and native fish habitat.

Under Alternative 1, the opportunity to improve habitat conditions for TES species would be minimal, and these species may continue to decline.

Cumulative Effects

In addition to growth in recreational travel, other reasonably foreseeable actions that could effect T&E habitat over the next 10 years on private and public lands include residential growth, new road construction on private lands, fuels reduction projects, utility corridor maintenance and upgrades, and new buried utility rights-of-way. Activities on public lands in the travel planning area that could also potentially impact T&E habitat and require mitigation include, Forest Service planning and projects, Uncompahgre Plateau Project activities, local land use planning, soil research, BLM Uncompahgre Field Office Resource Management Plan revision, continued population growth, vegetation treatments, county road upgrades, special recreation permits and activities, and utility rights of way and corridors. Some of these activities may benefit special status wildlife, plants, and habitat. Refer to the main Cumulative Impacts section of this document for a more detailed description of these activities and their potential impacts. The cumulative impacts from these activities to T&E habitat from all action alternatives will be long-term and most adverse in Alternative 1 and 4, dispersed and long-term in Alternatives 2 and 3.

WASTES, HAZARDOUS OR SOLIDS

Easy access to Public Lands from Montrose, Delta, Olathe, and other communities and tipping fees charged at legal disposal sites result in some dumping of materials on Public Lands. The dumping is serious in localized areas near population centers but minor in isolated areas; although there is some evidence that frequency of dumping may be increasing. The increase in dumping is probably related more to a growing population in the area than to any other factor. Dumping is typically exempt household solid waste consisting of building materials, furniture, appliances and yard waste. Dumping of hazardous materials occurs less commonly. Dumped materials that may include hazardous waste are typically oil products and remnants of methamphetamine labs (currently remnants of meth labs have not been found in the planning area). Both types of wastes are cleaned up and properly disposed of as an ongoing part of Public Land management.

Environmental Consequences

Impacts Common to All Alternatives

Hazardous and solid waste dumping, including incidental littering, & incidental spills would continue to occur to varying degrees and would be cleaned up & properly disposed of as an ongoing part of BLM land management.

Impacts from Alternative 1

Cross-country travel using motorized vehicles that results in the creation of additional user created routes would permit more opportunity for this unauthorized activity to occur in the planning area. Enforcement demands would continue to grow with the growing population and increase in motorized use. Opportunities for dumping these materials on public lands would increase incrementally as the number of miles of new routes being established increases.

Impacts from Alternatives 2, 3, and 4

New and existing opportunities for dumping of materials on Public Lands would be greatly decreased by eliminating all cross country travel with motorized vehicles, closing some routes and implementing conditions of use on some routes, such as limiting some existing routes to non-motorized vehicles. Enforcement demands would decrease as a result.

See Table 4 for the number of available route miles proposed in each of these alternatives.

Cumulative Effects

Cumulative impacts that would be measurable would not likely occur as a result of implementation of any alternative.

WATER QUALITY/ HYDROLOGY (includes information related to Standard 5)

The Dry Creek Travel area drains to both the Uncompahgre and Lower Gunnison Rivers. Table 14 shows the watershed structure by three hydrologic unit or watershed scale levels, with the 4th level being the largest. Fifth (5th) level watersheds are drainage divisions within 4th level watersheds, as 6th level watersheds are drainage divisions within 5th level watersheds. Additionally, the area is divided into 7 planning Sub-Regions A-G, with each unit having a unique management emphasis. T he boundaries of the planning Sub-Regions cross watershed divides, in some cases down to 4th level, as shown in Table 14.

The planning area is located on the eastern flank of the Uncompahgre Plateau, which is characterized by gently sloping (approximately 4%) mesas, dissected by deeply incised canyons. The watershed areas are typically elongated along the main stem channel axis having relatively narrow valley widths. Drainages commonly flow in a northeasterly direction before entering either the Lower Gunnison or Uncompahgre Rivers. Most of the areas streams exhibit intermittent or ephemeral flow regimes due to the semi-arid climate. The few main stem drainages that headwater at high elevations on the Uncompahgre Plateau and have perennial flow, include: Roubideau, Potter, Dry, and Spring Creeks.

The annual precipitation varies from about 10 inches at the lower elevations along the northeastern boundary to more than 16 inches at the higher elevations along the southwestern area boundary. The larger drainages that headwater at higher elevations, experience high flows from the spring season snowmelt, which can last for several weeks. Base flow in these drainages occurs from late summer through February or March. In all of the areas drainages, high magnitude, short duration flood flows occur in the summer months from localized, high intensity, short duration precipitation events associated with southwest monsoonal air flow. The frequency and magnitude of these events is highly variable from year to year. Because the typical northeast drainage orientation is the same direction as storm travel, and the common watershed size and shape allows for rapid runoff concentration, flood peaks are often amplified.

At present, the planning area has 73 miles of routes that occur within 100 feet of sensitive stream channels (the Water Influence Zone), including 877 stream crossings (Table 17). The 73 existing miles of routes is estimated to equate to 88 acres of soil and vegetation disturbance within this sensitive zone. The entire area is a source water area for downstream domestic and municipal water users. The planning area contains 200 total miles of routes on soils with a severe erosion potential (about 242 acres of disturbed soil). About 34% of the planning area drains to the lower Gunnison River via Roubideau Creek (Table 14), which presently has 249 route channel crossings, 28 miles of routes in the WIZ (34 acres of disturbance), and 59 miles (72 acres of disturbed soil) of routes on soils with a severe erosion potential. The remaining 66% of the area drains to the Uncompahgre River, which presently has 628 route channel crossings, 45 miles of routes (55 acres of disturbed soil) in the WIZ and 141 miles (171 acres of disturbed soil) of routes on soils with a severe erosion potential. The Uncompahgre River joins the lower Gunnison River at Delta, Colorado.

Table 14 Watershed Level Structure and Sub-Region Public Land Acreage by 6th Level Watershed			
4th Level Watershed	***5th Level Watershed (acres)*****	***6th Level Watershed (acres)*****	***Acres in Sub-Regions (acres)*****
Lower Gunnison River (HUC - 14020005)*	Roubideau Creek (37,527)	Cottonwood Creek (443)	A (443)
		Potter Creek (13,603)	A (12,051)
			B (1,552)
		Roubideau Creek (9,140)	A (74)
			B (8,706)
			C (360)
		Unnamed Drainage (14,341)	A (5,476)
			B (411)
			C (8,454)
Uncompahgre River (HUC - 14020006)	Dry Creek (63,481)	Coalbank/Big Sandy (14,692)	C (11,967)
			D (446)
			E (2,279)
		East Fork Dry Creek (22,978)	C (93)
			D (22,481)
			E (258)
			F (146)
		Roatcap Gulch (5,758)	B (1)
			C (5,757)
		Unnamed Drainage (20,053)	D (5,212)
			E (4,315)
			F (9,099)
			G (1,427)
	Spring Creek/Happy Canyon (9,556)	Spring Creek (9,556)	F (2,289)
			G (7,267)

* HUC – Hydrologic Unit Code developed and used by the US Water Resources Council
** Acres of public land managed by the Bureau of Land Management.

Water quality standards are set by the Colorado Water Quality Control Commission (CWQCC) and are applicable to all surface water drainages, including intermittent and ephemeral streams. The water quality classifications and standards applicable to the areas surface waters and downstream receiving streams are contained in the CWQCC's Regulation No. 35 Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins (Colorado Water Quality Control Commission, July 2007) and summarized in Table 15.

Table 15
Water Quality Designations and Classifications for Surface Waters and Major Receiving Streams

4th Level Watershed	*Stream Segment*	*Stream Designation 3*	*Stream Classification 2-5*
Uncompahgre River Watershed	Main stem of Dry Creek below forks to Coalbank Canyon	Use Protected	Aquatic Life Warm 2 Recreation E Agriculture
	East and West Forks of Dry Creek and Spring Creek		Aquatic Life Cold 1 Recreation E Agriculture
	All other tributaries to the Uncompahgre River not listed above, and the Uncompahgre River from LaSalle Road to Confluence park	Use Protected	Aquatic Life Warm 2 Recreation N Agriculture
	Uncompahgre River from Confluence park to mouth	Use Protected	Aquatic Life Warm 2 Recreation E Agriculture
Lower Gunnison River Watershed	Monitor and Roubideau Creeks form the National Forest bdny. to the confluence with Potter Creek		Aquatic Life Cold 1 Recreation E Water Supply Agriculture
	Roubideau Creek from Potter Creek to the mouth		Aquatic Life Cold 1 Recreation E Agriculture
	Other tributaries to the Lower Gunnison not listed above	Use Protected	Aquatic Life Warm 2 Recreation N Water Supply Agriculture
	Gunnison River from the confluence with the Uncompahgre River to the mouth		Aquatic Life Warm 1 Recreation E Water Supply Agriculture

1 The Colorado Water Quality Control Commission designates waters of the state, "Use Protected" if they do not warrant special protection provided by the outstanding waters designation or the anti-degradation review process.
2 Waters are designated either warm or cold based on water temperature regime. Class 1 water's are capable of sustaining a wide variety of cold or warm water biota, while class 2 waters are not.
3 Recreation E waters are used for primary contact recreation. Recreation N waters that are not suitable for primary contact recreation.
4 Waters that are suitable for irrigating crops usually grown in Colorado.
5 Waters that are suitable or intended to become suitable for potable water supplies.

In addition to the state's water quality classifications and numeric standards, all surface waters of the state are subject to the State of Colorado Basic Standards (Colorado Water Quality Control Commission, December, 2007), which in part reads: "*state surface waters shall be free from substances attributable to human-caused point or nonpoint source discharge in amounts, concentrations or combinations that:*

1. Can settle to form bottom deposits detrimental to the beneficial uses (e.g. silt and mud).
2. Are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life.
3. Produce a predominance of aquatic life."

The intention of the above standard is to address and prohibit water quality degradation from excessive sediment, nutrients, or toxic compounds.

Because of the uniform and primarily Dakota and Morrison formations, the sedimentary geology of the area, chemical water quality is consistent in the areas streams. Typically, the dominant cation/anion concentration during high flow conditions is calcium-bicarbonate, which tends to shift towards sodium-bicarbonate during the base flow season.

The sediment yield of the area's streams is largely associated with episodic, high flow events, resulting from intense precipitation events during the summer season. Sediment supplied to streams during these events is from a variety of sources, including both in and near channel, and upland sources. The existing network of routes in the area has the potential to intercept and concentrate storm runoff, which increases the sediment yield. High flow from snowmelt on the larger streams does transport sediment, but is mostly limited by the sediment supply in or near the channel.

The transport and fate of sediment produced, especially in the ephemeral channels, is difficult to predict. Some of the areas smaller drainages discharge into irrigation ditches and canals along the northeast area boundary. Several livestock watering ponds are also located on small ephemeral channels (see the Hydrology and Water Rights Section). However, eventually, all drainage from the area has the potential to be received by either the Uncompahgre or lower Gunnison Rivers both of which are on the Colorado State Monitoring and Evaluation List (Colorado Water Quality Control Commission April, 2006) for suspected water quality impairment from excessive sediment. Additionally, these two rivers (state identified river reaches: COGUUN04b and COGULG02) and tributary streams to the Uncompahgre River are on the Colorado State 303(d) list (Colorado Water Quality Control Commission February, 2008) for impaired water quality due to excessive levels of Selenium.

The entire area has been identified by the Colorado Water Quality Control Commission as a source water area that is hydrologically connected to downstream diversions for drinking water and other municipal uses. The BLM is a signatory to a Federal Multi-Agency Source Water Agreement (Clean Water Action Plan 1998). The agreement obligates the BLM to participate in protecting source water areas by implementing Standards for Rangeland Health (USDI, Bureau of Land Management 1997), and manage riparian and wetlands to achieve "proper functioning hydrologic condition" (USDI, Bureau of Land Management, 1998).

The area presently supports an extensive network of routes that vary in uses, density, and topographic position across and between Sub-Regions. See Appendix 4 for maps of each alternative in this EA and the routes for each alternative. Table 16 and Table 17 present route metrics commonly used to evaluate the influence to water resources from such a travel network. More specific rationale for using these metrics and presenting the data both on a 4th level watershed and Sub-Region basis is provided in the Water Quality Impacts Common to All

Alternatives section below. Many of these existing routes are user created, poorly designed and located, and commonly not maintained (Photo 1 and Photo 2).

Table 16
Existing Route Hydrologic Analysis Metrics by PA Sub-Region

Sub-Region	Route Drainage Crossings by Stream Type				Routes in WIZ by Stream Type[2]			
	Intermittent and Ephemeral (Number of Drainage Crossings)	Intermittent and Ephemeral (density)[1]	Perennial (Number of Drainage Crossings)	Perennial (density)[1]	Intermittent and Ephemeral (miles)	Intermittent and Ephemeral (density)[1]	Perennial (miles)	Perennial (density)[1]
A	105	3.7	29	1.0	10	0.4	5	0.2
B	17	1.0	41	2.5	2	0.1	3	0.2
C	206	5.0	3	0.1	18	0.4	1	0.0
D	256	5.8	10	0.2	16	0.4	1	0.0
E	89	8.3	0	0.0	5	0.5	0	0.0
F	101	5.6	0	0.0	10	0.6	0	0.0
G	20	1.5	0	0.0	2	0.1	0	0.0
Total	**794**	**4.6**	**83**	**0.5**	**63**	**0.4**	**10**	**0.1**

1. Density values are expressed in number per square mile for drainage crossings and miles per square mile for WIZ. The total Sub-Region acreage is used as a basis for calculating density values.
2. Water Influence Zone (WIZ) cumulative linear distance of routes within 100 feet of a drainage channel by planning Sub-Region.

Table 17
Existing Situation – Route Hydrologic Analysis Metrics by 4th Level Watershed

4th Level Watershed (HUC)[1]	Route Drainage Crossings[2]		Routes in WIZ[3]		Routes by Soil Erosion Potential			
	Number of Crossings	Crossing Density[4]	Miles in WIZ	WIZ Density[4]	Moderate (miles)	Moderate Density[4]	Severe (miles)	Severe Density[4]
Lower Gunnison River (HUC - 14020005)	249	4.2	28	0.5	76	1.3	59	1.0
Uncompahgre River (HUC - 14020006)	628	5.5	45	0.4	296	2.6	141	1.2
Total	**877**	**5.1**	**73**	**0.4**	**372**	**2.2**	**200**	**1.2**

1 US Water Resources Council- Hydrologic Unit Code
2 Includes ephemeral, intermittent, and perennial streams
3 Water Influence Zone (WIZ) cumulative linear distance of routes within 100 horizontal feet of a drainage channel (ephemeral, intermittent, and perennial streams)
4 Density values are calculated by number or miles per square mile of total unit area

Photo 1: Route in Ephemeral Wash in Sub-Region E, Showing Pulverized Channel Substrate, Ready for Mobilization with next Runoff Event.

Photo 2: Ingress and Egress Point to Access Channel Route in Sub-Region E, Showing Signs of Accelerated Erosion and Fine Material on Surface Likely to be Mobilized During Next Runoff Event

Ground water occurs in limited, unconsolidated surface deposits, and in portions of the Dakota and Morrison sedimentary units. The semi-arid climate limits water availability for groundwater recharge, and the deeply incised surface topography is not conducive for the occurrence of extensive, continuous groundwater aquifers. Past inventories have identified 27 springs or seeps, most of which are associated with discharge from either the Dakota or Morrison formations at impervious contact zones. The recharge area for these aquifers is up dip (southwest) on the higher elevations of the Uncompahgre Plateau.

Environmental Consequences

Impacts Common to all Alternatives

Please refer to the impacts discussion in Farmlands, Prime or Unique, Riparian/Wetlands, Aquatic Wildlife, Soils, and Floodplains for acreage impact figures. The primary effects to this resource are fully discussed in those sections.

Few, if any, hydrologic (water quality, quantity, and timing of flow) benefits occur from un-surfaced routes. Commonly, routes alter natural drainage patterns, collect and concentrate runoff, and accelerate both runoff and sediment yield. However, the route location on the landscape, soil erodability and degree of soil compaction on the route surface, and route design and maintenance all factor into the magnitude that hydrologic function and water quality is influenced. Routes located in lower topographic positions, in close proximity to, or in drainages, would have the greatest potential impact on drainage channel stability and water quality. Following are some of the more common impacts that occur when routes are located within or close to stream channels.

- At route/stream crossings, channel geometry is altered, affecting floodplain function and channel stability, resulting in accelerated sediment yield.

- Routes parallel to stream channels often disturb riparian vegetation, which is needed for channel stability and proper floodplain function. Routes within close proximity to streams also have a shorter flow path to deliver concentrated runoff and sediment to the receiving drainage channel.

- Routes in or close to channels can more easily convey chemical contaminants (e.g., motor and hydraulic oils, grease, fuel, antifreeze, and heavy metals from tire wear) to the water course.

- Routes close to channels also have the potential to intercept surface runoff from the land area upslope, concentrating the runoff and routing it to locations less capable of conveying the flow without eroding.

- Routes in channels diminish bank stabilizing vegetation, shear channel banks, and pulverize channel bed substrate (Photos 1 and 2), decreasing the substrate particle size and increasing the transportability of these materials, which increases downstream sediment yield.

Routes located on the upper portion of watersheds have less direct influence on drainage channels, but still have the potential to capture, redirect, and concentrate runoff from upslope,

often onto the road or trail surface. Surface runoff captured and concentrated on route surfaces can augment high flow peaks in receiving streams. Concentrated flow on routes located on soils that have a high capacity to erode, results in accelerated soil erosion and a higher sediment yield to local surface water ways.

Recreation Guidelines developed by the BLM (USDI, Bureau of land Management 2000) which are intended to minimize soil erosion and subsequent water quality impacts, include the following: plan routes and trails away from riparian and wetland areas, minimize surface disturbance to maintain sufficient vegetation to protect soils (especially highly erodible and fragile soils), and reduce the number of stream crossings where possible.

Based in part on BLM's Recreation Guidelines, the Public Land Health Standards, and the potential impacts described above, the following metrics are used to compare hydrologic impacts between the alternatives presented, including Alternative 2: number of stream channel (perennial, intermittent, and ephemeral) crossings by routes, miles of routes within 100 feet of stream channels (Water Influence Zone (WIZ)), and miles of routes located on soils having a moderate or severe potential for erosion.

The boundaries of the Sub-Regions cross watershed boundaries, in some cases down to 4th level watersheds as shown in Table 14. Impacts to water quality could occur downstream, and are most easily assessed on a watershed unit (4th level Hydrologic Unit Code) basis. Other potential impacts, such as the hydrologic function of stream channels, riparian areas, and uplands, could occur on site, or within a Sub-Region. Additionally, other resource analyses are mostly on a PA Sub-Region basis. Thus, in order to compare the level of impacts across the various resources analyzed, and also assess off site, downstream impacts, the water quality analysis is evaluated both by PA Sub-Region and watershed unit.

Impacts from Alternative 1

Major impacts would occur to water quality/hydrology within perennial streams as a result of the entire area being available for continued cross country travel and the creation of new user created routes and stream crossings, combined with the impacts that would continue to occur from 700 miles of existing routes. Alternative 1 would essentially leave the existing routes and all the public lands in the current status of being open to all forms of motorized and non-motorized travel. Over time the area would be expected to experience a progressive increase in the volume of on-route and off-route travel and the number of user created routes. User-created routes are often poorly located and designed and receive little or no drainage maintenance. Indiscriminant off route use disturbs soil surface, vegetation cover, and biological soil crust. The resultant water quality and quantity impacts would be accelerated sediment yield, the potential addition of petroleum based contaminants from motorized forms of travel, and augmented high flows from concentrated runoff. Accelerated sediment production could have both on and off site impacts. On site sediment impacts include excess deposition in stream channels, loss of aquatic life habitat in perennial streams, and more frequent maintenance of livestock water impoundments. Impacts to water quality/hydrology would continue in the planning area at 877 existing route channel/drainage crossings (83 of which are on perennial streams), and on, and from 73 miles of routes in the WIZ (10 miles of which are along perennial streams). Currently, although not designated as such, there are approximately 10 miles of technical 4WD routes. These routes are

commonly located in ephemeral drainage channels and are only suitable for use by modified 4 wheel drive vehicles and motorized and mechanized trials bikes. Because the ground surface disturbance from using these routes is in or near the channel, sediment available for transport in episodic channel flow is maximized. Overall, the number of both stream crossings and miles of routes in the WIZ would be expected to increase over time, along with a corresponding increase in sediment production.

Off site sediment impacts from existing and potential new disturbed area include potential impacts to farm or irrigation facilities that receive drainage (see Farmlands, Prime and Unique) and accelerated sediment delivery to the Uncompahgre and lower Gunnison Rivers, both of which are on the Colorado Monitoring and Evaluation List for suspected impairment from excessive sediment. The entire area is a source water area for downstream domestic and municipal water users, and an accelerated sediment yield could also affect these uses. About 34% of the area drains to the lower Gunnison River via Roubideau Creek (Table 14), which presently has 249 route channel crossings, 28 miles of routes in the WIZ, and 59 miles of routes on soils with a severe erosion potential. The remaining 66% of the area drains to the Uncompahgre River, which presently has 628 route channel crossings, 45 miles or routes in the WIZ and 141 miles of routes on soils with severe erosion. The Uncompahgre River joins the lower Gunnison River at Delta, Colorado, at which point the impacts described above for the Uncompahgre River would be added to the lower Gunnison River.

Finding on the Public Land Health Standard for Water Quality: As a result of the disturbances from existing routes and the high potential for increases in the number of miles new of user created routes, the potential exists for an accelerated and progressive increase in levels of sediment to be transported and discharged into waters that are presently on the Colorado Monitoring and Evaluation List for excessive sediment concentration. The area is also a source area for domestic and municipal water uses, which would also be affected by this accelerated sediment yield. Lastly, leaving public lands open to all forms of motorized and non-motorized travel would potentially result in more sensitive riparian areas not meeting the rating of "Proper Functioning Condition". For the reasons stated above, Alternative 1 would not meet the Water Quality, Public Land Health Standard #5.

Impacts from Alternative 2

Major improvements to water quality/hydrology would be expected in this alternative. Under Alternative 2 by prohibiting all cross country travel, except for horseback or foot travel, and limiting other travel to designated routes seasonally or yearlong and closing 258 total miles of existing routes, the number of stream crossings and miles of routes affecting all stream types in the WIZ would be reduced by 45%, or 389 fewer crossings, and 44%, or 32 fewer affecting miles, respectively, compared to Alternative 1 (Table 19). This would include 43%, or 36 fewer perennial stream crossings and 50%, or 5 fewer miles of travels routes affecting the WIZ, on perennial streams (Table 18). Technical 4WD routes would be reduced to a total of 8.6 miles, all of which would be in the Uncompahgre River Watershed. There would also be a reduction of 30%, or 59 fewer route miles on soils with a severe erosion potential (Table 19). With reductions in routes and off route travel prohibited, especially in the water quality sensitive areas described above, the sediment yield and potential contamination from petroleum products would be less than Alternative 1. The offsite water quality benefits from implementing this alternative would

be slightly greater for the Lower Gunnison River Watershed compared to the Uncompahgre River Watershed (Table 19 – compare stream crossing and WIZ density between drainage basins).

Finding on the Public Land Health Standard for Water Quality: Under this alternative, prohibiting all cross country travel, except for horseback or foot travel, and limiting other travel to designated routes seasonally or yearlong and closing existing routes would greatly improve the water quality (reduced yield of sediment and potential petroleum based contaminants) over time as the alternative is implemented, and as selected, existing routes are closed and rehabilitated. Thus, implementation of this alternative would meet the intent of Public Land Health Standard #5.

Table 18
Route Hydrologic Analysis Metrics by PA Sub-Region, Alternative 2

Sub-Region	Route Drainage Crossings				Routes in WIZ[2]			
	Intermittent and Ephemeral (number of stream crossings)	Intermittent and Ephemeral (density)[1]	Perennial (number of stream crossings)	Perennial (density)[1]	Intermittent and Ephemeral (miles)	Intermittent and Ephemeral (density)[1]	Perennial (miles)	Perennial (density)[1]
A	43	1.5 (-59%)	24	0.9 (-17%)	5	0.2 (-50%)	4	0.1 (-20%)
B	13	0.8 (-24%)	15	0.9 (-63%)	1	0.1 (-50%)	0	0.0 (-100%)
C	81	1.9 (-61%)	1	0.0 (-67%)	6	0.1 (-67%)	0	0.0 (-100%)
D	168	3.8 (-34%)	6	0.1 (-40%)	12	0.3 (-25%)	1	0.0 (0%)
E	31	2.9 (-65%)	0	0.0 (0%)	2	0.2 (-60%)	0	0.0 (0%)
F	88	4.9 (-13%)	0	0.0 (0%)	7	0.4 (-30%)	0	0.0 (-100%)
G	17	1.3 (-15%)	1	0.1 (0%)	2	0.1 (0%)	0	0.0 (0%)
Total	**441**	**2.6 (-44%)**	**47**	**0.3 (-38%)**	**35**	**0.2 (-44%)**	**5**	**0.1 (-50%)**

1. Density values are expressed in number per square mile for drainage crossings and miles per square mile for WIZ. The total Sub-Region acreage is used as a basis for calculating density values. Percent values in parenthesis are the change from Alternative 1.
2. Water Influence Zone (WIZ) cumulative linear distance of routes within 100 feet of a drainage channel by Sub-Region.

Table 19
Route Hydrologic Analysis Metrics by 4th Level Watershed, Alternative 2

4th Level Watershed (HUC)[1]	Route Drainage Crossings[2]		Routes in WIZ[3]		Routes by Soil Erosion Potential			
	Crossings Number	Crossing Density[4]	Miles in WIZ	WIZ Density[4]	Moderate (miles)	Moderate Density[4]	Severe (miles)	Severe Density[4]
Lower Gunnison River (HUC -	124	2.1 (-51%)	13	0.2 (-58%)	43	0.7 (-43%)	42	0.7 (-29%)

Table 19 Route Hydrologic Analysis Metrics by 4th Level Watershed, Alternative 2								
4th Level Watershed (HUC)[1]	Route Drainage Crossings[2]		Routes in WIZ[3]		Routes by Soil Erosion Potential			
	Crossings Number	Crossing Density[4]	Miles in WIZ	WIZ Density[4]	Moderate (miles)	Moderate Density[4]	Severe (miles)	Severe Density[4]
14020005)								
Uncompahgre River (HUC - 14020006)	364	3.2 (-42%)	28	0.2 (-38%)	182	1.6 (-39%)	99	0.9 (-30%)
Total	**488**	**2.8 (-45%)**	**41**	**0.2 (-55%)**	**225**	**1.3 (-40%)**	**141**	**0.8 (-30%)**

1US Water Resources Council- Hydrologic Unit Code
2 Includes ephemeral, intermittent, and perennial streams
3 Water Influence Zone (WIZ) cumulative linear distance of routes within 100 horizontal feet of a drainage channel (ephemeral, intermittent, and perennial streams).
4 Density values are calculated by number or miles per square mile of total unit area. The total Sub-Region acreage is used as a basis for calculating density values. Percent values in parenthesis are the change from the existing situation (Alternative 1).

Impacts from Alternative 3

Major improvements to water quality/hydrology would be expected in this alternative. Water quality improvements from implementing Alternative 3 would be similar to but greater in degree than from implementing Alternative 2, primarily from eliminating all cross country travel and closing routes.

With 369 miles of existing routes targeted for closure under this alternative, the number of all stream crossings and miles of routes affecting all stream types in the WIZ would be reduced by 56%, or 492 fewer crossings, and 53%, or 39 fewer miles affecting the WIZ, respectively, compared to Alternative 1 (Table 21). This would include -18%, or 20 fewer perennial stream crossings and -20%, or two fewer miles of travels routes affecting the WIZ (Table 20). Technical 4WD routes would be reduced to a total of 3.4 miles, all of which would be in the Uncompahgre River Watershed. There would also be -67%, or 133 fewer route miles on soils with a severe erosion potential (Table 21). With reductions in routes and off route travel prohibited, the sediment yield and potential contamination from petroleum products would be less than Alternative 1. Benefits to water quality would occur in both the Lower Gunnison and Uncompahgre Rivers from a reduced number stream crossings, fewer miles of routes in the WIZ, and less route disturbance on soils with a severe erosion potential, see Table 21**.**

Finding on the Public Land Health Standard for Water Quality: Under this alternative, prohibiting all cross country travel, except for horseback or foot travel, and limiting other travel to designated routes seasonally or yearlong and closing existing routes would greatly improve the water quality (reduced yield of sediment and potential petroleum based contaminants) over time as selected, existing routes are closed and rehabilitated, and mitigation measures are implemented. Thus, implementation of this alternative would meet the intent of Public Land Health Standard #5.

Table 20
Route Hydrologic Analysis Metrics by PA Sub-Region, Alternative 3

Sub-Region	Route Drainage Crossings				Routes in WIZ[2]			
	Intermittent and Ephemeral (number)	Intermittent and Ephemeral (density)[1]	Perennial (number)	Perennial (density)[1]	Intermittent and Ephemeral (miles)	Intermittent and Ephemeral (density)[1]	Perennial (miles)	Perennial (density)[1]
A	73	2.6 (-30%)	22	0.8 (-24%)	6	0.2 (-40%)	4	0.1 (-20%)
B	11	0.7 (-35%)	41	2.5 (0%)	1	0.1 (-50%)	3	0.2 (0%)
C	64	1.5 (-69%)	0	0.0 (-100%)	5	0.1 (-72%)	0	0.0 (-100%)
D	98	2.2 (-62%)	5	0.1 (-50%)	7	0.2 (-56%)	1	0.0 (0%)
E	12	1.1 (-87%)	0	0.0 (0%)	1	0.1 (-80%)	0	0.0 (0%)
F	50	2.8 (-50%)	0	0.0 (0%)	5	0.3 (-50%)	0	0.0 (0%)
G	9	0.7 (-55%)	0	0.0 (0%)	1	0.1 (-50%)	0	0.0 (0%)
Total	**317**	**1.8 (-60%)**	**68**	**0.4 (-18%)**	**26**	**0.2 (-59%)**	**8**	**0.0 (-20%)**

1. Density values are expressed in number per square mile for drainage crossings and miles per square mile for WIZ. The total Sub-Region acreage is used as a basis for calculating density values. Percent values in parenthesis are the change from the existing situation (Alternative 1).
2. Water Influence Zone (WIZ) cumulative linear distance of routes within 100 feet of a drainage channel by planning Sub-Region.

Table 21
Route Hydrologic Analysis Metrics by 4th Level Watershed, Alternative 3

4th Level Watershed (HUC)[1]	Route Drainage Crossings[2]		Routes in WIZ[3]		Routes by Soil Erosion Potential			
	Crossings Number	Crossing Density[4]	Miles in WIZ	WIZ Density[4]	Moderate (miles)	Moderate Density[4]	Severe (miles)	Severe Density[4]
Lower Gunnison River (HUC - 14020005)	170	2.9 (-32%)	17	0.3 (-39%)	23	0.4 (-70%)	12	0.2 (-80%)
Uncompahgre River (HUC - 14020006)	215	1.9 (-66%)	17	0.1 (-62%)	128	1.1 (-57%)	55	0.5 (-61%)
Total	**385**	**2.2 (-56%)**	**34**	**0.2 (-53%)**	**151**	**0.9 (-59%)**	**67**	**0.4 (-67%)**

1 US Water Resources Council- Hydrologic Unit Code
2 Includes ephemeral, intermittent, and perennial streams
3 Water Influence Zone (WIZ) cumulative linear distance of routes within 100 horizontal feet of a drainage channel (ephemeral, intermittent, and perennial streams).

4 Density values are calculated by number or miles per square mile of total unit area. Percent values in parenthesis are the change from the existing situation (Alternative 1).

Impacts from Alternative 4

Water quality impacts from implementing Alternative 4 would be major due to the elimination of all cross country motorized and non motorized mechanized travel and new, user created routes, and would be similar to but somewhat more in degree that from implementing alternative 2. The primary differences between Alternatives 1 and 4 for water quality impacts would be that under Alternative 4, user created trail proliferation would not occur, and implanting this alternative would have overall Planning area-wide benefits to water quality.

The number of all types of stream crossings and miles of routes in the WIZ would be increased by 6%, or and 1%, or fewer miles, respectively, compared to Alternative 1 (Table 21), primarily due to the proposed hiking and horse trail in the bottom of Roubideau Canyon.

The Roubideau horse trail would result in an increase in the density of perennial stream crossings by 124%, or 3 more drainage crossings per square mile, and the same for miles affecting the WIZ (133%, or 4 more miles), compared to Alternative 1. Since this trail is limited to horse and foot traffic, impacts to water quality would be minimal.

Technical 4WD routes would be reduced to a total of 8.5 miles, all of which would be in the Uncompahgre River Watershed.

There would also be a slight reduction of 2%, or 0.1 miles of routes per square mile in the number of miles of routes on soils with a severe erosion potential, compared to Alternative 1 (Table 23). The route density in Alternative 4 would be more similar to that in Alternative 1, than either Alternative 2 or Alternative 3.

Finding on the Public Land Health Standard for Water Quality: Under this alternative, prohibiting all cross country travel, except for horseback or foot travel, and limiting other travel to designated routes seasonally or yearlong and closing existing routes would greatly improve water quality, although under Alternative 4 the density of route stream crossings and miles in the WIZ would slightly increase from Alternative 1. Thus, implementation of this alternative would meet the intent of Public Land Health Standard #5.

Table 22
Route Hydrologic Analysis Metrics by PA Sub-Region, Alternative 4

Sub-Region	Route Drainage Crossings				Routes in WIZ[2]			
	Intermittent and Ephemeral (number)	Intermittent and Ephemeral (density)[1]	Perennial (number)	Perennial (density)[1]	Intermittent and Ephemeral (miles)	Intermittent and Ephemeral (density)[1]	Perennial (miles)	Perennial (density)[1]
A	98	3.5 (-7%)	27	1.0 (-7%)	8	0.3 (-20%)	4	0.1 (-20%)
B	19	1.1 (12%)	92	5.5 (124%)	2	0.1 (0%)	7	0.4 (133%)
C	225	5.4	3	0.1	17	0.4	1	0.0

Table 22
Route Hydrologic Analysis Metrics by PA Sub-Region, Alternative 4

Sub-Region	Route Drainage Crossings				Routes in WIZ[2]			
	Intermittent and Ephemeral (number)	Intermittent and Ephemeral (density)[1]	Perennial (number)	Perennial (density)[1]	Intermittent and Ephemeral (miles)	Intermittent and Ephemeral (density)[1]	Perennial (miles)	Perennial (density)[1]
		(9%)		(0%)		(-6%)		(0%)
D	248	5.6 (-3%)	9	0.2 (10%)	16	0.4 (0%)	1	0.0 (0%)
E	79	7.4 (-11)	0	0.0 (0%)	4	0.4 (-20%)	0	0.0 (0%)
F	110	6.1 (9%)	0	0.0 (0%)	10	0.6 (0%)	0	0.0 (0%)
G	20	1.5 (0%)	1	0.1 (0%)	2	0.1 (0%)	0	0.0 (0%)
Total	**799**	**4.6 (1%)**	**132**	**0.8 (59%)**	**59**	**0.3 (-6%)**	**13**	**0.1 (30%)**

1. Density values are expressed in number per square mile for drainage crossings and miles per square mile for WIZ. The total Sub-Region acreage is used as a basis for calculating density values. Percent values in parenthesis are the change from the existing situation (Alternative 1).
2. Water Influence Zone (WIZ) cumulative linear distance of routes within 100 feet of a drainage channel by planning Sub-Region.

Table 23
Route Hydrologic Analysis Metrics by 4th Level Watershed, Alternative 4

4th Level Watershed (HUC)[1]	Route Drainage Crossings[2]		Routes in WIZ[3]		Routes by Soil Erosion Potential			
	Crossings Number	Crossing Density[4]	Miles in WIZ	WIZ Density[4]	Moderate (miles)	Moderate Density[4]	Severe (miles)	Severe Density[4]
Lower Gunnison River (HUC - 14020005)	340	5.8 (37%)	31	0.5 (11%)	63	1.1 (-17%)	65	1.1 (10%)
Uncompahgre River (HUC - 14020006)	591	5.2 (-6%)	43	0.4 (-4%)	246	2.2 (-17%)	130	1.1 (-8%)
Total	**931**	**5.4 (6%)**	**74**	**0.4 (1%)**	**309**	**1.8 (-17%)**	**195**	**1.1 (-2%)**

1 US Water Resources Council- Hydrologic Unit Code
2 Includes ephemeral, intermittent, and perennial streams
3 Water Influence Zone (WIZ) cumulative linear distance of routes within 100 horizontal feet of a drainage channel (ephemeral, intermittent, and perennial streams).
4 Density values are calculated by number or miles per square mile of total unit area. Percent values in parenthesis are the change from the existing situation (Alternative 1).

Cumulative Effects

There are many factors affecting the water quality and hydrology. Much of the surrounding private land in this area is being subdivided and becoming increasingly developed with new routes and home sites, potentially adding to accelerated levels of sediment yield in these watersheds.

Along with the impacts caused by the development of new routes and home sites, there are impacts associated with historic livestock grazing that continue to influence the water quality with excessive sediment concentrations in the waters of the Dry Creek travel planning area and downstream users. The Dry Creek TMP is an important piece of the watershed management equation. It will determine the kinds and amounts of travel uses that will be allowed on the Public Lands within the affected watersheds. As the development of private lands for residential homes, and the demand for recreational uses on Public Lands continue to increase, the decisions made in the Dry Creek TMP will play an important role in determining the overall health of these watersheds.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

There are 73 miles of perennial and intermittent streams on public lands. The majority of these streams area perennial (65.2 miles), while the remainder are intermittent in flow but still have enough water to support riparian vegetation in major amounts. The 73 miles is estimated to support 1,783 acres of riparian habitat. The major stream systems are the Roubideau, Dry and Spring Creek drainages.

These drainages contain riparian vegetation which can be subdivided into shrub-dominated, cottonwood and evergreen dominated communities. The cottonwood vegetation class includes Rio Grande cottonwood trees (*Populus deltoides ssp.Wislizenii*) at lower elevations and narrowleaf cottonwood (*Populus angustifolia*) at higher elevations with occasional hybrids between these two occurring in small stands. Sandbar willow (*Salix exigua*), thinleaf alder (*Alnus tenuifolia*), and water birch (*Betula occidentalis*) are the main shrub species near the water's edge. On higher terraces, skunkbush sumac (*Rhus aromatica*), silver buffaloberry (*Shepherdia argentea*), wood rose (*Rosa woodsii*), seep willow *Baccharis salicina*) and clematis (*Clematis ligusticifolia*) are the most common species. Common reed grass (*Phragmites australis*) is present in some areas. Riparian vegetation at the highest elevations includes evergreens such as Douglas fir (*Pseudotsuga menzieseii*) and blue spruce (*Picea pungens*), often mixed with alder, dogwood, or higher elevation willow species. Ephemeral drainages are often dominated by tamarisk (*Tamarix chinensis*) and seep willow. Weeds are common in some of the riparian areas. Russian knapweed (*Acroptilon repens*), tamarisk, Russian olive (*Eleagnus angustifolia*), hoary cress (*Cardaria draba*) and Canada thistle (*Cirsium arvensis*) have invaded riparian communities in many areas resulting in degraded riparian habitat and community quality.

A major amount of the riparian area is associated with narrow, V-shaped valleys located at the bottom of steep canyons. This is particularly true of the higher elevation streams, where topography has isolated and protected them from route development and proliferation, and other direct human associated disturbances. Lower elevation streams tend to be in wider, flatter canyon bottoms which have traditionally served as access ways up onto the Uncompahgre

Plateau. See Table 24 for estimates of acreages of existing routes on BLM land that are in the riparian zone. Estimates were derived from assuming a riparian corridor width of 60 meters.

Table 24
Riparian Zones Directly Affected by Existing Routes

Stream Name	Total Acres	Acres Affected by Existing Routes[1]
Cottonwood Creek	9.3	0
Criswell Creek	117.3	0
Cushman Creek	197.6	2.6
Dry Creek	257.9	1.6
East Fork Dry Creek	126.2	0.7
West Fork Dry Creek	98.8	0
Monitor Creek	231.9	1.1
Little Monitor Creek	35.2	0
Potter Creek	210.3	11.4
Roubideau Creek	314.1	5.3
Spring Creek	130.8	0.01
East Fork Spring Creek	16.1	0
Middle Fork Spring Creek	19.6	0
West Fork Spring Creek	18.4	0
Totals	1,784	23

1 Assuming average route width of six meters and riparian corridor width of 60 meters

Nearly all of the streams were assessed for Land Health in 2004-2005. At that time, no major large scale problems were found on reaches of the following streams and they are rated as Meeting Standard 2: Criswell Creek, Cushman Creek, portions of Dry Creek, East Fork Dry Creek, West Fork Dry Creek, portions of Monitor Creek, Little Monitor Creek, Potter Creek, portions of Roubideau Creek, Spring Creek, East Fork Spring Creek, West Fork Spring Creek, and Middle Fork Spring Creek.

Some Land Health problems were found with reaches of the following creeks, which were rated as Meeting Standard 2 with Problems: portions of Dry Creek, portions of Monitor Creek (evaluated in 1996), and portions of Roubideau Creek. These problems included channel sinuosity and width to depth ratios, exotic plant and noxious weed prevalence, inadequate vegetation and roots to protect streambanks, poor riparian plant vigor, riparian areas not reaching their potential extent, lack of riparian species where they would be expected, poor upland watershed condition affecting the riparian area, lack of diversity in vegetation age classes, and an imbalance between water and sediment. No riparian zones had problems serious enough to necessitate a rating of Not Meeting Standard 2. At the time of the Land Health evaluation, the problems were attributed to the following causes: current and historic grazing, drought, invasive

and noxious plants, and upland erosion and water diversions. Since the Land Health evaluation, extensive weed control efforts have taken place in the Roubideau drainage to control Russian knapweed and to a lesser extent tamarisk.

There are 4 lentic wetlands which have been inventoried. They total 3.8 acres, and are all associated with stock ponds. These are low quality wetlands with little obligate wetland vegetation, and problems related to dewatering, irregular flow from irrigation water, and heavy livestock use. The ponds generally reflect the condition of most of the many developed ponds. Most of these ponds have associated routes to, across, or around and sometimes even OHV play areas within these when they are dry. It is likely that there are additional small naturally occurring wetlands associated with seeps. However these have not been inventoried for wetland condition, and are not notable within the area, nor evident from the existing route network.

Environmental Consequences

Impacts Common to all Alternatives

Routes generally degrade riparian and wetland areas. This has been well documented by numerous researchers in many locations (Forman 2008, Jones et al 2008, Trombulak and Frissell 2008). In addition to direct destruction of and impacts to riparian vegetation for the width of the route (estimated here as 6 meters in width including shoulder area), off-route impacts often extend up to many feet on either side of a route in an effect researchers have termed the "road influence zone" (RIZ). Riparian vegetation in this zone is at a greater risk of being degraded. Degradation includes weeds invading undisturbed riparian vegetation, overgrazing because of increased access for livestock and other grazers, sediment deposits onto the riparian vegetation, and increased erosion within the riparian zone. The amount of degradation varies depending on different route characteristics. These characteristics include the route's orientation within the riparian zone, its proximity to the stream, the substrate the route passes over, route width and the type and the level of use the route receives. The impacts of these characteristics are described as follows:

Orientation: Routes which are oriented perpendicular to the stream course generally remove and impact less riparian vegetation than those which parallel the stream course.

Proximity: Routes which travel through the riparian zone have a direct impact on riparian vegetation by destroying it. Routes located adjacent to riparian areas generate reduced off-route impacts, compared to routes within the riparian area, and these impacts generally decline with increasing distance between the route and the riparian zone.

Substrate: Routes which pass over soft substrates and mud generally cause more impacts to riparian vegetation than those which pass over rocks.

Use Level: Heavily used routes introduce more weeds, generate more dust, and require more road maintenance, creating more off-route impacts to riparian vegetation than less heavily travelled routes.

Use Type: When routes exclude some users, they generally have lower use levels with fewer off-route impacts to riparian habitat than routes which have multiple uses. In some cases limiting motorized travel and other uses may draw more users for the specialized experience, but for the purpose of this analysis BLM assumes that limited use routes would have lower use levels than unrestricted routes.

Route Width: Wider routes remove and destroy more riparian vegetation than narrower routes.

In general, these impacts are additive, so that an area with more routes in and near riparian vegetation and wetlands would have more degraded riparian systems than similar areas with fewer routes.

Based on BLM's Recreation Guidelines, the Public Land Health Standards, and the potential impacts described above, the mileage of routes passing through the riparian zone is used as the primary measure to assess impact to the riparian zone. These are in turn evaluated by vehicular use type on routes (which encompasses route widths), and riparian health Standard 2 ratings. There are no instances where routes pass through riparian areas in Sub-Regions C, E, or F, so these Sub-Regions do not appear in the tables below, and there are no differences in riparian impacts between the alternatives in these Sub-Regions.

Impacts from Alternative 1

Major impacts could be expected to occur to wetlands and riparian zones due to the unrestricted cross country travel that would continue anywhere on public lands, including within riparian areas. In addition, the existing 700 miles of routes would be available for use with any type of vehicle. This alternative continues current travel management, which has contributed to the riparian conditions in place today. Currently, an estimated 1.3%, or 23 acres, of the 1,784 total acres of riparian acreage would continue to be directly affected by routes (Table 24). Table 25 shows that a total of 9.4 miles of existing routes currently create associated impacts (20.5 acres of disturbed soil and vegetation) in riparian habitats, including 6.3miles of unrestricted motorized routes, or about 13 acres of disturbance. The 3.1 miles of hiking and horseback routes and trails in Table 25 are within the Camel Back WSA, Sub-Region B, which is closed to the use of motorized vehicles and mountain bikes. Because nearly all other routes in the planning area that affect riparian areas are currently available to all uses under this alternative, including motorized, mechanized, and non-motorized uses, BLM cannot identify route differences due to use type, use level, or route width. Under current management, a great number of these existing routes could be widened by vehicular use to accommodate full size vehicles and the full array of transportation modes, with the exception of routes in the Camel Back WSA. In addition, new user-created routes would likely be developed and existing routes could become wider.

Table 25 Mileage of Routes in Riparian Areas" by Sub-Region for Alternative 1 – No Acton								
Sub-Region	**Existing Route Type**							
	All Routes	**4-WD & 2 WD Routes**	**ATV**	**Motorized Single Track**	**Non-motorized Single Track**	**Closed**	**Admin Only**	**Horse and Foot**
A	4.3	**These categories are not applicable for this alternative**						NA
B	3.1							3.1
D	2.0							NA
G	0.03							NA
Totals	9.4							3.1

If existing trends in community population growth, recreational use and increasing numbers of public land visitors continue, it is likely that there would be additional riparian acreage affected, and increased severity of impacts to the existing affected area. This would arise from additional user-created routes, and deteriorating condition of existing routes as use levels increase. Impacts would be more weed infestations, loss of additional riparian vegetation, increased sedimentation onto riparian vegetation, and in some places increased erosion within the riparian zone. In some cases, channel alteration would be expected, which could further degrade riparian vegetation and function. Anticipated incremental and major impacts would be localized, minor to moderate in a few places, and long term. These impacts would only occur in Sub-Regions A, B, D, and G, where riparian areas are present.

Table 26 shows Land Health Assessment data for Standard 2-Healthy Riparian Systems relative to existing routes. There are presently 2.2 miles of routes in riparian areas that meet Standard 2 with problems. An additional 7.23 miles of routes pass through riparian areas which presently fully meet Standard 2. About 2.7 of these miles are horse and hiking routes in the WSA. Under current management, it is conceivable that riparian conditions near these routes would degrade enough to cause some riparian reaches to move from fully Meeting to Meeting with Problems, or even to Not Meeting Standard 2, especially if new user-created routes become established in riparian habitats.

Table 26 Riparian Health Standard 2 Ratings: Mileage of Routes in Riparian Areas by Sub-Region for Alternative 1		
Riparian Health Standard 2 Rating		
Sub-Region	**Meeting Standard 2**	**Meeting Standard 2 with Problems**
	Existing Routes	
	All Available Routes[1]	**All Available Routes[1]**
A	2.6	1.7
B	2.7	0.4
D	1.9	0.1
G	0.03	0
TOTALS	7.23	2.2

1 Including county roads & horseback and hiking routes in the WSA

Impacts from Alternative 2

This alternative represents a major change from existing route management in Alternative 1 that would affect the riparian zones in Sub-Regions A, B, D and G. First, compared to Alternative 1, no additional user-created and unplanned, poorly located routes would be allowed, so there would be no additional destruction and impacts to riparian vegetation or soils from the establishment and use of such routes, a major improvement in management and riparian impacts. Second, route management and improvements identified in this alternative (including hardening or rerouting of stream crossings and improving road drainage, and designing and constructing new routes considering slope, soils, vegetation, and location) would also further reduce both direct and indirect riparian impacts from sedimentation, erosion, and channel alteration. Limits on driving and parking off-road in order to retrieve game or to camp would also further reduce impacts to riparian areas as compared with Alternative 1.

Compared to Alternative 1, this alternative would result in a nearly 60% reduction in the number of miles of motorized routes, or 3.7 fewer mile, or about 8 fewer acres, within the riparian area (Table 27). A total of 1.5 miles of existing routes in the riparian RIZ would be closed, resulting in about 3.3 acres either recovering naturally or being rehabilitated. This is a total of 11.1 fewer acres of disturbed vegetation and soils in this sensitive zone. Because of the availability of moisture and resilience of the riparian plant community, BLM anticipates that closed routes would be sufficiently re-vegetated within 5 years and would recover many of their habitat and hydrologic functions. However, approximately 1.2 miles of new route construction is proposed for this alternative. Compared with Alternative 1, these road closures, in combination with the newly constructed routes would still represent a 3% reduction in total route mileage, or 0.3 fewer miles, that pass through riparian areas. In addition, non-motorized mechanized travel would be limited to using 2.7 miles of routes in riparian areas, while 8.9 miles of routes would be available for hiking and horseback travel, a decrease of 0.5 miles, compared with Alternative 1. These limitations on travel in the riparian RIZ, although not large numbers, would result in proportionately major reductions in existing impacts to riparian areas, and they would probably reduce the amount of use, and potentially result in the narrowing of the width of some of these routes, from 10 or more feet to 5 feet or less, further reducing impacts. Overall, this alternative places travel limitations on 82%, or 7.5 miles (about 16 acres) of the existing routes in riparian zones. Sub-Region B would undergo increases in riparian route mileage, compared to Alternative 1, as a result of trail construction for foot and horse travel along the upper reach of Roubideau Creek. This may increase the use levels in the riparian zone, but it would be mitigated by careful trail placement outside the sensitive riparian area. In addition it would reduce use of dispersed, informal trails which can be damaging to the riparian area. Sub-Region G would also have a small increase (0.17 miles) in routes in the riparian zone as a result of proposed non-motorized single track crossings of Spring Creek to create a larger recreational loop.

Table 27 Mileage of Designated Routes in Riparian Areas by Sub-Region for Alternative 2								
Sub-Region	**Designated Route Type**							
	All Routes[1]	**4WD & 2WD Routes-Open**	**ATV**	**Motorized Single Track**	**Non-motorized Single Track**	**Horse and Foot**	**Closed**	**Admin Only**
A	3.7	1.3	0	0	0	2.4	0.6	0
B	3.7	0	0	0	0	3.7	0.4	0
D	1.6	0.1	0.2	1.0	0	0.1	0.5	0
G	0.1	0	0	0	0.1	0	0	0
Totals	9.1	1.4	0.2	1	0.1	6.2	1.5	0

1 Excludes closed routes

Moderate long term improvements to existing impacts occurring in riparian areas are anticipated from this alternative as compared with Alternative 1. In addition, prohibiting all cross country travel with motorized or mechanized uses would result in major reductions in potential additional impacts in riparian or wetland areas. Reductions in total route miles and in road widths in the riparian RIZ would allow the impacted vegetation to return over a five year time-frame on closed and narrowed routes. Reductions in user numbers on the limited routes would reduce the amount of weed seed transported in and soil disturbance associated with route use. This would result in modest reductions of indirect riparian impacts. Route maintenance, parking, camping, and game retrieval limitations would also result in less impacts to riparian areas as compared with Alternative 1, even considering the impacts associated with Alternative 2 campground and trailhead construction.

Implementing this alternative, compared with implementing Alternative 1, would improve ratings for Land Health Standard 2 for riparian health. Table 28 shows Land Health Assessment data for Standard 2-Healthy Riparian Systems relative to routes which pass through the riparian zone and are designated in the Travel Management Plan for this alternative. Sub-Regions A, B, and D would still have routes which pass through riparian areas which meet Standard 2 with problems. However, this alternative also proposes route closures on 0.8 miles and use limitations on 1.34 miles, leaving only 1.3 miles of designated, full sized motorized routes in problem riparian areas, and only in Sub-Region A. Where possible, these routes would be mitigated with stream crossing improvements, which would reduce potential channel and riparian impacts. These changes from Alternative 1 represent an overall reduction of nearly 40% of full size motorized routes, and a shift to limited use on 39% of total routes occurring in riparian areas with land health problems. Limiting vehicular use in the riparian zone on public lands which currently meet Standard 2 with problems would reduce both direct and indirect riparian impacts, and it is possible that some of the riparian areas would change in status from a "meeting with problems" to a "meeting" rating.

Table 28 Riparian Health Standard 2 Ratings: Mileage of Designated Routes in Riparian Areas by Sub-Region for Alternative 2						
	Riparian Health Standard 2 Rating					
Sub-Region	Meeting			Meeting with Problems		
	Designated Route Types			Designated Route Types		
	All 4WD & 2WD Motorized Routes-Open[1]	Limited Use[2]	Closed	All 4WD & 2WD-Open Motorized Routes-Open[1]	Limited Use[2]	Closed
A	0	2.2	0.3	1.3	0.2	0.3
B	0	2.7	0	0	1.1	0.4
D	0.3	1.2	0.4	0	0.04	0.1
G	0	0.1	0	0	0	0
Totals	0.3	6.2	0.7	1.3	1.34	0.8

1 Includes county roads
2 Includes ATV, Motorized Single Track, Non-motorized Single Track,, Horse and Foot, and Admin designations

Impacts from Alternative 3

Many of the riparian habitat impacts from implementing this alternative would be similar or result in slightly more improvements to riparian areas, compared with those under Alternative 2 (see Table 29 for details).

Compared to all alternatives, the Travel Management Plan in this alternative would result in the fewest miles of designated routes of all types in riparian areas. Compared to Alternative 1, reductions in negative impacts to riparian habitat would be major and much less due to the elimination of all cross country travel and implementing this travel plan. In all Sub-Regions with public lands that meet Land Health Standard 2, there would be 1.2 fewer miles of routes of all types and 2.6 fewer acres of disturbance in the RIZ. In all Sub-Regions with lands that meet Land Health Standard 2 with Problems, there would be 1.7 fewer miles (3.7 fewer acres disturbed) of routes of all types in the RIZ. Limiting all travel to designated routes on public lands, proposed route maintenance, parking, camping and game retrieval limitations and designing and constructing new routes considering slope, soils, vegetation, and location would result in less impacts to riparian areas as compared with Alternative 1, even considering the impacts associated with trailhead construction proposed in this alternative. As in Alternative 1, no impacts from new trail construction would occur in the riparian zone. Compared to Alternative 1, this alternative would result in a nearly 60% reduction in the number of miles of motorized routes, or 4.9 fewer miles, or 10.7 fewer acres of disturbed soil and vegetation within the riparian area. A total of 1.6 miles of existing routes, or 3.5 fewer acres of disturbance, in the riparian zone would be closed. These routes would then either be rehabilitated, or allowed to recover naturally, as in Alternative 2. Approximately 1.2 miles of new route construction is proposed for this alternative. In addition, motorized and non-motorized vehicular travel on the public lands riparian zone would be limited to using 1.3 miles of designated routes, about seven fewer miles than in Alternative 1; designated routes open to horse and foot travel would be limited to 7.1 miles of routes in riparian areas. An additional 0.5 miles of route would be limited to administrative motorized use and public horse and foot travel use. These limitations on travel

in the riparian area would probably result in reduced impacts to riparian areas, through likely reductions in the amount of use, and potential route narrowing, as in Alternative 2.

Table 29
Mileage of Routes in Riparian Areas by Sub-Region for Alternative 3

Sub-Region	Designated Route Type							
	All Routes[1]	4WD & 2WD Routes-Open	ATV	Motorized Single Track	Non-motorized Single Track	Horse and Foot	Closed	Admin Only
A	3.5	1.1	0	0	0	2.4	0.8	0.01
B	3.1	0	0	0	0	2.7	0.02	0.4
D	1.3	0.1	0.1	0	0	0.7	0.7	0.1
G	0	0	0	0	0	0	0.03	0
Totals	7.9	1.2	0.1	0	0	5.8	1.6	0.5

1 Excludes closed routes

Alternative 3 should improve ratings for Land Health Standard 2 for riparian health to a similar degree as Alternative 2 (See Table 30 for specifics). This alternative proposes closing 0.5 miles of existing routes in riparian areas which currently have problems meeting Standard 2. Only 1.1 miles of motorized routes would be available for use in Sub-Region A (slightly less than in Alternative 2), with mitigation of constructing stream crossing improvements to reduce channel and riparian impacts. These changes from Alternative 1 represent an overall reduction of 50% of unlimited, motorized routes that would be designated in riparian areas with land health problems. There would also be an assumed reduction in use on an additional 27% of the existing routes in riparian areas having land health problems. These changes would reduce both direct and indirect riparian impacts, and it is possible that some of the riparian areas would change in status from a "meeting with problems" to a "meeting" rating, similar to the results from Alternative 2.

Table 30
Riparian Health Standard 2 Rating: Mileage of Routes in Riparian Areas by Sub-Region for Alternative 3

Sub-Region	Meeting			Meeting with Problems		
	Designated Route Types			Designated Route Types		
	4WD & 2WD Motorized Routes - Open[1]	Limited Use[2]	Closed	4WD & 2WD Motorized Routes - Open[1]	Limited Use[2]	Closed
A	0	2.2	0.3	1.1	0.2	0.4
B	0	2.6	0	0	0.4	0.02
D	0.3	0.9	0.6	0	0	0.1
G	0	0	0.3	0	0	0
Totals	0.3	5.7	1.2	1.1	0.6	0.52

1 Includes county roads
2 Includes ATV, Motorized Single Track, Non-motorized Single Track, Horse and Foot, and Admin Only designations

Impacts from Alternative 4

Prohibiting all cross country travel within riparian areas and the proliferation of user created routes would greatly reduce potential impacts and disturbance in this sensitive zone. Overall, other improvements to riparian areas are anticipated from implementing this alternative, as compared with implementing Alternative 1. Route maintenance, parking, camping, and game retrieval limitations would result in fewer impacts to riparian areas as compared with Alternative 1, even when the impacts associated with proposed campground and trailhead construction are included. Many of the improvements to riparian impacts from this alternative would be relatively similar to or slightly less as compared with impacts from Alternative 2. There would be 0.8 fewer miles of routes in the riparian area closed, or 1.7 acres of fewer disturbances, so less riparian vegetation recovery would be expected, as compared with Alternative 2. There would be 0.4 more miles (0.9 acres more disturbance) of designated routes available for 4WD & 2WD motorized vehicular travel in the riparian zone, which would result in slightly more effects on riparian areas than in Alternative 2, through more use on routes and wider routes. Compared to Alternative 2 there would be 0.2 more miles (0,4 acres more disturbance) of limited use, motorized routes designated in the riparian zone, which would result in slightly more impacts to riparian areas through more vehicular use on routes. There would also be an increase of 4.8 miles of non-motorized, mechanized routes (2.9 acres more disturbance – hiking, horseback, mountain bikes) in this alternative as compared to Alternative 2, also causing more short term impacts to riparian vegetation. The long term riparian impacts associated with these routes would be mitigated by constructing stream crossing improvements to reduce channel and riparian impacts, and implementing other design features.

Table 31
Mileage of Routes in Riparian Areas by Sub-Region for Alternative 4

Sub-Region	Designated Route Types							
	All Routes[1]	4WD & 2WD Routes - Open	ATV	Motorized Single Track	Non-motorized Single Track	Horse and foot	Closed	Admin Only
A	3.9	1.4	0.2	0	2.2	0.01	0.4	0
B	6.9	0	0	0	2.7	4.2	0	0
D	1.8	0.4	0.9	0.3	0	0.1	0.3	0
G	0.1	0	0	0.1	0	0	0	0
Totals	12.7	1.8	1.1	0.4	4.9	4.3	0.7	0

1 Excludes closed routes

Alternative 4 should improve ratings for Land Health Standard 2 for riparian health as compared with Alternative 1. Alternative 4 will improve riparian health to a slightly lesser degree than Alternative 2. See Table 32 for specifics in riparian areas with land health problems. This alternative proposes fewer route closures or use limitations for these 4 Sub-Regions as Compared with Alternative 2, leaving 1.5 miles of designated routes (3.3 acres of disturbance) available for full-size motorized uses and 3 miles of limited use routes for ATV, motorcycle, mountain bike, horse, hiking and administrative uses in riparian areas (1.8 acres of disturbance) with land health problems [a total of 1.9 more miles (5.3 acres of disturbance) of routes than with Alternative 2]. Some of the riparian impacts associated with these routes would be mitigated by constructing

stream crossing improvements to reduce channel and riparian impacts.

In addition, modestly limiting vehicular use on public land riparian areas which currently meet Standard 2 or meet Standard 2 with problems would reduce both direct and indirect riparian impacts, and it is possible that some of the riparian areas would change in status from a "meeting with problems" to a "meeting" rating over time, as compared with Alternative 1.

Table 32
Riparian Health Standard 2 Ratings: Mileage of Routes in Riparian Areas by Sub-Region for Alternative 4

Sub-Region	Riparian Health Standard 2 Rating					
	Meeting			Meeting with Problems		
	Proposed Route Management			Proposed Route Management		
	4WD & 2WD Motorized Routes - Open[1]	Limited Use[2]	Closed	4WD & 2WD Motorized Routes- Open[1]	Limited Use[2]	Closed
A	0	2.4	0.2	1.4	0.1	0.3
B	0	4.1	0	0	2.9	0
D	0.5	1.3	0.2	0.1	0	0.1
G	0	0.1	0	0	0	0
Totals	0.5	7.8	0.4	1.5	3.0	0.4

1 Includes county roads
2 Includes ATV, Motorized Single Track, Non-motorized Single Track, Horse and Foot, and Admin designations

Finding on the Public Land Health Standard for riparian systems: Because of the prohibition of all cross country travel on public lands and implementing the travel plans in Alternatives 2, 3 and 4, major reductions in disturbances to soils and vegetation, and improvements in land health ratings for Standard 2 on 14 streams, in varying degrees, from no changes to modest changes. These alternatives are consistent with the intent of Standard 2 of managing for streams in proper functioning condition. Alternative 1 would result in no changes to modest declines in land health ratings for Standard 2, particularly on lower elevation streams. This is not consistent with the intent of Standard 2.

Cumulative Effects

Population growth and residential development of surrounding private lands, increasing infrastructure development and right of way approvals on BLM, will continue to occur throughout the greater region if past trends continue. This will result in increased amounts of recreational and other types of usage and disturbance on public lands, including riparian areas and wetlands in and around the Dry Creek TMP area. In addition, as large scale and regional events like climate change and weed invasions occur, the riparian and wetland areas can be expected to degrade. The cumulative effects of designating routes to mitigate growing recreational and other demands will help alleviate impacts from the pressure of existing and new users. Past impacts would be remediated in many riparian/wetland areas from closures, reroutes or use restrictions on many routes. Measures such as maps, informational kiosks, regulations

and enforcement will help educate the public land users about their travel-related impacts, and may lead many to adopt better travel practices in the Dry Creek area and in other areas as well, which would reduce riparian and wetland impacts. On the other hand, increasing numbers of users on the designated routes may cause the routes to deteriorate more rapidly and require more frequent maintenance or hardening to avoid impacts to riparian/wetland areas. If this maintenance cannot be regularly carried out, there would be fewer, but larger instances of riparian impacts from routes as compared with the current situation. Increases in the miles of routes from additional permitted activities would be analyzed in separate Environmental Assessments; however they would be expected to incrementally degrade riparian areas where they pass through or near to them. Route designations, closures and limitations will help mitigate weed spread and improve riparian connectivity, which will be important for riparian/wetland areas to be resilient to climate change. Overall cumulative impacts from the proposed action are expected to result in improvements to riparian wetland areas in the planning area, and be neutral to riparian/wetland areas in other parts of the region.

SOILS (includes findings on Standard 1)

The soils on the area are largely a product of the local geologic parent material, climatic conditions, and the soils topographic position on the landscape. The sedimentary sandstone and shale units of the Dakota and Morrison formations dominate the surface geology of the area and when weathered, produce soils having textures dominated by sandy and fine sandy loams. The deeper soils with little rock content are mostly found on the interior portions of mesa tops and terraces adjacent to drainage channels. The shallower, rocky soils are found along mesa rims and canyon side slopes. The soils in the lower and more arid portions of the area are mostly classified in the soil orders; Aridisols (soils of dry climate regimes) and Entisols (very limited soil development), and have little organic matter throughout their vertical profile. At the higher elevations, soils are commonly in the soil orders; Alfisols (high level of subsoil development) and Mollisols (soils having darkened, organic matter enriched surfaces). The soils on the area are more specifically described in the Soil Surveys for Ridgway Area, Colorado and Paonia Area, Colorado (USDA, Natural Resources Conservation Service).

The vegetation cover over most of the area is either dominated by Pinon-juniper woodland or sagebrush/grass communities. Another important soil cover component is Biological Soil Crust , an important component of arid soils that are comprised of a complex mosaic of cyanobacteria, green algae, lichens and mosses, and other bacteria (Photo 3). These soil crusts serve many, beneficial functions to protect and enhance soil productivity, including acting as a soil surface stabilizer to protect soils from erosive forces, and are most prevalent on the more arid portions of the area, receiving below 14 inches of annual precipitation, and on slopes less than 25%. These soil crusts occur in both the Pinon-juniper and sagebrush plant communities with the higher potential for occurrence being in the areas dominated by Wyoming big sagebrush and black sagebrush (USDI, Bureau of Land Management, 2001). Table 33 shows the existing route metrics on soils with a high potential to support soil crusts. A total of about 60,000 acres of soils in the planning area with a high potential for BSC contain 440 miles of all types of routes (about 530 miles of disturbed soils), and on average have a density of 4.7 miles of routes per square mile of public land.

Photo 3 - Biological Soil Crust near Lower Dry Creek Rim Road (T. 49 N., R 11 W., Section 24, NMPM). The roughened surface is formed by cyanobacteria filaments that act to stabilize this fine sandy soil.

Table 33
Route Metrics for Soils with a High Potential of Supporting Biological Soil Crusts (BSC), Existing Situation.

Sub-Region	Area with High Potential for BSC (acres)	Miles of Routes on Soils with High Potential for BSC	Density of Routes on Soils with High Potential for BSC (miles/square mile)
A	10,124 (52%)[1]	62	3.90
B	5,496 (51%)	13	1.51
C	20,059 (72%)	142	4.53
D	10,549 (56%)	94	5.70
E	6,602 (96%)	54	5.23
F	6,261 (53%)	66	6.74
G	894 (10%)	9	6.44
Total	**59,985**	**440**	**4.69**

1 Percent of total Sub-Region

Erosion of soils occurs from energy generated by blowing wind and/or moving water. The potential for wind erosion on these soils is mostly in the moderate category with a few soil units having a low potential. See Table 33. The soil erosion potential from water across the area is variable, and is dependent on the physical and chemical properties of the soil, land slope and topographic position, and rock fragment content in the soil matrix. Specifically for un-surfaced routes, a soil's erosion potential (slight, moderate, severe) is commonly estimated using a combination of the soil erodability potential (K Factor), degree of land slope, and volume of rock fragments greater than 75 mm in the top 30 cm of soil (USDA Forest Service). Table 34 shows the acreage of three erosion categories by management Sub-Region, and the existing route metrics by erosion category. The planning area contains about 51,900 acres and 51,300 acres of soils with a moderate or severe potential for erosion, respectively, with 372 and 199 miles of routes, respectively. These miles of routes equate to about 690 total acres of disturbance on these 103,300 acres of soil, or about 0.6% disturbed.

Table 34 Route Metrics for Soil Erosion Potential, Existing Situation.									
Sub-Region	Soil Erosion Potential								
	Slight[2]			Moderate[3]			Severe[4]		
	Total acres	Route Miles	Route Density[1]	Total acres	Route Miles	Route Density[1]	Total acres	Route Miles	Route Density[1]
A	1,616	12	4.75	5,886	36	3.91	11,229	34	1.94
B	330	1	1.94	2,431	7	1.84	8,069	12	0.95
C	4,027	38	6.03	15,976	100	4.01	7,815	31	2.54
D	1,907	11	3.69	13,879	91	4.20	13,616	61	2.87
E	2,209	17	4.93	3,682	32	5.56	947	6	4.53
F	506	6	7.58	5,939	63	6.79	5,368	38	4.53
G	290	17	37.50	4,110	43	6.70	4,289	17	2.54
Total	**10,885**	**102**	**6.00**	**51,903**	**372**	**4.59**	**51,333**	**199**	**2.48**

1. Route miles per square mile of soil erosion category.
2. Little accelerated erosion likely.
3. Some accelerated erosion likely, occasional route maintenance needed.
4. Major accelerated erosion expected, frequent route maintenance needed.

The area presently supports an extensive network of routes that vary in density and topographic position. Many of the existing routes are user created (Photo 4), are poorly designed and located, and commonly not maintained to ensure adequate drainage and minimize erosion.

Photo 4 - User created trail showing impacts to vegetation and pulverized soil, easily transported by wind and water.

Environmental Consequences

Impacts Common to all Alternatives

Soil resources rarely benefit from un-surfaced routes. Routes alter and expand drainage patterns, collect and concentrate runoff which can accelerate erosion rates above natural conditions. Route locations across the area include locations in both uplands and channel bottoms, with variable soil conditions. Routes on areas dominated by either rock outcrop or high rock content in the soil matrix are somewhat resilient to surface impacts, while the finer textured soils containing little rock in the near surface horizons are more prone to accelerated erosion when disturbed. Soil impacts from routes commonly include an increase in the soils bulk density from compaction, loss of vegetation and BSC, and destabilization of physical soil surface crusts and aggregates, all of which can accelerate soil loss from erosion. See Photo 3.

Overall, surface erosion from routes is dependent on physical soil factors, route grade and position on the landscape, traffic type and volumes, and the effectiveness of drainage maintenance. Since assessing some of these factors is beyond the scope of this document or data is lacking, all routes were considered equal when assessed against the soil metrics described below.

Recreation Guidelines developed by the BLM (USDI, Bureau of land Management 2000) which are intended to achieve and sustain healthy soil resources include managing public lands to minimize ground surface disturbance to maintain sufficient vegetation to protect soils. Of special importance are highly erodible and fragile soils, including soils having high densities of biological soil crusts. Based in part on these guidelines and the Public Land Health Standards, the soil metrics used to assess impacts between alternatives are the miles of routes and route density located on severe and moderate erosion potential soils, and on soils having a high potential of supporting biological soil crusts.

Impacts Common to Alternatives 2, 3, and 4

Major reductions in impacts now occurring on soils with a high potential for biological soil crusts and with a moderate or severe erosion potential would occur, since all motorized and non-motorized mechanized off route, cross-country travel would be prohibited, routes would be closed, most travel would be restricted to designated routes, except for horseback or foot travel, and other actions would be implemented to prevent erosion.

Impacts from Alternative 1

Under Alternative 1, about 700 miles of existing routes would remain available for motorized and non-motorized uses, and cross-country travel of any kind would be permitted to continue on all public lands, except for Sub-Region B, Camel Back Wilderness. These factors would result in current levels of impacts continuing, and a major increase in the rate of new routes being created, an increase of acres of disturbed soils with potential for BSC and high and severe erosion potential, and increases in removal of vegetation in the planning area. At present, the Planning area has 440 miles (4.69 miles per square mile) of routes that occur on soils with a high potential to support Biological Soil Crusts (Table 33). This equates to about 530 acres of

sensitive soils that would continue to be disturbed. The route density on biological soil crust soils varies from 1.51 miles per square mile in Sub-Region B to 6.74 miles per square mile in Sub-Region F. The higher the route density on these soils, the greater the disturbance per unit area, and potentially, the higher the accelerated soil erosion and sediment yield. The same relationship occurs with route density on soils having a moderate or severe erosion potential. Currently, there are 372 and 199 miles of routes on soils having a moderate or severe potential for erosion, respectively. The acreages in these two categories of erosion potential are 51,903acres and 51,333 acres respectively. Route density on soils with a severe erosion potential varies from 0.95 miles per square mile in Sub-Region B to 4.53 miles per square mile in Sub-Regions E and F (Table 34). With the existing travel management designations and management, under this alternative the anticipated future increase in use on public lands would result in additional user-created routes in more locations and diffuse off route, cross-country use. This combined with no planned mitigation (i.e. route maintenance and seasonal and weather related closures) would result in a progressive increase in the amount and severity of soil disturbance, resulting in more soil erosion and sediment yield over time. Soil surface health would also decline, since the soils would not be able to support as much vegetation and biological soil crusts. An increase of invasive plant species would potentially occur, as they commonly establish on disturbed soils.

Standard 1 finding: Under this alternative, soil productivity would be expected to decline over time as a result of the existing number of miles of existing routes in locations affecting sensitive soils, and the high potential for more user created routes being created in inappropriate locations. The lack of proposed measures to keep route erosion at a minimum would also add to the decline of soil productivity. Consequently, ground surface disturbance would increase, decreasing the potential for healthy native vegetation communities and accelerating soil erosion. Thus, this alternative would not meet the intent of Public Land Health Standard #1.

Impacts from Alternative 2

Compared to Alternative 1, major reductions in impacts would occur due to the elimination of routes on sensitive soils and the prohibition of all cross-country motorized and mechanized travel in this alternative. Approximately 169 miles of existing motorized and non-motorized routes, on soils with a high potential to support biological soil crusts, would be closed under this alternative so rehabilitation could occur, which would result in about 205 fewer acres of this sensitive soil type being disturbed, or a 38% reduction in the overall route density on biological soil crust soils, (Table 35). Closing these routes would permit rehabilitation to occur on these acres. Additionally there would be a 40% and 29% reduction in the overall density of routes on soils with moderate and severe erosion potential, respectively (Table 36), or about 205 total miles. This reduction equates to about 248 fewer acres of this sensitive resource that would be impacted.

Standard 1 finding: Under this alternative, soil productivity and soil surface conditions would improve over time as selected, existing routes are closed and rehabilitated, no additional user created routes are established by use, and the measures in this alternative are implemented. Thus, implementation of this alternative would meet the intent of Public Land Health Standard #1.

Table 35 Route Metrics for Soils with a High Potential for Supporting Biological Soil Crusts (BSC), Alternative 2.			
Sub-Region	**Miles of Routes on Soils with High Potential for BSC**	**Density of Routes on Soils with High Potential for BSC**	**Change from the Existing Situation (miles/square mile)**
A	38	2.40	-39%
B	13	1.51	0%
C	86	2.74	-39%
D	61	3.70	-35%
E	27	2.62	-50%
F	40	4.09	-39%
G	6	2.93	-33%
Total	**271**	**2.89**	**-38%**

Table 36 Route Metrics for Soil Erosion Potential, Alternative 2.									
Sub-Region	**Soil Erosion Potential**								
	Slight[2]			**Moderate[3]**			**Severe[4]**		
	Route Miles	**Route Density[1]**	**Change from Existing Condition**	**Route Miles**	**Route Density[1]**	**Change from Existing Condition**	**Route Miles**	**Route Density[1]**	**Change from Existing Condition**
A	7	2.77	-42%	20	2.17	-44%	22	1.25	-35%
B	1	1.93	0%	6	1.58	-14%	14	1.11	-17%
C	25	3.97	-34%	61	2.44	-39%	16	1.31	-48%
D	9	3.02	-18%	56	2.58	-38%	45	2.12	-26%
E	8	2.32	-53%	17	2.95	-47%	4	2.70	-33%
F	4	5.06	-33%	39	4.20	-38%	26	3.10	-32%
G	5	11.03	-71%	26	4.05	-40%	15	2.24	-12%
Total	**59**	**3.47**	**-42%**	**225**	**2.77**	**-40%**	**142**	**1.77**	**-29%**

1. Route miles per square mile of soil erosion category.
2. Little accelerated erosion likely.
3. Some accelerated erosion likely, occasional route maintenance needed.
4. Major accelerated erosion expected, frequent route maintenance needed.

Impacts from Alternative 3

Major reductions in existing and likely impacts would occur due to the elimination of routes on sensitive soils and the prohibition of all cross-country motorized and mechanized travel. With approximately 249 motorized and non-motorized routes targeted for closure under this alternative, there would be a 57% reduction in the overall route density on soils with a high potential for supporting biological soil crusts, compared to Alternative 1 (Table 37). Additionally, there would be a 56% and 52% reduction in the overall density of these routes on soils with moderate and severe erosion potential, respectively (Table 38), or about 378 fewer acres of this sensitive resource that would be disturbed. This alternative would result in the most major reduction in existing and potential impacts to these sensitive soils, compared to Alternative 1.

Standard 1 finding: Under this alternative, soil productivity and soil surface conditions would improve over time as selected, existing routes are closed and rehabilitated, and as measures in this alternative are implemented. Thus, implementation of this alternative would meet the intent of Public Land Health Standard #1.

Table 37
Route Metrics for Soils with a High Potential for Supporting Biological Soil Crusts (BSC), Alternative 3

Sub-Region	Miles of Routes on Soils with High Potential for BSC	Density of Routes on Soils with High Potential for BSC	Change from the Existing Situation (miles/square mile)
A	33	2.09	-47%
B	10	1.63	-18%
C	69	2.20	-51%
D	30	1.82	-68%
E	20	1.94	-63%
F	25	2.56	-62%
G	4	2.86	-56%
Total	**191**	**2.03**	**-57%**

Table 38
Route Metrics for Soil Erosion Potential, Alternative 3

Sub-Region	Soil Erosion Potential								
	Slight[2]			Moderate[3]			Severe[4]		
	Route Miles	Route Density[1]	Change from Existing Condition	Route Miles	Route Density[1]	Change from Existing Condition	Route Miles	Route Density[1]	Change from Existing Condition
A	7	2.77	-42%	14	1.52	-6%	21	1.20	-38%
B	1	1.94	0%	5	1.32	-29%	11	0.87	-8%
C	21	3.33	-45%	51	2.04	-49%	11	0.90	-65%
D	5	1.68	-55%	35	1.61	-62%	23	1.08	-62%
E	4	1.16	-76%	14	2.43	-56%	3	2.03	-50%
F	3	3.79	-50%	28	3.02	-56%	16	1.91	-58%
G	2	4.41	-88%	17	2.65	-60%	11	1.64	-35%
Total	**43**	**2.53**	**-58%**	**164**	**2.02**	**-56%**	**96**	**1.20**	**-52%**

1. Route miles per square mile of soil erosion category.
2. Little accelerated erosion likely.
3. Some accelerated erosion likely, occasional route maintenance needed.
4. Major accelerated erosion expected, frequent route maintenance needed.

Impacts from Alternative 4

Major reductions in impacts would occur due to the elimination of routes on sensitive soils and the prohibition of all cross-country motorized and mechanized travel. Approximately 60 miles of motorized and non-motorized routes on soils with a high potential to support biological soil crusts would be targeted for closure under this alternative, which would result in a 14% reduction

in the overall route density on these soils with a high potential for crusts being impacted, compared to Alternative 1 (Table 39). Additionally, there would be a 17% and a 1% reduction respectively, in the overall density of these routes on soils with moderate and severe erosion potential, respectively (Table 40), or about 73 fewer acres of this sensitive resource that would be impacted. With this alternative, the soil metrics evaluated show the Travel Management Plan in this alternative most similar to Alternative 1.

Standard 1 finding: Under this alternative, soil productivity and soil surface conditions would improve over time as selected, existing routes are closed and rehabilitated, no additional user created routes are established by use, and measures in this alternative are implemented. Thus, implementation of this alternative would meet the intent of Public Land Health Standard #1.

Table 39
Route Metrics for Soils with a High Potential for Supporting Biological Soil Crusts (BSC), Alternative 4

Sub-Region	Miles of Routes on Soils with High Potential for BSC	Density of Routes on Soils with High Potential for BSC	Change from the Existing Situation (miles/square mile)
A	54	3.41	-13%
B	16	1.86	23%
C	128	4.08	-10%
D	79	4.79	-16%
E	40	3.88	-26%
F	54	5.52	-18%
G	9	3.94	0%
Total	**380**	**4.05**	**-14%**

Table 40
Route Metrics for Soil Erosion Potential, Alternative 4

Sub-Region	Soil Erosion Potential								
	Slight[2]			Moderate[3]			Severe[4]		
	Route Miles	Route Density[1]	Change from Existing Condition	Route Miles	Route Density[1]	Change from Existing Condition	Route Miles	Route Density[1]	Change from Existing Condition
A	9	3.56	-25%	28	3.04	-22%	29	1.65	-15%
B	2	3.88	100%	7	1.84	0%	22	1.74	84%
C	33	5.24	-13%	86	3.45	-14%	30	2.46	-3%
D	9	3.02	-18%	76	3.50	-16%	56	2.63	-8%
E	14	4.06	-18%	24	4.17	-25%	5	3.38	-17%
F	5	6.32	-17%	52	5.60	-17%	35	4.17	-8%
G	7	15.44	-58%	34	5.29	-21%	17	2.54	0%
Total	**79**	**4.64**	**-23%**	**307**	**3.79**	**-17%**	**204**	**2.54**	**1%**

1. Route miles per square mile of soil erosion category.
2. Little accelerated erosion likely.
3. Some erosion likely, occasional route maintenance needed.
4. Major erosion expected, frequent route maintenance needed.

Cumulative Effects

The lands surrounding the Dry Creek travel planning area are rapidly changing. In looking at the entire area, there are many factors affecting the soils. Much of the surrounding private land in this area is being subdivided and becoming increasingly developed with new routes and home sites, adding to the soil surface impacts in the watersheds.

Along with the impacts caused by the development of new routes and home sites, there are impacts associated with grazing that continue to influence the soils of the Dry Creek travel planning area. The Dry Creek TMP is an important piece of the watershed and soils management equation. It will determine the kinds and amounts of travel uses that will be allowed on the public lands within the affected watersheds. As the development of private lands for residential homes and the demand for recreational uses on public lands continue to increase, the decisions made in the Dry Creek TMP will play an important role in determining the overall health of these watersheds.

VEGETATION (includes a finding on Standard 3)

Upland vegetation is varied, and includes at least 20 distinct vegetation classes. A detailed description of these vegetation classes can be found in the Roubideau Land Health Assessment (Uncompahgre Field Office 2004-2005). The following table presents the acreage of each upland vegetation type on BLM lands along with the acreage occupied by existing routes.

Table 41
Existing vegetation classes in PA and areas affected by routes

Vegetation Class Name	Acreage in Plan Area	Acreage Occupied by Existing Routes[1]
Agriculture	251	6
Barren Land	857	8
Douglas Fir	21	0
Douglas Fir/Aspen Mix	6	0
Gambel Oak	73	0.2
Grass Dominated	5,343	112
Grass/Forb Rangeland	11,334	132
Greasewood	235	3
Mesic Mountain Shrub Mix	786	7
Ponderosa/Oak Mix	105	1
Pinyon-Juniper/Mountain Shrub Mix	6,073	77
Pinyon-Juniper/Oak Mix	1,784	25
Pinyon-Juniper/Sagebrush Mix	15,774	245
Pinyon-Juniper Woodland	17,003	126
Ponderosa Pine	10	0.3
Ponderosa Pine-Aspen Mix	1	0
Sagebrush Community	10,814	192
Sagebrush-Gambel Oak Mix	302	5

Vegetation

Table 41 Existing vegetation classes in PA and areas affected by routes		
Vegetation Class Name	Acreage in Plan Area	Acreage Occupied by Existing Routes[1]
Sagebrush/Grass Mix	20,688	449
Sagebrush-Mesic Mountain Shrub Mix	466	6
Salt Desert Shrub Community	2,921	62
Saltbush Community	8,048	139
Shrub/Grass/Forb Mix	301	6
Snakeweed	970	16
Sparse Pinyon-Juniper/Shrub/Rock Mix	3,805	43
Totals	107,971	1,661

1 Assumes average width of 6 meters for each route

The current state of vegetation health has been determined by the Roubideau Land Health Assessment (2004-2005). Vegetation across the area was subdivided according to soil types and grazing allotment boundaries, and then rated as meeting, meeting with problems, or not meeting Standard 3 for healthy plant and animal communities. The ratings for Standard 3 are shown in Table 42 by total acreage, then by acreage occupied by the existing routes.

Table 42 Standard 3 ratings for healthy plant communities		
Std 3 Rating for Healthy Plant Communities	Total Acreage in Plan Area	Acreage occupied by Existing Routes[1]
Meeting	19,278	192
Meeting with Problems	67,884	1,036
Not Meeting	19,442	382
Unknown or Not Upland	3,360	71

1 Assumes average width of 6 meters for each route

Vegetation problems identified in the Land Health Assessment includes low levels of perennial grasses, low perennial forb cover, poor shrub vigor and heavy hedging on shrubs, exotic plants, noxious weeds, and low vegetation diversity. These problems typically occur in some areas and not others. The most widespread factors contributing to these conditions are historic livestock grazing, routes, vegetation serial stage, past vegetation treatments, historic deer use, motorized use, drought, nearby private lands with the associated disturbance and weeds from these, and heavy wildlife use. Less frequent causes of problems include recreation impacts, poor management of rights-of-ways, current livestock grazing, woodcutting, heavy browse use, and pond development.

The Colorado Natural Heritage Program (Lyon, et.al.1999) has identified five potential conservation areas identified by the Colorado Natural Heritage Program CA (PCA) sites that contain high quality plant communities or assemblages of rare plants that they feel warrant protection and management (Table 43). The values in the four sites are primarily plant communities although some also protect sensitive plant habitat.

Vegetation

Table 43 Colorado Natural Heritage Program Potential Conservation Areas in the Dry Creek Planning Area			
PCA Name	Resource Values	Biodiversity Rank [1]	Management Urgency Rank [2]
Dry Creek	Saline bottomland shrublands, and Narrowleaf Cottonwood/Skunkbrush riparian forests	B3	M3
Rim Road	Xeric pinyon/juniper woodland, Sage sparrow, Black-throated sparrow, Northern harrier, White-tailed antelope ground squirrel	B3	M3
Roubideau Creek	Narrowleaf cottonwood riparian forest, Grand Junction milkvetch, Good neighbor bladderpod, Foothills riparian shrubland, Narrowleaf cottonwood/skunkbrush riparian forest, Montane riparian forest, Lower montane riparian forest, Xeric pinyon-juniper woodland, Coyote willow/mesic graminoid, Northern leopard frog	B2	M2
Temple Park	Good neighbor bladderpod	B4	M3

[1] Biodiversity Rank: B1= Outstanding significance such as the only known site for a globally species. B2= Very high significance, such as one of the best examples of a community type, or good occurrence of a globally imperiled species or a species with very restricted range. B3= High significance, such as an excellent example of any community type or a good occurrence of any species with very restricted range or a good occurrence of a state rare species.

[2] Management Urgency Rank: M1=Management action required at once to prevent the loss or irreversible degradation of one or more of the species or communities for which the PCA was identified. M2= Management action required within 5 years to prevent the loss of one of the items for which the PCA was identified. M3= Management action needed within 5 years to maintain the current quality of identified resources. M4= Management actions may be needed in the future to maintain the quality of the identified resources. M5= No serious management needs identified.

The following table shows the acreage of each PCA, and the estimated acreage overlain by existing routes (assuming routes average 6 meters in width.)

Table 44 Potential Conservation Areas and area affected by routes			
PCA Name	Sub-Region	Total Acreage	Acreage Occupied by Existing Routes[1]
Dry Creek	D	1,760	33
Rim Road	E	6,829	152
Roubideau Creek	A, B	9,231	66
Temple Park	F	351	14
Totals		18,210	265

1 Assumes average width of 6 meters for each route

Vegetation

Environmental Consequences

Routes generally degrade native vegetation. This has been well documented by numerous researchers in many locations (Forman and Alexander, 1998, Walker and Everett, 1987, Jones et al 2008, Trombulak and Frissell 2008). On Public Lands, vegetation degradation ranges from complete destruction on the route surface to impacts of the adjacent plant community. This impact includes erosion and sedimentation associated with routes, introduction of weeds, production and deposition of dust, increased grazing levels from enhanced livestock and grazing animal access, and destruction or impacts from increased human presence, such as woodcutting, human-caused fires, dumping, and other activities. These off-route impacts often extend up to many feet on either side of a route in an effect researchers have termed "the road influence zone" (RIZ). In general, an area with more routes (expressed as higher route density) would have more degraded vegetation than an area with lower route density, if all other factors are equal. A route density of one route mile per square mile of land area is estimated to directly or indirectly impact approximately 1% of the vegetation within that square mile.

The amount of degradation can vary depending on different route characteristics. These characteristics include the route width, the type and level of use the route receives, the type of vegetation the route passes through, and the substrate the route passes over. The impacts of these characteristics are described as follows:

Route Width:	Wider routes remove and destroy more vegetation than narrower routes.
Use Level:	Heavily used routes introduce more weeds, generate more dust and erosion, and require more road maintenance, creating more off-route impacts to vegetation than less heavily travelled routes.
Use Type:	BLM assumes for this analysis that routes with limited uses generally have fewer off-route impacts to vegetation than routes which have less limitations because of lower use levels as a result of excluding some uses (there are some exceptions to this).
Vegetation Type:	Tall, impenetrable, or sprouting vegetation is more likely to resist route widening and reduce the width of the RIZ for sediment transport, dust spread, and off-route grazing or human disturbance. Low, non-sprouting, semidesert vegetation generally does not present as much of a barrier, and as a result has a wider RIZ for these types of degradation.
Substrate:	Routes which pass over soft substrates and mud generally cause more impacts to vegetation than those which pass over rocks or sandy soils.

Limitations of use on routes, such as seasonal restrictions or vehicle types, either can help to modify and reduce the impacts of route density. Use limitations include seasonal closures and restrictions on the types of use that can occur on a route. Recreation Guidelines developed by

the BLM (USDI, Bureau of land Management 2000) which are intended to minimize natural resource impacts include the following: Protect plant and animal communities by limiting recreational use by type, season, intensity, distribution, or duration; and protect against the establishment or spread of noxious weeds.

The density of routes passing through the various planning Sub-Regions is used as the primary measure to assess impact on upland vegetation. This is in turn evaluated by use type (which encompasses route widths), route density in PCAs, and Land Health Standard 3 ratings for healthy native plant communities. See Table 45 for route impacts to vegetation in PCAs. The impacts will be discussed in more detail under evaluation of the different alternatives.

Table 45
Potential Conservation Areas and Route Densities by Alternative
(miles of route per square mile of public land)

PCA Name	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	Existing 4WD & 2WD Routes-Open[2]	Existing Routes With Uses Limited[1]	Designated 4WD & 2WD Routes-Open	Designated Routes With Uses Limited[3]	Designated 4WD & 2WD Routes-Open	Designated Routes With Uses Limited[3]	Designated 4WD & 2WD Routes-Open	Density of Designated Routes With Uses Limited[3]
Dry Creek	5.2	0	0.9	3.1	0.5	1.7	2.2	3.2
East Fork Spring Creek	0	0	0	0	0	0	0	0
Rim Road	5.6	0	2.3	0.8	1.2	1.2	3.7	0.8
Roubideau Creek[1]	0.8[1]	0.7[1]	0.3[1]	1.1[1]	0.2[1]	1.0[1]	0.4[1]	1.6[1]
Temple Park	10.2	0	5.5	2.4	2.9	2.5	7.5	1.9

1 All routes in Roubideau Creek PCA – limited to hiking and horseback uses only
2 Existing routes are available for all types of vehicular use except in Roubideau Creek PCA
3 Includes ATV, Motorized Single Track, Non-motorized Single Track, Horse and Foot, and Admin Only designations

Impacts from Alternative 1

This alternative continues current travel management, which has contributed to the upland vegetation conditions in place today. Currently, an estimated 1,661 acres of existing vegetation, or 1.5% of the acreage is directly impacted by routes. An additional 3% of the vegetation can be considered to be in the RIZ and affected by sedimentation, erosion, dust deposition, increased grazing and human disturbances, and subject to or already invaded by nonnative weedy plants. Table 46 shows the route density in each Sub-Region. Because all existing routes are currently available for all vehicles and users, BLM cannot calculate density differences by use type, use level, or route width. Under this alternative, many of these existing routes could be user-developed to accommodate full size vehicles and the array of transportation modes, with the exception of Sub-Region B in the Camel Back WSA, which is closed to motorized and mechanized vehicles. In addition, new routes could be informally developed.

Table 46 Density of Existing Routes by Sub-Region for Alternative 1 (miles of route per square mile of public land)			
Sub-Region	Route Type		
	All ExistingRoutes[1]	Horse and Foot	Closed
A	3.2	NA	0
B[2]	1.2	1.2	0
C	4.1	NA	0
D	4.1	NA	0.01
E	5.6	NA	0.1
F	6.4	NA	0.04
G	5.0	NA	0
All Sub- Regions	3.9	1.2	0.15

1 Excludes closed routes; includes county roads
2 Sub-Region B (Camel Back WSA) – closed to motorized and mechanized vehicle use except for administrative uses

If existing trends in community population growth, recreational use and increasing numbers of public land visitors continue, it is likely that there would be additional vegetation destroyed, impacted, or reduced in quality under this alternative. This impact would occur as a result from additional user-created routes, off-route driving and parking for camping, game retrieval, or many other purposes, and the deteriorating condition of existing routes as use levels increase. Impacts would be more weed infestations and dominance of those weeds in the community, depressed vigor of vegetation adjacent to the route, and more impacts to route-side vegetation. Anticipated impacts would be widespread, moderate and long term. These impacts would occur in all of the Sub-Regions.

Under this alternative, route densities for 3 of the 5 PCAs—Temple Park, Rim Road, and Dry Creek—are already affecting between 5 and 10% of the PCA area. This current level of impact is not consistent with PCA objectives of protecting these plant communities. Long term, widespread direct and indirect impacts to vegetation in these areas would be anticipated and increase over time with new user-created routes, off road driving, and increased use levels, and overall quality of vegetation in these PCAs (with the exception of East Fork of Spring Creek) would deteriorate.

Table 47 shows Land Health Assessment data for Standard 3-Healthy Plant Communities relative to existing route density. In this alternative, the majority of these existing routes are available for use with all vehicle types except for Sub-Region B, Camel Back WSA. For all Sub-Regions except Sub-Region B, routes affect from 4.4 to 6.4% of the vegetation in polygons which presently do not meet Land Health Standard 3. Route densities are of similar magnitude in areas which meet Standard 3 with problems. These levels of vegetation destruction and impacts from indirect route impacts would not be consistent with improving vegetation conditions and Standard 3 ratings, particularly since many of the problems relate to exotic species.

Table 47
Plant Community Health Standard 3 Ratings
Density of Existing Routes (miles of route per square mile of public land) in areas meeting, meeting with problems, and not meeting Standard 3 for Alternative 1

Sub-Region	Plant Community Health Standard 3 Rating								
	Meeting			Meeting with Problems			Not Meeting		
	Existing Route Types			Existing Route Types			Existing Route Types		
	Open[1]	Limited Use[2]	Closed	Open[1]	Limited Use[2]	Closed	Open[1]	Limited Use[2]	Closed
A	1.6	0.07	0	2.6	0.1	0	4.8	0	0
B[3]	0.1[3]	1.2[3]	0	0.04[3]	1.0[3]	0	0	1.5[3]	0
C	3.7	0.01	0	4.0	0	0	6.4	0	0
D	2.4	0	0	4.5	0	0.01	4.4	0	0.04
E	7.9	0	0	5.4	0	0.2	5.8	0	0.1
F	4.9	0	0	6.6	0	0.1	6.2	0	0.1
G	2.1	0	0	5.9	0	0	6.3	0	0

1 2WD & 4WD routes and those which were not evaluated. Includes county roads
2 All other routes, incl. for ATV, Motorized Single Track, Non-motorized Single Track, Horse and Foot, and Admin uses or designations.
3 Sub-Region B (Camel Back WSA) - closed to motorized and mechanized vehicular use, except for administrative uses

Impacts from Alternative 2

This alternative represents a change from existing route management that would affect vegetation in each of the Sub-Regions. First, no additional unplanned or user-created routes would be allowed, so there would be no additional destruction and impacts to vegetation from such routes. Second, route maintenance and measures identified in this alternative would reduce sediment and erosion that degrades vegetation in the RIZ. Third, limits on driving and parking off-road in order to retrieve game or to camp, and restricting all motorized and non-motorized travel to designated routes would also reduce impacts to vegetation as compared with Alternative 1. This alternative meets the public demand for these uses by development of hardened staging, trailhead, and camping areas which would impact vegetation. However, the impacts from new recreation facility construction would be mitigated by selecting sites already impacted by informal uses wherever possible, and by using best management construction techniques.

Alternative 2 represents a reduction in overall route density of 33% as compared with Alternative 1 (Table 48). Comparatively, when route use limitations are included, the density of existing routes available for use only with 4WD and 2WD vehicles declines by 66%. Closed routes in this alternative would either be actively rehabilitated or allowed to recover naturally. Because of the varying availability of moisture and resilience of the plant communities across the area, BLM anticipates that it would take closed routes from 3 to 10 years to be sufficiently re-vegetated to recover many of their habitat and ecologic functions. Route closures that would reduce route density to a sizable extent are proposed in Sub-Regions A, C, D, E, F, and G in this alternative, as compared with Alternative 1. Alternative 2 also proposes route designations and limitations for many of the existing routes that would affect user numbers and in many cases reduce route widths. Reduced route width would allow some vegetation to recover along the edges of the route over an anticipated 5-10 year time frame (longer than on closed routes because of adjacent ongoing disturbance). Reduced route use would result in less sediment deposition, erosion, maintenance impacts, human-related vegetation destruction, and instances of weed introduction

and spread. Alternative 2 proposes use limitations that would affect a substantial number of the routes in Sub-Regions A, D, E, F, and G as compared with Alternative 1. This further reduces the vegetation impacts of route density associated with the total route network as compared with Alternative 1.

Table 48
Density of Designated Routes by Planning Area Sub-Region for Alternative 2
(miles of route per square mile of public land)

Sub-Region	Route Type								
	All Routes[1]	2WD & 4WD Routes-Open	Technical 4WD	ATV	Motorized Single Track	Non-motorized Single Track	Horse and Foot	Admin Only	Closed
A	1.9	1.0	0	0.1	0	0	0.6	0.1	1.25
B[2]	1.3	0.1	0	0	0	0	1.3	0	0.2
C	2.4	2.1	0	0.1	0	0	0.07	0.2	1.6
D	2.8	1.0	0.2	0.2	0.8	0.1	0.01	0.2	1.3
E	3.1	1.9	0.1	0	0.1	0	0	0.6	2.6
F	4.3	1.7	0.1	0.3	0.01	1.0	0.04	0.8	2.5
G	3.5	1.4	0	0.9	0.5	0.5	0.2	0	1.6
All Sub-Regions	2.6	1.3	0.05	0.2	0.2	0.2	0.2	0.2	1.4

1 Excludes closed routes
2 Sub-Region B (Camel Back WSA) – closed to motorized and mechanical vehicular travel, except for administrative use

Under this alternative, total route densities for 4 of the 5 PCAs—Temple Park, Rim Road, Roubideau Creek and Dry Creek—would be reduced from 7 to 45% as compared with Alternative 1. There would be further reductions in vegetation impact from route use limitations and in some cases route narrowing of 14-60% for these PCAs. In this alternative, there would be some route construction in the Roubideau Creek PCA, but impacts to the important vegetation in this PCA would be mitigated by using best management practices and avoiding the plant communities of concern. These changes from Alternative 1 represent a substantial overall reduction of route-related destruction and impacts of vegetation in all of the PCAs except for East Fork of Spring Creek, which would be the same as Alternative 1. These reductions are consistent with PCA objectives of protecting these plant communities.

Table 49 shows Land Health Assessment data for Standard 3-Healthy Plant Communities relative to existing route density. This alternative represents a change from Alternative 1 with the majority of the routes either closed or limited in use in areas not meeting Standard 3. The same change generally applies to routes in areas currently meeting Standard 3 with problems. With the exception of Sub-Region B, route closures would allow from 1.4 to 3.6% of the area to recover from route impacts in polygons currently not meeting Standard 3, and route limitations would reduce the level of impact on another 0.4-2.7% of the area. Changes would be of a similar magnitude in areas which meet Standard 3 with problems. In addition, impacts associated with off road driving would be reduced. The reduced impacts, destruction and disturbance of vegetation in this alternative is consistent with and would support other actions being taken to improve vegetation conditions and Standard 3 ratings, particularly since many of the problems relate to exotic species.

Table 49 Plant Community Health Standard 2 Ratings: Density of Designated Routes (miles of route per square mile of public land) in areas meeting, meeting with problems, and not meeting Standard 3 for Alternative 2									
Sub-Region	Plant Community Health Standard 3 Rating								
	Meeting			Meeting with Problems			Not Meeting		
	Designated Route Types			Designated Route Types			Designated Route Types		
	2WD & 4WD Routes - Open[1]	Limited Use[2]	Closed	2WD & 4WD Routes- Open[1]	Limited Use[2]	Closed	2WD & 4WD Routes - Open[1]	Limited Use[2]	Closed
A	0.2	0.7	0.8	1.2	0.7	0.8	1.7	0.4	2.7
B	0.1	1.5	0.5	0.04	0.9	0.1	0	3.0	0
C	2.1	0.2	1.5	2.0	0.4	1.5	2.2	0.7	3.6
D	0.3	1.1	1.0	1.5	1.7	1.4	2.1	1.1	1.4
E	3.6	4.1	0.2	2.3	0.5	2.8	2.2	1.2	2.5
F	1.6	1.7	2.0	3.1	1.8	2.1	1.2	2.7	2.7
G	0.5	1.3	0.3	1.8	2.3	2.0	1.5	2.3	2.6

1 Includes county roads
2 Includes ATV, Motorized Single Track, Non-motorized Single Track, Horse and Foot, and Admin designations
3 Sub-Region B (Camel Back WSA) - closed to motorized and mechanized vehicular use, except for administrative uses

Impacts from Alternative 3

This alternative represents a change from existing route management that would affect vegetation in each of the Sub-Regions. Similar impacts as with Alternative 2 are anticipated from the prevention of additional user-created routes, from the proposed route maintenance and mitigation, and from the limits on driving and parking off-road in order to retrieve game or to camp. This alternative also addresses the public demand for these uses by development of a few hardened staging, trailhead, and camping areas which would impact vegetation, but to a lesser extent than Alternative 2. Although these impacts are to be mitigated by selecting sites already impacted by informal uses wherever possible, and by using best management construction techniques, overall vegetation disturbance and impacts from these activities should be somewhat less than under Alternative 2.

Alternative 3 represents a reduction in overall route density of 70% as compared with Alternative 1 (Table 50). When designated route limitations are included, the density of existing 2WD and 4WD only route designation declines by 82%. For the planning area as a whole and for each of the Sub-Regions individually, Alternative 3 proposes more reductions in route density and use restrictions for the remaining routes than Alternative 2.

Table 50 Density of Designated Routes by Planning Area Sub-Region for Alternative 3 (miles of route per square mile of public land)	
Sub-	Route Type

Region	All Routes[1]	2WD & 4WD Routes - Open	Technical 4WD	ATV	Motorized Single Track	Non-motorized Single Track	Horse and Foot	Admin Only	Closed
A	1.7	0.5	0	0	0	0.2	0.8	0.1	1.5
B	1.0	0.1	0	0	0	0	1.0	0.02	0.3
C	2.0	1.0	0	0.3	0	0.4	0.1	0.2	2.1
D	1.8	0.6	0.1	0.01	0.3	0.01	0.1	0.4	2.3
E	2.4	0.7	0	0	0	0.1	0	1.2	3.3
F	3.0	0.9	0.01	0	0	0.4	0	1.2	3.4
G	2.3	1.3	0	0	0	0.9	0	0.1	2.7
All Sub-Regions	1.2	0.7	0.02	0.1	0.1	0.2	0.3	0.4	2.1

1 Excludes closed routes

Under this alternative, total route densities for 4 of the 5 PCAs—Temple Park, Rim Road, Roubideau Creek and Dry Creek—would be reduced from 20 to 80% as compared with Alternative 1. There would be further reductions in vegetation impact from route use limitations and in some cases route narrowing of 21-33% for these PCAs. These changes are somewhat larger in magnitude than under Alternative 2, and would allow for somewhat more vegetation recovery. In this alternative, no additional trail construction would occur in the Roubideau Creek PCA, so vegetation impacts to important plant communities would be somewhat less than under Alternative 2. As with Alternative 2, these changes represent a substantial overall reduction from Alternative 1 regarding route-related destruction and impacts of vegetation in all of the PCAs except for East Fork of Spring Creek. These reductions are consistent with PCA objectives of protecting these plant communities.

Table 51 shows Land Health Assessment data for Standard 3-Healthy Plant Communities relative to existing route density. This alternative represents a change from Alternative 1 with the majority of the routes either closed or limited in use in areas not meeting Standard 3. The same generally applies to routes in areas currently meeting Standard 3 with problems. With the exception of Sub-Region B, route closures would allow from 2.4 to 5% of the area to recover from route impacts in PA locations currently not meeting Standard 3, and route limitations would reduce the level of impact on another 0.5-1.9%. Changes would be of a similar magnitude in areas which meet Standard 3 with problems. These changes would increase the level of vegetation that is allowed to recover as compared with Alternative 2. Similar to Alternative 2, impacts associated with off road driving would be reduced. The reduced impacts, destruction and disturbance of vegetation in this alternative is consistent with and would support other actions being taken to improve vegetation conditions and Standard 3 ratings, particularly since many of the problems relate to exotic species.

Table 51
Plant Community Health Standard 2 Ratings: Density of Designated Routes (miles of route per square mile of public land) in areas meeting, meeting with problems, and not meeting Standard 3 for Alternative 3

Sub-	Plant Community Health Standard 3 Rating

Region	Meeting			Meeting with Problems			Not Meeting		
	Designated Route Types			Designated Route Types			Designated Route Types		
	2WD & 4WD Routes -Open[1]	Limited Use[2]	Closed	2WD & 4WD Routes-Open[1]	Limited Use[2]	Closed	2WD & 4WD Routes -Open[1]	Limited Use[2]	Closed
A	0.2	0.7	0.8	0.6	1.1	1.0	0.7	0.7	3.5
B[3]	0.1	0.7	0.8	0.04	0.8	0.2	0	3.1	0
C	1.0	0.7	2.1	1.0	1.1	1.9	0.9	0.5	5.0
D	0.2	0.6	1.6	1.0	0.9	2.6	1.4	0.6	2.4
E	2.8	4.8	0.3	0.9	1.0	3.7	1.4	1.5	3.0
F	1.6	0.8	2.4	1.8	1.6	3.3	0.8	1.9	3.5
G	0.4	0.7	1.0	1.7	1.1	3.1	0.4	1.0	5.0

1 Includes county roads
2 Includes ATV, Motorized Single Track, Non-motorized Single Track, Horse and Foot, and Admin designations
3 Sub-Region B (Camel Back WSA) - closed to motorized and mechanized vehicular use, except for administrative uses

Impacts from Alternative 4

This alternative represents a change from existing route management that would affect vegetation in each of the Sub-Regions. Similar impacts as with Alternative 2 are anticipated from the prevention of additional user-created routes, from the proposed route maintenance and mitigation, and from the limits on driving and parking off-road in order to retrieve game or to camp. This alternative also addresses the public demand for these uses by development of hardened staging, trailhead, and camping areas which would impact vegetation to a similar extent as Alternative 2.

Alternative 4 represents a reduction in overall route density of 13% as compared with Alternative 1 (Table 52). When route use limitations are included, the density of 'open" route designation declines by 38%. For the Dry Creek Area as a whole, and for each of the Sub-Regions individually, Alternative 4 proposes fewer reductions in route density and use restrictions for the remaining routes than Alternative 2 proposes.

Table 52
Density of Designated Routes by Planning Area Sub-Region for Alternative 4 (miles of route per square mile of public land)

Sub-Region	Route Type								
	All Routes*	2WD & 4WD Routes	Technical 4WD	ATV	Motorized Single Track	Non-motorized Single Track	Horse and Foot	Admin Only	Closed
A	2.6	1.7	0	0.3	0.3	0.2	0	0.1	0.6
B	1.8	0.1	0	0	0	0.2	1.5	0	0.1
C	3.6	3.4	0	0.02	0	0.1	0.1	0.05	0.6
D	3.6	1.9	0.1	0.2	0.9	0.1	0.01	0.03	0.6
E	4.4	3.2	0.2	0	0.1	0	0.03	0.5	1.3
F	5.6	3.8	0.1	0.8	0.4	0.1	0	0.1	1.3
G	4.3	3.5	0	0	0.9	0	0	0	0.8

Table 52
Density of Designated Routes by Planning Area Sub-Region for Alternative 4
(miles of route per square mile of public land)

Sub-Region	Route Type								
	All Routes*	2WD & 4WD Routes	Technical 4WD	ATV	Motorized Single Track	Non-motorized Single Track	Horse and Foot	Admin Only	Closed
All Sub-Regions	3.4	2.4	0.1	0.2	0.4	0.1	0.2	0.1	0.7

*Excludes closed routes

Under this alternative, total route densities for 4 of the 5 PCAs—Temple Park, Rim Road, Roubideau Creek and Dry Creek—would change somewhere within a range of a 20% reduction to a 25% increase as compared with Alternative 1. In Temple Park and Rim Road, there would be overall reductions in potential impacts to vegetation as a result of decreased overall route density, but increases in impacts in Dry Creek and Roubideau PCAs because of increased route density. This increase of potential impact would be modified somewhat as each of the four PCA's would undergo some reduction in vegetation impacts from route use restrictions (ranging from 14-62% percent of total existing route density). The reduction in route density and route restrictions is smaller in magnitude than under Alternative 2, and would allow for less vegetation recovery for Rim Road and Temple Park PCAs. In the case of Dry Creek and Roubideau Creek PCAs, route density increases would likely be offset by route use limitations and reductions in impacts from off-road driving, resulting in similar to slightly less damaging impacts to vegetation as compared with Alternative 1. The reductions in Temple Park and Rim Road PCA's, while an improvement to vegetation, are probably not adequate to be consistent with PCA objectives of protecting these plant communities. The overall lack of improvement for the Dry Creek and Roubideau PCA's as compared with Alternative 1 is not consistent with the objective of protecting vegetation for these areas.

Table 53 shows Land Health Assessment data for Standard 3-Healthy Plant Communities relative to existing route density. This alternative represents a change from Alternative 1 with less than half of the routes either closed or limited in use in areas not meeting Standard 3. The same generally applies to routes in areas currently meeting Standard 3 with problems. With the exception of Sub-Region B, route closures would allow from 1.2 to 1.7% of the area to recover from route impacts in polygons currently not meeting Standard 3, and route use limitations would reduce the level of impact on another 0.04-1.9% of the area. Changes would be of a similar magnitude in areas which meet Standard 3 with problems. These changes would substantially reduce the amount of vegetation that is allowed to recover as compared with Alternative 2. Similar to Alternative 2, impacts associated with off road driving would be reduced. The reduced impacts, destruction and disturbance of vegetation in this alternative, while likely to minimally improve conditions compared with Alternative 1, is not likely to be fully consistent with or complimentary to other actions being taken to improve vegetation conditions and Standard 3 ratings, particularly since many of the problems relate to exotic species.

Table 53
Plant Community Health Standard 2 Ratings: Density of Designated Routes (miles of route per square mile of public land) in areas meeting, meeting with problems, and not meeting Standard 3 for Alternative 4

Sub-Region	Plant Community Health Standard 3 Rating								
	Meeting			Meeting with Problems			Not Meeting		
	Designated Route Types			Designated Route Types			Designated Route Types		
	2WD & 4WD Routes-Open[1]	Limited Use[2]	Closed	2WD & 4WD Routes -Open[1]	Limited Use[2]	Closed	2WD & 4WD Routes -Open[1]	Limited Use[2]	Closed
A	0.3	0.9	0.6	1.7	0.8	0.3	3.1	0.2	1.7
B[3]	0.1	1.9	0.1	0.04	1.3	0.1	0	3.0	0
C	3.2	0.2	0.3	3.3	0.2	0.6	4.6	0.3	1.7
D	0.8	1.4	0.3	2.4	1.5	0.7	3.2	0.8	0.7
E	5.4	2.3	0.2	3.5	0.6	1.4	3.8	1.0	1.2
F	2.7	2.1	0.8	5.2	0.8	1.2	3.5	1.9	1.3
G	1.2	0.8	0.2	4.1	1.0	1.1	6.3	0.04	0

1 Includes county roads
2 Includes ATV, Motorized Single Track, Non-motorized Single Track, Horse and Foot, and Admin designations
3 Sub-Region B (Camel Back WSA) - closed to motorized and mechanized vehicular use, except for administrative uses

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic; Wildlife, Terrestrial; and Invasive, Non-native Species):
Alternative 1 is not consistent with lands moving toward meeting Standard 3. Alternatives 2 and 3 are consistent with and complementary to other actions being taken to ensure lands meet Standard 3. Alternative 4 would result in minimal improvements to Land Health Standard 3 ratings, but is not fully consistent with lands meeting Standard 3.

Cumulative Effects

Population growth and residential development of surrounding private lands, increasing infrastructure development and right of way approvals on BLM, will continue to occur throughout the greater region if past trends continue. This will result in increased amounts of recreational and other types of usage and disturbance on public lands in and around the Dry Creek TMP area. Other activities that may contribute to cumulative impacts include Forest Service planning and projects, Uncompahgre Plateau Project activities, local land use planning, the BLM Uncompahgre Field Office Resource Management Plan revision, vegetation treatments, weed control, grazing, fire suppression activities, county road upgrades, special recreation permits and activities, and utility rights of way and corridors. In addition, as large scale and regional events like climate change and weed invasions occur, the vegetation community is expected to degrade. The cumulative effects of designating routes to mitigate growing recreational and other demands will help alleviate impacts from the pressure of existing and new users. Past impacts to vegetation would be remediated in many areas from closures, reroutes or use restrictions on many routes. Measures such as maps, informational kiosks, regulations and enforcement will help educate the public land users about their travel-related impacts, and may lead many to adopt better travel practices in the Dry Creek area and in other areas as well, which

would reduce vegetation impacts. On the other hand, increasing numbers of users on the designated routes may cause the routes to deteriorate more rapidly and require more frequent maintenance or hardening to avoid impacts to vegetation. If this maintenance cannot be regularly carried out, there would be fewer, but larger instances of vegetation impacts from routes as compared with the current situation. Increases in the miles of routes from additional permitted activities would be analyzed in separate Environmental Assessments; however they would be expected to incrementally degrade vegetation. Some of these would be offset by efforts directed at restoring vegetation health, such as the UP Project, weed control, and some vegetation treatments. Route designations, closures and limitations will help mitigate weed spread and improve landscape and vegetation connectivity, which will be important for vegetation communities to be resilient to climate change. Overall cumulative impacts from the proposed action are expected to result in improvements to vegetation in the planning area, and be neutral to vegetation in other parts of the region.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Aquatic wildlife species and their habitats are limited to perennial streams and some intermittent streams. The planning area has approximately 700 miles of existing routes available to most forms of motorized and non-motorized travel, 70 miles of perennial and 455 miles of intermittent streams (see Table 12 in Threatened, Endangered and Sensitive Species section). Native fish species including white sucker, speckled dace, and longnose sucker are known to be present in Roubideau Creek. The speckled dace is also found in Potter Creek. The non-native brown trout, rainbow trout and brook trout are found in Roubideau Creek. In the East fork of Dry Creek brown trout are present and in the West fork of Dry Creek rainbow trout are present. Some frogs, including northern leopard frogs, toads, and snakes are known to be present, but their status is unknown. No Federally listed fish are expected to be present in the streams.

Riparian habitat is present along the perennial and intermittent streams (See Riparian/Wetland section), and is extremely important for many aquatic wildlife species. However, the status of most of these species is unknown. Most public land riparian systems are in fair condition, but flow alterations, along with the invasions of salt cedar and Russian knapweed have degraded the usability of some areas for native wildlife. Most tributary streams are also incised--likely due to historic events--and many of them are still in the process of maturing and establishing a wider flood plain and riparian system.

The limited amount of ponds and open water area limits the potential for waterfowl production. There are small numbers of waterfowl, including mergansers, Canada geese, mallards, green wing teal, etc. that utilize the area seasonally, and some nesting may occur along major streams.

Environmental Consequences:

Impacts to aquatic wildlife and habitat would be some of the most acute because of this resource's susceptibility to such impacts. Analysis of effects to aquatic wildlife and habitat are similar to and somewhat a result of the impacts to soils, threatened and endangered species (TES) and habitat (especially for native fish and amphibian habitat types), water quality, floodplains, wetland and riparian habitat, and prime farmlands. See the TES section for general

discussion of OHV-related activity effects to wildlife, fish and plants. Also see Water Quality section for potential effects to sediment loads and Riparian/Wetland section for potential effects to aquatic habitat.

Most motorized vehicular and mountain bike travel activities within the planning area may have effects to aquatic wildlife populations and habitat. Measuring indicators of all these factors for the numerous species of interest would be an excessively difficult task. In addition, for most of the species of interest, the relationships between these factors and population dynamics are not well understood. An increase or reduction in miles of routes, changes in the class of route use (i.e., from motorized to non-motorized), or other activities that would increase or decrease soil and vegetation disturbance, would, in general, affect aquatic habitat or aquatic wildlife species. See the Water Quality section for potential effects regarding sediment loads.

Impacts from Alternative 1

700 miles of existing routes would continue to affect aquatic species and habitat, including native fish species and add to the existing disturbances occurring in 70 miles of existing perennial streams at 84 crossings and amphibian habitat in perennial and intermittent streams at 881 crossings (Table 27). Additional likely new established crossings in perennial streams from user created routes would continue to create significant increases in this sensitive habitat. Impacts that would occur to soils, water quality, floodplains, riparian and wetland habitat, prime farmland outside the planning area, and special status aquatic species and habitat in this alternative would also affect aquatic habitat and species. Refer to those sections for acreage and mileage impacts that are relative to impacts to aquatic habitat. Existing routes and management would continue, along with existing levels of associated resource disturbance and habitat fragmentation. New, unplanned, and poorly located routes would continue to be created, potentially further impacting habitat and/or the species in Table 13.

Impacts from Alternative 2

Implementing Alternative 2 would result in significant reductions in potential impacts to this sensitive resource from new user created routes and perennial stream crossings by eliminating all cross country motorized vehicular and mountain bike travel and limiting this travel to designated routes. Implementing this travel plan would result in a decrease in the number of miles of existing vehicular routes, which would in turn result in fewer stream crossings within amphibian (-52%, or 461 fewer intermittent and perennial stream crossings) habitat as compared to Alternative 1 (Table 13). Implementing Alternative 2 would result in a slight increase in the number of steam crossings within Native fish (+4%, or 3 more crossings). Mitigation and design features would mitigate impacts from these crossings.

Considering only the number of miles of designated motorized routes, there would be even larger reductions in the number of existing stream crossings within amphibian (-56%, or 451 fewer intermittent and perennial stream crossings) and Native fish (-58%, or 14 fewer perennial stream crossings) habitats, as compared to Alternative 1 (Table 27).

Impacts from the Alternative 3

By eliminating all cross country motorized vehicular and mountain bike travel major decreases in new potential impacts to aquatic habitat in 70 miles of perennial streams would occur. Implementing Alternative 3 compared to Alternative 1 would result fewer stream crossings within native fish (-19% or 16 fewer crossings), and amphibian (-70% or 619 fewer crossings) habitats. Considering only the number of miles of designated motorized routes, there would be even larger reductions in the number of stream crossings within native fish (-75%, or 18 fewer crossings) and amphibian (-80% or 641 fewer crossings) habitats, as compared to Alternative 1 (Table 27) by eliminating all cross country motorized vehicular and mechanized travel.

Compared to implementing Alternative 2, implementing Alternative 3 would result in a greater decrease in the total number of miles of existing vehicular routes, which would in turn result in fewer stream crossings within native fish (-22%, or 19 fewer crossings) and amphibian (-38%, or 158 fewer crossings) habitats, as compared to Alterative 2 (Table 27). Considering only the number of miles of designated motorized routes, there would be even larger reductions in the number of stream crossings within native fish (-40% or 4 fewer crossings), and amphibian (-55% or 190 fewer crossings) habitat as compared to Alternative 2 (Table 27).

Impacts from the Alternative 4

By eliminating all cross country motorized vehicular and mountain bike travel significant decreases in new potential impacts to aquatic habitat in 70 miles of perennial streams would occur. Implementing Alternative 4, as compared to Alternative 1, would result in increases or decreases in the number of stream crossings within native fish (+58%, or 49 more crossings) and amphibian (-10%, -92 fewer crossings) habitats. The increases within Native fish habitat can all be attributed to non-motorized routes, since changes in the number of miles of designated motorized routes in this alternative show slight show decreases as compared to Alternative 1. Considering only the number of miles of designated motorized routes, there would be additional decreases in the number of stream crossings within native fish (-8% or 2 fewer crossings) and amphibian (-17% or 133 fewer crossings) habitats, as compared to implementing Alternative 1 (Table 27).

Implementing Alternative 4, as compared to implementing Alternative 2, would result in increases in the number of miles of existing travel routes, which would in turn result in an increase in the number of stream crossings within native fish (+53%, or 46 more stream crossings) and amphibian (+88%, or369 more crossings) habitats. (Table 13). Considering only the number of miles of designated motorized routes, there would be increases in stream crossings in amphibian (+91%, or 318 more crossings) and native fish (+120%, or 12 more crossings) habitat, as compared to implementing Alternative 2, and primarily within intermittent streams. Mitigation and design features would be applied to these routes and stream crossings which would limit the degree of impact to aquatic habitat in the long term.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation; Wildlife, Terrestrial; and Invasive, Non-native Species): Eliminating all cross country travel by motorized and non motorized mechanized uses would greatly contribute to land health standards being met. See the Threatened and Endangered Species section. Based on findings in several biological resource sections, aquatic wildlife habitats would be expected to improve by implementing Alternatives 2, 3, and 4. Generally, Alternative 3 goes farther to

decrease route densities (overall and motorized) for aquatic wildlife species. Alternative 4 would result in the least amount of change compared to Alternative 1in improving habitat conditions, and would result in increases in the number of stream crossings within native fish habitats. However, mitigation applied would limit the effects of this change. Under Alternative 1, the opportunity to improve habitat conditions for aquatic wildlife species is lost, and these species may decline (Table 27).

Cumulative Effects

Population growth and residential development of surrounding private lands, along with other resource impacting trends, will occur throughout the greater region that will result in increased amounts of recreational usage on public lands. The cumulative effects of providing a high number of additional routes to meet growing recreational demands would add to very predictable impacts to the watersheds within the Dry Creek TMP. Increases in the miles of routes would create additional acres of semi-permeable and non-permeable surfaces that would result in increased amounts of runoff, erosion, and drainage changes. Other activities that may contribute to cumulative impacts include Forest Service planning and projects, Uncompahgre Plateau Project activities, local land use planning, soil research, continued population growth, BLM Uncompahgre Field Office Resource Management Plan revision, continued population growth, vegetation treatments, county road upgrades, special recreation permits and activities, and utility rights of way and corridors. Some of these activities may benefit aquatic species and habitats. Refer to the main Cumulative Impacts section of this document for a more detailed description of these activities and their potential impacts.

WILDLIFE, TERRESTRIAL (includes findings on Standard 3)

The Dry Creek Travel Management area supports a large variety of upland, riparian, and aquatic wildlife species. Table 54 below shows a list of the most common or noted wildlife species, their occurrence, and the basic habitat types in which they are found. Some species are year-long residents, while others are migrants. A variety of small mammal, bird, and reptile species are scattered throughout the area where their specific habitats are present. Habitat variety is great, and is created by diversity in topography, slope, aspect, vegetation, soils, and climate. The description of the existing vegetation in the vegetation section provides a good description of most wildlife habitats that occur.

Table 54
Most Common or Noted Terrestrial Wildlife Species, Groups of Species, Their Occurrence, and Basic Habitat Types in the Planning Area (Roubideau Land Health Assessment, BLM 2006)

Species (Common Name)	Habitat Type	Occurrence
Mule deer	Pinyon-juniper, oak-mountain shrub, riparian, sagebrush, grassland.	Common, year long, mostly during winter
Elk	Pinyon-juniper, oak-mountain shrub, riparian, sagebrush, grassland.	Common, mostly during winter.
Desert Bighorn Sheep	Canyon benches, mesa tops, and valley bottoms	Uncommon, present in the Roubideau Creek drainage
Cougar	All types, mostly along rim-rock areas.	Common, year long

Table 54
Most Common or Noted Terrestrial Wildlife Species, Groups of Species, Their Occurrence, and Basic Habitat Types in the Planning Area (Roubideau Land Health Assessment, BLM 2006)

Species (Common Name)	Habitat Type	Occurrence
Bobcat	All types	Uncommon, year long
Coyote	All types	Common, year long
Cottontail rabbit	All types	Common, year long
Porcupine	Pinyon-juniper, riparian	Common, year long
Prairie dog (white-tailed)	Sagebrush, desert shrub	Common, year long
Raptor; Eagles, Hawks, Falcons.	All types	Common, year long
Merriam's Turkey	Riparian forests, Pinyon-juniper, Oak-mountain shrub	Riparian communities and PJ in the winter and oak-mountain shrub spring and fall.
Blue grouse	Oak/Serviceberry	Common, year long
Gunnison sage grouse	Sagebrush; sagebrush/grass	Uncommon, year long
Chukar	Salt desert	Uncommon, year long
Neo-tropical birds	All types	Common, warm season
Small mammals	All types	Common, year long
Amphibians-Reptiles	All types	Common year long

Mule deer and elk are probably the most noted wildlife species that occur due to their historic prominence in the ecosystem and their high social and economic value to the area and region. Both species use the area year long, but primarily they use it as winter range, coming from higher elevation summer ranges on the Uncompahgre Plateau. The intensity of use by each species varies widely from year to year, and is controlled primarily by population size, and the variation in timing and amount of snowfall. During most winters there is a high degree of overlap in mule deer and elk use on winter ranges, however, the extent of competition is unknown. The Colorado Division of Wildlife has classified nearly all the area as winter range for mule deer and more than two thirds of the area as winter range for elk (Table 55). The severe winter range and winter concentration areas constitute BLM's crucial winter range.

Table 55
Big Game habitat within the Dry Creek Travel Management Planning Area

Species	Habitat	Sub-Region (acres and % of Sub-Region)							
		A	B	C	D	E	F	G	Total
Bighorn Sheep	Production	597.8	1100.8	--	--	--	--	--	1698.6
		3%	10%	--	--	--	--	--	1%
	Winter/ Summer Range	8325.4	9964.5	1603.1	--	--	--	--	19893.1
		43%	93%	6%	--	--	--	--	17%
Elk	Severe Winter	5452.5	4254.3	9591.6	14869.6	--	8468.2	3398.3	46034.6
		28%	40%	34%	50%	--	72%	39%	40%
	Winter Concentration	919.1	896.2	--	194.9	--	87.2	1350.3	3447.7
		5%	8%	--	1%	--	1%	16%	3%
Mule Deer	Severe Winter	19194.2	10830.9	25584.6	17247.4	6869.6	8430.1	3468.3	91625.1
		99%	102%	92%	58%	100%	71%	40%	80%
	Winter Concentration	--	0.1	10987.4	4543.8	49.5	7088.1	1269.5	23938.4
		--	0%	39%	15%	1%	60%	15%	21%

Table 55
Big Game habitat within the Dry Creek Travel Management Planning Area

Species	Habitat	Sub-Region (acres and % of Sub-Region)							
		A	B	C	D	E	F	G	Total
	Winter Range	19194.2	10830.9	27826.5	29171.1	6869.6	11823.6	8222.7	113938.6
		99%	102%	100%	98%	100%	100%	95%	99%
Pronghorn	Range	3785.7	--	41.4	--	--	--	--	3827.2
		19%	--	0%	--	--	--	--	3%

Bighorn sheep habitat encompasses almost all of Sub-Region B, and more than two-thirds of Sub-Region A (Table 55). At the present time there is an established desert bighorn sheep population in Roubideau Canyon. It is unknown whether this population is interacting with the desert sheep in the Escalante Canyon area, but it is highly probable. To date, in spite of the close proximity of domestic sheep, there have been no known cases of pneumonia, scapies, blue tongue, and other pathogens in this population.

Merriam turkey habitat is limited mostly to the higher elevations along the west side of the area, and along the major stream drainages. They use the larger canyon bottoms at lower elevations as winter range and the pinyon-juniper, oak/serviceberry areas at higher elevations for breeding, nesting, and brood rearing. Since the 1880's there has been a long history of great fluctuations in turkey numbers on the Uncompahgre Plateau. Turkeys were reported to be plentiful before settlement, but disappeared in the mid 1880's from several hard winters in a row, and disease contracted from domestic fowl. In the 1930's, turkeys were re-introduced, and did well until the mid 1960's, when again a major decline occurred. And, again the cause of decline was hard winters and "micoplasma" a bacterial disease causing respiratory problems, and which is passed from hens to their eggs, or through direct contact with other birds. In the 1980's turkeys were again transplanted, which have resulted in the current recurring high population. No specific mapping of seasonal use areas or assessment of habitat quality is available for this species at this time.

Large predators, such as coyotes, cougars, and black bears use the area regularly as parts of their larger overall ranges. Of the predators, coyotes are the most numerous and widespread. Black bear primarily use the major drainages with well developed riparian vegetation, and the higher elevation oak/serviceberry areas, especially during spring, late summer, and fall for feeding. About 1,330 acres of black bear fall concentration habitat is found at the southwestern border with the Forest Service in Sub-Regions D (1291.2 acres), F (10.9 acres) and G (28.3 acres). Black bear densities and total numbers on the Uncompahgre Plateau may be the highest in Colorado. Mountain lion probably use nearly all of the area at some time or another while hunting, or raising young. The number of mountain lion present is probably very low, limited mostly to the ones who have established their territories, or parts of their territories in this area. There appears to be suitable denning habitat in the rocky cliffs and drainages that are distributed throughout the area. While the exact status of these predator populations are unknown, they are all believed to be doing well.

Prairie dogs are found in the lower elevation areas. It is assumed at this time that they are white-tailed prairie dogs (See TES section). Prairie dogs potentially may occur anywhere there is open grassland, grass/sagebrush or salt desert shrub areas. BLM mapped some of the prairie dog

colonies in the 1980s, but there has been no follow-up mapping. Plague-caused fluctuations in the prairie dog populations have resulted in some of the previously mapped sites being abandoned. It also appears that there has been a general reduction in the total number of prairie dogs living, but there is no quantified data to support this observation.

Environmental Consequences

Analyses of effects to terrestrial wildlife are handled in a similar manner as explained in the Threatened and Endangered Species section. See the TES section for a general discussion of the potential effects to wildlife from recreational and other vehicular travel-related activities.

Recreational and other travel activities may have effects to wildlife populations similar to those described in the TES, Migratory Bird and Aquatic Wildlife sections of this document. Measuring indicators of all these factors for the numerous species of interest would be an excessively difficult task. In addition, for most of the species of interest, the relationships between these factors and population dynamics are not well understood. Because of these difficult to measure potential impacts to wildlife populations, BLM assumes that any reduction in routes, or reduction in class of use (i.e., from motorized to non-motorized) would in general improve wildlife habitats.

Table 56
Change in miles of routes by Alternative for selected wildlife species

Species	Type	Alt 1	Alt 2			Alt 3					Alt 4				
				Δ 1			Δ 2		Δ 1			Δ 2		Δ 1	
			Open*	%	miles	Open*	%	miles	%	miles	Open*	%	miles	%	miles
Bighorn Habitat (miles)	Public	25.0	21.8	-13%	-3.2	16.6	-20%	-5.2	-34%	-8.4	29.4	+35%	+7.6	+18%	+4.4
	Admin	25.0	22.7	-9%	-2.3	17.5	-23%	-5.2	-30%	-7.5	29.4	+30%	+6.7	+18%	+4.4
	Motorized	19.0	8.6	-86%	-10.4	3.5	-59%	-5.1	-82%	-15.5	17.7	+105%	+9.1	-7%	-1.3
Elk Habitat (Winter Concentration) (miles)	Public	11.9	9.3	-22%	-2.6	7.3	-21%	-2.0	-39%	-4.6	11.9	+28%	+2.6	0%	0.0
	Motorized	7.3	3.9	-108%	-3.4	1.5	-63%	-2.4	-79%	-5.8	6.0	+52%	+2.1	-18%	-1.3
	Seasonal	0.0	1.5	↑	1.5	0.0	-100%	-1.5	0%	0.0	0.0	-100%	-1.5	0%	0.0
Elk Habitat (Severe Winter) (miles)	Public	277.9	167.2	-40%	-110.7	101.8	-39%	-65.4	-63%	-176.1	247.5	+48%	+80.3	-11%	-30.4
	Admin	277.9	186.4	-33%	-91.5	129.3	-31%	-57.1	-53%	-148.6	248.9	+34%	+62.5	-10%	-29.0
	Motorized	268.0	131.2	-55%	-136.8	76.3	-42%	-54.9	-72%	-191.7	233.0	+78%	+101.8	-13%	-35.0
	Seasonal	0.0	42.8	↑	42.8	11.2	-74%	-31.6	↑	+11.2	0.0	-100%	-42.8	0%	0.0
Mule Deer Habitat (Winter Concentration) (miles)	Public	163.0	95.1	-42%	-67.9	55.5	-42%	-39.6	-66%	-107.5	141.9	+49%	+46.8	-13%	-21.1
	Admin	163.0	107.8	-34%	-55.2	76.8	-29%	-31.0	-53%	-86.2	143.2	+33%	+35.4	-12%	-19.8
	Motorized	163.0	74.5	-54%	-88.5	42.1	-43%	-32.4	-74%	-120.9	139.2	+87%	+64.7	-15%	-23.8
	Seasonal	0.0	45.2	↑	45.2	8.3	-82%	-36.9	↑	+8.3	0.0	-100%	-45.2	0%	0.0
Pronghorn Habitat (miles)	Public	20.3	9.5	-53%	-10.8	10.4	+9%	+0.9	-49%	-9.9	18.1	+91%	+8.6	-11%	-2.2
	Admin	20.3	10.9	-46%	-9.4	11.1	+2%	+0.2	-45%	-9.2	18.3	+68%	+7.4	-10%	-2.0
	Motorized	20.3	8.3	-59%	-12.0	4.9	-41%	-3.4	-76%	-15.4	18.1	+118%	+9.8	-11%	-2.2
Black Bear Habitat (miles)	Public	6.3	3.4	-46%	-2.9	3.0	-11%	-0.4	-52%	-3.3	5.1	+50%	+1.7	-19%	-1.2
	Admin	6.3	3.9	-38%	-2.4	3.5	-9%	-0.4	-44%	-2.8	5.3	+35%	+1.4	-16%	-1.0
	Motorized	6.3	3.4	-46%	-2.9	3.0	-11%	-0.4	-52%	-3.3	5.1	+50%	+1.7	-19%	-1.2

Footnotes: Δ 1 – Percent change from Alternative 1; Δ 2 – Percent change from Alternative 2; *Includes routes designated as open and those which were not evaluated, including county roads; Public – routes open for public use. Includes motorized and non-motorized uses; Admin – total including routes open for Administrative use; Motorized – routes open for public motorized use; Seasonal – Seasonal closures of routes; -- no routes for category; ↑ – increase from zero. Cannot calculate percentage

Impacts Common to All Alternatives

There would continue to be routes at varying levels in all alternatives. Thus, all alternatives continue to have impacts to wildlife populations from activities relative to habitat fragmentation, patch size, edge to interior ratio, barriers to movement, facilitation of invasions of non-native and/or opportunistic species, mortality rates, noise and other disturbance factors.

Impacts from Alternative 1

Yearlong existing levels of use on 700 miles of existing routes would continue to result in major disturbances to wildlife species and their habitat, and result in wildlife habitat fragmentation. Cross-country travel would continue to cut new routes through big game (bighorn, elk, mule deer and pronghorn) and other wildlife species habitat (Table 56 and Table 9- Migratory Bird Section), resulting in major increases to habitat and species. This alternative would continue to not have seasonal closures of routes, since no routes have been designated. Without these seasonal closures, winter travel through these areas would continue to create additional stress to big game species during a time period of high energy demands and stress for these and other wildlife species. This could result in increased winter wildlife mortality and decreased reproduction in the spring.

Existing habitat types would continue to be impacted by habitat fragmentation and other disturbance factors from about 484 miles of existing motorized routes that have removed approximately 587 acres of various types of vegetation.

Big Game Species:
Alternative 1 would have motorized and non-motorized routes that would pass through bighorn (25.0 miles all routes; 19.0 miles motorized), elk (winter concentration [11.9 miles all routes; 7.3 miles motorized]; severe winter [277.9 miles all routes; 268.0 miles motorized]), mule deer (winter concentration [163.0 miles all routes, all motorized]) and pronghorn (20.3 miles all routes, all motorized) habitat (Table 56).

Predator Species:
Effects on predators and their habitat would be similar to that described for other wildlife species and habitat. Alternative 1 would have 6.3 miles of motorized routes that would pass through 1,330 acres of black bear habitat (Table 56).

Impacts from Alternative 2

Major reductions in potential impacts to these habitat types and species would occur as the result of restricting travel to designated routes and preventing the creation of new user created routes. Existing levels of disturbance and habitat fragmentation would be reduced through implementation of Alternative 2 as a result of closing and rehabilitating approximately total 259 miles of existing motorized and non-motorized routes. This would result in large decreases in the number of miles of routes through wildlife species habitat (Table 56 and Table 9). Administrative routes are included in this alternative and these routes would only have occasional motorized use as compared to public access routes. If administrative roads would be

included, the number of miles of routes potentially affecting wildlife species or habitat increases, but would be less compared to Alternative 1.

Implementing this alternative would result in the closure of about 255 of 484 miles of existing motorized routes in these habitat types, a 53% reduction, which would result in about 309 fewer acres of disturbed and fragmented wildlife habitat.

Big Game Species:
Alternative 2, compared to Alternative 1, would have fewer miles of motorized and non-motorized routes that would pass through bighorn (-13%, or 3.2 fewer miles), elk winter concentration -22%, or 2.6 fewer miles; severe winter -40%, or 110.7 fewer miles), mule deer (winter concentration -42%, or 67.9 fewer miles) and pronghorn (-53%, or 10.8 fewer miles) habitat from Alternative 1 (Table 56). Alternative 2, compared to Alternative 1, would have fewer miles of motorized routes only that would pass through bighorn (-86%, or 10.4 fewer miles), elk (winter concentration -108%, or3.4 fewer miles); severe winter -55%, or 136.8 fewer miles), mule deer (winter concentration -54%, or 88.5 fewer miles) and pronghorn (-59%, or 12.0 fewer miles) habitat.

Compared to Alternative 1, which contains no seasonal route closures, in this alternative seasonal closures from December 1 through April 15 would be in effect on designated motorized and non-motorized routes that pass through elk winter concentration (1.47 miles); severe winter (42.8 miles), and mule deer winter concentration (45.2 miles) habitat.

Predator Species:
Effects on predators and their habitat would be similar to that described for other wildlife species and habitat. Alternative 2, compared to Alternative 1, would have nearly 3.0 fewer miles of motorized routes that would pass through 1,330 acres of black bear habitat, a 46% reduction. This reduction would help prevent further disturbance to black bear and their habitat. Seasonal closures of about 7.3 miles of motorized routes in Sub-Region D may provide for fewer disturbances to black bear and their habitat from December 1 through April 15 (Table 3).

Other Wildlife Species:
Other wildlife species would have similar effects to what is described in the Migratory Bird section and Table 9, and the TES Section and Table 12 of this document.

By reducing the number of miles of overall routes and changing some routes to non-motorized uses, and prohibiting cross-country travel, impacts to wildlife species should reduce effects from habitat fragmentation, patch size, edge to interior ratio, barriers to movement, facilitation of invasions of non-native and/or opportunistic species, mortality rates, noise and other disturbance factors.

Impacts from Alternative 3

Major reductions in potential impacts to these habitat types and species would occur as the result of restricting travel to designated routes and preventing the creation of new user created routes. Effects from this alternative would be similar to Alternative 2. Impacts and levels of disturbance

and habitat fragmentation would be reduced as a result of closing and rehabilitating approximately 369 total miles of existing motorized and non-motorized routes, closing some routes seasonally, restricting travel to designated routes, preventing the creation of new user created routes, and by implementing measures in Alternative 3 (Table 56 and Table 9).

Implementing this alternative would result in the closure of about 353 of 484 miles of existing motorized routes in these habitat types, a 73% reduction, which would result in about 428 fewer acres of disturbed and fragmented wildlife habitat.

Big Game Species:

Compared to Alternative 1, Alternative 3 contains reductions in the number of miles of motorized and non-motorized routes that pass through bighorn (-34%, or 8.4 fewer miles), elk (winter concentration -39%, or 4.6 fewer miles; severe winter -63%, or 176.1 fewer miles), mule deer (winter concentration -66%, or 107.5 fewer miles) and pronghorn (-49%, or 9.9 fewer miles) habitat (Table 56).

Compared to Alternative 1, Alternative 3 would contain even larger reductions in the number of miles of motorized routes through bighorn (-82%, or 15.5 fewer miles), elk winter concentration (-79%, or 5.8 fewer miles); elk severe winter (-72%, or 191.7 fewer miles), mule deer winter concentration (-74%, or 120.9 fewer miles) and pronghorn (-76%, or 15.4 fewer miles) habitat.

Compared to Alternative 1, which contains no seasonal route closures of any kind, seasonal closures in this alternative would be in effect from December 1 through April 15 for motorized and non-motorized vehicles on routes that pass through elk severe winter (11.2 miles), and mule deer winter concentration (8.3 miles) habitat.

Compared to Alternative 2, Alternative 3 contains additional reductions in the number of miles of motorized and non-motorized routes that pass through bighorn (-20%, or 5.2 fewer miles), elk winter concentration (-21%, or 2.0 fewer miles); severe winter (-39%, or 65.4 fewer miles), and mule deer (winter concentration -42%, -39.6 fewer miles). However, this alternative increases the number of miles of routes that would pass through pronghorn (+9%, 0.9 more miles) habitat. Compared to Alternative 2, Alternative 3 contains additional reductions in the number of miles of motorized routes only that pass through bighorn (-59%, or 5.1 fewer miles), elk winter concentration (-63%, or 2.4 fewer miles); severe winter (-42%, or 54.9 fewer miles), mule deer (winter concentration (-43%, or 32.4 fewer miles) and pronghorn (-41%, or 3.4 fewer miles) of habitat. Comparing this alternative with Alternative 2, seasonal closures from December 1 through April 15 would be in effect for motorized and non-motorized vehicles on routes that pass through some elk and mule deer habitat, but the number of miles affected would be greatly reduced. There would be no seasonal route closures in elk winter concentration habitat (-100%, or 1.5 fewer miles restricted than in Alternative 2), and large decreases in seasonal route closures in elk severe winter (-74%, or 31.6 fewer miles restricted that in Alternative 2), and mule deer winter concentration (-82%, or 36.9 fewer miles restricted than in Alternative 2). These fewer number of miles of routes categorized for seasonal closures would be attributed to the routes being closed to use yearlong in this alternative, resulting in fewer impacts to wildlife habitat and species.

Predator Species:
Effects on predators and their habitat would be similar to that described for predators in Alternative 2. Alternative 3, compared to Alternative 1, would have nearly 3.3 fewer miles of motorized routes that would pass through 1,330 acres of black bear habitat, a 46% reduction. This reduction would help prevent further disturbance to black bear and their habitat. Compared to Alternative 2, this alternative would provide for 0.4 less miles of motorized routes that would pass through black bear (fall concentration) habitat, an 11% reduction from Alternative 2. Seasonal closures of about 4.0 miles of motorized routes in Sub-Region D may provide for fewer disturbances to black bear and their habitat from December 1 through April 15 (Table 3).

Other Wildlife Species:
Effects on other wildlife species would be similar to those described in the Migratory Bird section and Table 9, and the TES Section and Table 12 of this document.

Impacts from the Alternative 4

Major reductions in potential impacts to these habitat types and species would occur as the result of restricting travel to designated routes and preventing the creation of new user created routes. Effects from this alternative would be similar to Alternative 2. In general, impacts and levels of disturbance and habitat fragmentation would be reduced as a result of closing and rehabilitating approximately 118 miles of existing motorized and non-motorized routes, restricting travel to designated routes, preventing the creation of future new user-created routes, and by implementing measures in Alternative 4 (Table 56 and Table 9).

Implementing this alternative would result in the closure of about 65 of 484 miles of existing motorized routes in these habitat types, a 13% reduction, which would result in about 79 fewer acres of disturbed and fragmented wildlife habitat.

Big Game Species:

Compared to Alternative 1, Alternative 4 contains increases or reductions in the number of miles of motorized and non-motorized routes that pass through bighorn (+18%, or 4.4 more miles), elk severe winter (-11%, or 30.4 fewer miles), mule deer winter concentration (-11%, or 2.2 fewer miles), and pronghorn (-49%, or 9.9 fewer miles) habitat (Table 56). The 1.5 miles of routes that affect elk winter concentration habitat in Alternative 1, would be either designated for non-motorized uses or would be closed to all travel yearlong in this alternative, resulting in less impact to wildlife and wildlife habitat.

Compared to Alternative 1, Alternative 4 would contain reductions in the number of miles of motorized routes only through bighorn (-7%, or 1.3 fewer miles), elk winter concentration (-18%, or 1.3 fewer miles), elk severe winter (-13%, or 35.0 fewer miles), mule deer winter concentration (-15%, or 23.8 fewer miles) and pronghorn (-11%, or 2.2 fewer miles) habitat. Increases in the number of miles of routes through bighorn habitat from Alternative 1 to Alternative 4 can all be attributed to limiting use on those routes in this alternative to non-

motorized travel.

Compared to Alternative 2, Alternative 4 contains additional miles of existing motorized and non-motorized routes that pass through bighorn (+35%, or 7.6 more miles), elk winter concentration (+28%, or 2.6 more miles); severe winter (+48%, or 80.3 more miles), and mule deer (winter concentration +49%, or 46.8 more miles), and pronghorn (+91%, or 8.6 more miles) habitat.

Compared to Alternative 2, Alternative 4 contains an increase in the number of miles of motorized routes only that pass through bighorn (+105%, or 9.1 more miles), elk winter concentration (+52%, or 2.1 more miles); elk severe winter (+78%, or 101.8 more miles), mule deer (winter concentration (+87%, or 64.7 more miles) and pronghorn (+118%, or 9.8 more miles) habitat.

There would be no seasonal closures for travel through elk or mule deer habitat in this alternative. Most of the miles of routes that currently pass through big game habitat would, in this alternative, be designated for administrative uses only, closed, or for ATV use and single track vehicle use. These changes, although not resulting in closing routes seasonally, would result in fewer impacts to big game species and habitat than in Alternative 1. Without these seasonal closures, winter travel through big game habitat on those routes where motorized travel would be available yearlong, may create stress to big game species during a time period of high energy demands and stress for these and other wildlife species. This could result in increased winter mortality and decreased reproduction in the spring.

Predator Species:
Effects on predators and their habitat would be similar to that described for other wildlife species and habitat. Alternative 4, compared to Alternative 1, would have 1.2 fewer miles of motorized routes that would pass through 1,330 acres of black bear habitat, a 19% reduction. This reduction would help prevent further disturbance to black bear and their habitat. Compared to Alternative 2, this alternative would provide an additional 1.7 more miles of motorized routes that would pass through black bear (fall concentration) habitat, a +50% increase over Alternative 2.

Other Wildlife Species:
Other wildlife species would have similar effects to that described in the Migratory Bird section and Table 9, and the TES Section and Table 12 of this document.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation): Eliminating all cross country travel by motorized and non motorized mechanized uses would greatly contribute to land health standards being met. See the Vegetation section. Based on findings in several biological resource sections, aquatic wildlife habitats would be expected to improve by implementing Alternatives 2, 3, and 4. Generally, Alternative 3 goes farther to decrease route densities (overall and motorized) for terrestrial wildlife species. Alternative 4 would result in the least amount of change compared to Alternative 1in improving fragmentation and other habitat conditions. Under Alternative 1, the opportunity to improve habitat conditions for terrestrial wildlife species is lost, and these species

may decline in health and numbers.

Cumulative Effects

In addition to growth in recreational travel, other reasonably foreseeable actions that could affect terrestrial wildlife habitat over the next 10 years on private and public lands include residential growth, new road construction on private lands, fuels reduction projects, utility corridor maintenance and upgrades, and new buried utility rights-of-way. Activities on public lands in the travel planning area that could also potentially impact terrestrial wildlife habitat and require mitigation include Forest Service planning and projects, Uncompahgre Plateau Project activities, local land use planning, soil research, BLM Uncompahgre Field Office Resource Management Plan revision, continued population growth, vegetation treatments, county road upgrades, special recreation permits and activities, and utility rights of way and corridors. Some of these activities may benefit terrestrial wildlife and habitats. Refer to the main Cumulative Impacts section of this document for a more detailed description of these activities and their potential impacts. The cumulative impacts from these activities to terrestrial habitat from all action alternatives will be long-term and most adverse in Alternative 1 and 4, dispersed and long-term in Alternatives 2 and 3.

OTHER ELEMENTS

For the following elements are considered. Those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access			X
Cadastral Survey		X	
Fire			X
Forest Management			X
Geology and Minerals			X
Hydrology/Water Rights			X
Law Enforcement			X
Paleontology			X
Noise			X
Range Management			X
Realty Authorizations			X
Recreation			X
Socio-Economics			X
Transportation			X
Visual Resources			X

FIRE MANAGEMENT

The Public Lands addressed in the proposed Travel Management Plan are within portions of the Roubideau Fire Management Unit (FMU) and the Uncompahgre Valley FMU. These FMUs consist primarily of pinyon, juniper, sagebrush and grass/desert shrub fuel types and fire is managed in these areas using an Appropriate Management Response, ie, fires are either suppressed or managed for resource benefits depending on site specific resource/social constraints and/or opportunities to receive benefits from the fire event. Prescribed fire is also a valuable tool that is being used to manage vegetation and fuels across portions of the area. Mechanical fuels reduction treatments have been implemented and will continue to be implemented in this area over the foreseeable future as well. The Uncompahgre Field Office Fire Management Plan is the guiding document for all fire and fuels management activities in this area.

The two FMUs are further subdivided into areas in which 1) fire needs to be suppressed and mechanical treatments are needed due to valued private property, improvements and infrastructure, 2) fire and mechanical treatments are valuable tools to utilize to manage wildlife habitat with some constraints, and 3) fire can be allowed to function as a more natural process to maintain natural vegetation mosaics on the landscape. In the Dry Creek Travel Management area approximately 10-15% of the area requires suppression action on all fires as well as mechanical treatments to reduce hazards to private property, improvements, and infrastructure, while the remaining 85-90% can best be described as 'fire use areas' in which a combination of mechanical treatment, prescribed fire, and wildland fire use fires can be utilized to improve wildlife habitat and maintain natural processes and natural vegetative mosaics.

Greater than 95% of the ignitions that occur within this area are from lightning so human caused fires are not a major problem. The few human caused fires that have occurred consist primarily of camp fires associated with party spots and hunting or heavy equipment/roadside fires.

Environmental Consequences

Impacts Common to All Alternatives

When planning and analyzing prescribed burns, the use of motorized vehicles on routes where this use would normally not be permitted would be analyzed in the subject NEPA document for that project and either approved, modified, or denied. In those situations where the use of motorized vehicles would be unacceptable the prescribed burn itself may be modified to take advantage of natural barriers, available designated routes, or in rare instances, the burn could be cancelled.

Fire suppression would be conducted according to the current fire management plan for these lands.

Implementing either alternative would not result in major impacts to fire management or suppression activities.

Impacts from Alternative 1

Currently fire management activities can utilize all existing routes to access mechanical and prescribed fire projects and to patrol for, locate, and manage fire incidents. Most fires, since they are lightning caused, are not usually located near a vehicle access point and subsequently require a hike from the nearest route to locate and manage the fire. Prescribed burns in the area often utilize routes as control lines due both to the route acting as a fuel break and the ability of fire engines to be positioned on the route to improve control of the burn. Under the No Action Alternative these techniques for fire management activities would continue in the same manner that they are currently occurring. There would be no reduction in the available access routes for these activities.

Impacts from Alternative 2

Implementing this alternative would result in 324 miles of routes for full-size motorized vehicles being available for fire management activities. In addition, there would be 34 miles of ATV routes available for fire management activities in this alternative, for a total of 358 miles of available motorized routes for these activities, 342 fewer total miles than would be available in Alternative 1. These miles include access on all administrative routes in Alternatives 1 and 2, and the mileages include the routes that would be closed in Alternatives 2 (259 miles). Thus, planning for and implementing fire management activities would be somewhat more difficult in this alternative than in Alternative 1. This would have some impact on fire management actions as follows: 1) locating and accessing ignitions may be slowed in areas that are more remote due to less road coverage, 2) supporting fires logistically would be more challenging due to decreased ability to move equipment and supplies into remote fires, 3) prescribed burns may be more difficult to manage due to limited road access and subsequent inability to utilize engines for control on routes.

With nearly a 50% reduction in routes, the already limited number of human ignitions should be further reduced, or at a minimum, may become more concentrated in areas in which the public has access or is concentrated in.

Because 85-90% of the area is available for Wildland Fire Use the closure of routes in the area may increase both the need and desire to manage fires more as natural processes on the landscape. A primary objective of fire management within the UFO is to utilize natural ignitions to achieve natural vegetation and fuels mosaics. By limiting the ability of fire personnel to access and intensively manage fires the expectation could be that the fire program may manage fires with a slightly more hands off approach within portions of this area; this would be in line with the intent of the fire management plan to utilize fire for resource benefits across 85-90% of the area.

Access into areas containing private property, improvements, and infrastructure to manage or quickly control fires in those locations should not be greatly reduced since most of these access points are across County or subdivision roads or other rights-of ways which would not be greatly impacted with Alternative 2.

When planning and analyzing prescribed burns, the use of ATVs and UTVs in areas closed to travel or on closed routes as an administrative use would be analyzed in the subject NEPA document for that project and either approved, modified, or denied. In those situations where the use of ATVs or UTVs is unacceptable the prescribed burn itself may be modified to take advantage of natural barriers, open routes, or in rare instances, the burn could be cancelled.

Impacts from Alternative 3

Implementing this alternative would result in a total of 267 miles of motorized routes for full-size vehicles and ATVs (13 miles) being available for fire management activities, 433 fewer miles than in Alternative 1 and 91 fewer miles than in Alternative 2, the Proposed Action. These miles include access on all administrative routes in Alternatives 1, 2, and 3, and the mileages include the routes that would be closed in Alternatives 2 and 3. Thus, planning for and implementing fire management activities would be somewhat more difficult in this alternative than in Alternative 1 and 2. This would have the greatest impact on fire management activities due to greatly less access into the planning area and would make management of any fires more difficult both operationally and logistically. This concern would be especially prevalent in areas containing private property, improvements, and infrastructure.

Impacts from Alternative 4

Implementing this alternative would result in 506 total miles of routes for full-size motorized vehicles and ATVs (32 miles) being available for fire management activities, 194 fewer miles than in Alternative 1 and 148 more miles than in Alternative 2, the Proposed Action. These miles include access on all administrative routes in Alternatives 1, 2, and 4, and the mileages include the routes that would be closed in Alternatives 2 and 4. Thus, planning for and implementing fire management activities would be somewhat more difficult in this alternative than in Alternative 1, and would be made slightly easier and more flexible as compared to Alternative 2. This would allow for more intensive access and management of fires than with the proposed action, though less intensive than under the No Action Alternative.

Cumulative Effects

As mentioned under each of the alternative analysis above, with the emphasis of the Montrose Interagency Fire Management Unit fire program to manage fire over much of this landscape as a natural process, ie, Wildland Fire Use, the closure of varying levels of routes in the area will influence that emphasis due to decreased access for initial attack and logistical support. This could increase the amount of fire that occurs as a natural process within this area by 10-20% or more. Additionally, over time, as closed routes in the area become revegetated there will be fewer ‘natural’ fire breaks across the landscape and fire, whether they are suppression fires or fires for resource benefits, could become larger due to a reduced number of barriers to fire spread on the landscape. This will probably not be a major issue for 1-2 decades or more until roads begin to revegetate over time, and even after 10-20 years the impact may be minimal.

FOREST MANAGEMENT

The planning area includes some of the forest types found throughout the Uncompahgre Field Office (UFO). The dominant forest type in the planning area is Piñon and juniper and Piñon and juniper mixed woodlands.

Ponderosa pine and Douglas fir are found in the planning area, but not in commercial quantities. The entire planning area, except for the Camel Back Wilderness Study Area, is available for firewood and post and rail cutting and gathering by individuals. The BLM conducts no commercial sales of forest products in the planning area. Non-commercial Christmas tree and transplant harvesting occurs in designated locations within the area. Personal use firewood gathering is authorized by permit. Approximately 64 personal use firewood permits, 7 rail post permits, and 1 bough permit were issued in 2007. Stipulations for minimizing resource impacts are attached to each permit that is issued, including permitted off-route use of motorized vehicles. Forest product permits that are issued to the general public currently include a stipulation that limits parking to within 10 feet of existing open routes. Because of the close proximity of the planning area to the City of Montrose and the town of Olathe, firewood cutting is a fairly important use of resources on public lands.

Some unauthorized firewood cutting and harvesting does occur in the planning area.

Very little recent forest management activity has been accomplished in the planning area on public lands. Some pinon-juniper chainings were conducted in the past on the narrow ridges east of Dry Creek Rim Road. These chained areas are being re-vegetated naturally with shrubs and some scattered pinon communities.

There are approximately 40,700 acres of Piñon-juniper communities within the planning area (Table 41). Approximately 30,000 acres of these communities do not meet health standards (Roubideau Land Health Assessment, available in Uncompahgre Field Office).

Historic photos and tree stand structure indicate that in some areas in the planning area piñon-juniper woodlands are becoming denser than they were in the past and are expanding into other plant communities. Recent long-term drought has brought on an Ips beetle epidemic in much of southwestern Colorado. Many other pinyon pathogens have also combined with these to create "piñon decline" which kills the piñon trees. Because piñon are such an important part of the plant communities in the Roubideau unit, piñon decline was used as an indicator of health during the Roubideau Land Health Assessment, and captured by evaluating the vigor or piñon trees. Piñon decline was observed at many sites across the unit, and is especially prevalent in the southern part of the unit.

Approximately 475 miles of existing routes and trails in all travel use categories traverse the Piñon-juniper woodlands, and all the routes are available for motorized use. The more accessible routes are used to gather and cut firewood using full-size pickup trucks and small utility trailers. All the available public lands are available for motorized, cross-country access for this activity.

Environmental Consequences

Impacts Common to All Alternatives:

Existing and future individual firewood permits and permits for gathering other forest products would be issued, with stipulations that address motorized vehicular access. Permits could contain stipulations regarding resource impacts or limiting the activity in wet weather. Public lands could be closed to the gathering of forest products in the event of fire danger or other safety concerns.

Impacts Common to Alternatives 2, 3, and 4

Closing some routes would limit the public's ability to access forest products in some areas. Closing routes that lead onto public lands from private lands with exclusive private landowner access might actually help to reduce unauthorized firewood or forest product gathering.

Restricting motorized use and prohibiting motorized use on some routes, or limiting some routes to ATV or motorcycle use could increase the costs of future forest management. Limiting use on some routes to ATVs or single-track activities such as hiking, motorcycle use, or mountain bikes could restrict access if forest management activities require the use of motorized, full-size vehicles.

Limiting all motorized travel for forest management activities to designated routes would not greatly affect the implementation of these programs.

Closing routes with gates would allow easy access for future forest health and fuels reduction projects. Permanent closures by mechanical means with boulders and tank traps could result in higher future costs for forest management activities.

Impacts from Alternative 1

Growing demands for forest product gathering or cutting would result in continued loss of vegetation and more soil disturbance and an increase in the rate of creation of new routes from cross-country travel for this activity.

Impacts from Alternative 2

Implementing this alternative would result in 230 miles of routes for full-size motorized vehicles being available for forest product gathering. In addition, there would be 34 miles of ATV routes available for this activity, for a total of 264 miles of available motorized routes, 334 fewer total miles than would be available in Alternative 1. These miles do not include access on any administrative routes, and the mileages include the routes that would be closed in Alternatives 2 (259 miles). Closing approximately 259 miles of routes would, to some degree, create an inconvenience to the public in gathering forest products, since the products would need to be carried further where those routes provided access. A decrease in the loss of roadside vegetation and soil impacts would occur because no use would occur on those routes. The conditions of

use on travel in this alternative would result in decreased off-route travel to gather or cut products, and the proliferation of new user-created routes would decrease significantly. This would prevent further vegetation loss and soil and water impacts. The closure of routes and the travel conditions of use could also deter unauthorized gathering because of this inconvenience.

An additional 61 miles of administrative routes would be available for planning for and implementing forestry management activities for a total of 324 miles of motorized routes. Forest management implementation would be slightly more difficult in this alternative than in Alternative 1, because locating, accessing, and implementing activities may be slowed in areas that are more remote due to less road coverage and subsequent inability to utilize motorized vehicles everywhere for needed uses.

Impacts from Alternative 3

These impacts would be similar to forest product gathering as those in Alternative 2, except that implementing this alternative would result in a total of 123 miles of motorized routes for full-size vehicles and ATVs (13 miles) being available, for a total of 136 miles of motorized routes for access, 554 fewer miles than in Alternative 1 and 128 fewer miles than in Alternative 2, the Proposed Action. These miles do not include access on administrative routes in Alternatives 2, and 3, and the mileages include the routes that would be closed in Alternatives 2 and 3 (369 miles closed in Alternative 3). Thus, forest product gathering activities would be somewhat more difficult in this alternative than in Alternative 1 and 2.

An additional 99 miles of administrative routes would be available for planning for and implementing forestry management activities for a total of 222 miles of motorized routes, about 100 fewer miles than in Alternative 2 and 480 fewer than in Alternative 1. This alternative would have the greatest impact on implementing forest management activities due to greatly less access into the public lands in the planning.

The decreases in vegetation loss and soil impacts would be greater in this alternative than in any alternative.

Impacts from Alternative 4

Implementing this alternative would result in 422 miles of routes for full-size motorized vehicles being available for forest product gathering. In addition, there would be 29 miles of ATV routes available for this activity, for a total of 451 miles of available motorized routes, 249 fewer total miles than would be available in Alternative 1 and 187 more miles than in Alternative 2. These miles do not include access on any administrative routes, and the mileages include the routes that would be closed in Alternatives 2 (118 miles). Closing approximately 118 miles of routes would, to some degree, create an inconvenience to the public in gathering forest products, since the products would need to be carried further where those routes provided access. A decrease in the loss of roadside vegetation and soil impacts would occur because no use would occur on those routes. The conditions of use on travel in this alternative would result in decreased off-route travel to gather or cut products, and the proliferation of new user-created routes would decrease significantly. This would prevent further vegetation loss and soil and water impacts.

The closure of routes and the travel conditions of use could also deter unauthorized gathering because of this inconvenience.

An additional 12 miles of administrative routes would be available for planning for and implementing forestry management activities for a total of 463 miles of motorized routes. Forest management implementation would be slightly more difficult in this alternative than in Alternative 1, because locating, accessing, and implementing activities may be slowed in areas that are more remote due to less road coverage and subsequent inability to utilize motorized vehicles everywhere for needed uses.

Cumulative Effects

The alternatives under consideration create no long-term adverse or beneficial cumulative effects to forest management in the travel planning area when considered with other reasonably foreseeable actions.

GEOLOGY AND MINERALS

The Planning area is located in the Colorado Plateau geomorphic province. It is on the northeastern flank of the Uncompahgre uplift. The Uncompahgre uplift is a broad upwarping of Precambrian rock overlain by Mesozoic sediments. The formations overlying the project area include Precambrian age formations and the Chinle, Entrada and Morrison formations located in drainages, and the Dakota and Mancos shale formations located on the mesa tops.

Leasable Minerals: There are no oil and gas leases at this time. Any leases issued would contain stipulations for oil and gas operation activities contained in the current resource management plan for the Uncompahgre Field Office. Much of the public land is available for oil and gas leasing, either yearlong or with seasonal restrictions to prevent disturbance to wintering big game. The Camel Back WSA is closed to oil and gas leasing, as well as to other mineral leasing.

No other energy leasable minerals and no non-energy leasable minerals are known to exist at this time.

Saleable Minerals: Motorized access is important for the mineral program, especially for saleable minerals. Valid existing rights associated with the minerals program and permits issued to the public in the FO include vehicular access.

Saleable mineral activities in the area primarily include rock collection for landscape purposes. No commercial rock collecting occurs in the area. Individuals with permits can collect moss rock using equipment such as wheel barrows, ATVs, pickup trucks, and small trailers. Approximately 160 individual rock-collecting permits were issued by BLM in 2008. Authorized types of vehicles can be taken cross-country if a valid permit authorizing this use has been issued. These permits include measures for rehabilitation and other mitigation and are designed to minimize cross-country impacts. With the exception of the Camel Back Wilderness Study Area (WSA), the public land is available for collection and sale of saleable minerals, primarily

moss and decorative rock. The Colorado Department of Transportation (CDOT) holds a permit for a mineral material storage site located in Sub-Region C in Sec. 27, T50N, R11W, NMPM. This permit is a free-use permit to the CDOT, and is used for storage and extraction of large rocks for road or other construction purposes.

Locatable Minerals: Several mining claims are located in the area, but none are actively being developed. There has been little past production and no recent production of locatable minerals within the area. There are some abandoned mines from past mining activities. Much of the public land is open to mining claim location yearlong. The Camel Back WSA is withdrawn from the staking of mining claims.

Environmental Consequences

Overall, in all alternatives, a large number of miles of existing routes would be available for motorized and non-motorized access for minerals management purposes, and all public lands, except for public lands within the WSA, would remain available for leasable, locatable, and saleable minerals, including collection of moss rock or decorative rock. Mineral material activities, such as moss rock collection, would be conducted according to BLM authorizations and subject to stipulations included in the authorizations.

Impacts from Alternative 1

There are approximately 700 miles of existing, available motorized and non-motorized routes. About 96%, or 677 miles, of this total would be available for use with motorized vehicles in this alternative. The public lands, with the exception of the Camel Back WSA, would continue to be available for collection of moss or decorative rock, and all existing routes would be available for access. Mineral material activities, such as moss rock collection, would be conducted according to BLM issued permits and stipulations included in permits. Cross-country travel for miscellaneous rock collection would continue to occur, resulting in soil erosion, compaction, and the creation of new, user-established routes and trails. Existing policies for the management of use would continue, and probable expansion and proliferation of unplanned and poorly located routes by all users would occur.

Impacts from Alternative 2

Approximately 66% of the existing routes and trails, or 460 miles, would be designated as being available for access for minerals management purposes, including for moss or decorative rock, using motorized and non-motorized travel. Compared to Alternative 1, implementing the travel management plan in this alternative would result in fewer miles of access routes being available for access to use for minerals management purposes, including collecting moss or decorative rock, or in exercising mineral material permits. Mineral related activities, such as moss rock collection, would be conducted according to BLM issued permits and stipulations included in permits. During part of the year, some of these routes would not be available for use in order to prevent disturbance to wintering big game. See Appendix 4 for routes that would be closed seasonally in this alternative. Some existing routes would be closed, which could limit vehicular access to some public lands.

Impacts from Alternative 3

The impacts from implementing this alternative are similar to those in Alternative 2, the difference being that approximately 48% of the existing routes and trails, or 336 miles, would be designated as being available for motorized and non-motorized access for mineral related activities. Mineral material activities, such as moss rock collection, would be conducted according to BLM issued permits and stipulations included in permits.

Impacts from Alternative 4

In Alternative 4, approximately 88% of the miles of existing routes, or 617 miles, would be available for motorized and non-motorized access for mineral related activities. Most of the existing routes would be available yearlong for mineral material access. Mineral material activities, such as moss rock collection, would be conducted according to BLM issued permits and stipulations included in permits.

Cumulative Effects

Cumulative impacts particularly for saleable minerals (moss rock and decorative rock collecting) would be measurable by the miles of roads proposed to be closed by each alternative, ie fewer miles of roads results in less areas of public land that would be accessible.

HYDROLOGY/WATER RIGHTS

Refer to the Water Quality section for a description of the areas hydrologic function.

There are several water sources across the planning area that has associated water rights or permits. The Colorado Water Conservation Board holds instream flow water rights on Roubideau, Potter, Dry and Spring Creeks, for the protection of existing fisheries and other, natural attributes of the riverene environment. Additionally, these creeks as well as the East and West Forks of Dry Creek, and Criswell and Monitor Creeks, have federal appropriative water rights for instream diversions to benefit, livestock, wildlife, recreation, and fire suppression. Approximately 65 livestock watering ponds are located throughout the area. Most of these ponds are permitted through the Colorado Division of Water Resources, and have storage capacities less than 1 acre-foot. For the most part, the ponds are seasonally functional, containing water only after snowmelt or large precipitation events. There are also about 27 spring or seep sources across the planning unit, many of which have been developed for sources of livestock water. Twelve of the 27 springs have federal reserved water rights under the authority of Federal Executive Order - Public Water Reserves #107. The remaining 15 water sources have state adjudicated water rights.

Impacts Common to all Alternatives

With water sources needing routing maintenance such as livestock ponds and spring

developments, authorized access, including off route travel if needed, is allowed under all alternatives for the party responsible for conducting the maintenance.

Impacts from the Alternative 1

Under Alternative 1, travel on over 700 miles of existing routes, and cross-country travel on all public lands would continue to be available. In the future, additional user created routes would become established, increasing soil disturbance in sensitive areas such as the WIZ and on erodible soils. Many of the existing and anticipated future routes would receive little maintenance to ensure adequate drainage and minimize erosion. Accelerated sediment production and potential contaminant spills from motorized use could continue to occur on or along 10 miles of routes along perennial streams within the WIZ, and 83 perennial stream crossings, within Sub-Regions A, B, C, and D (Table 16). This sediment production and potential spillages could impact fisheries presently protected with instream flow water rights. At present there are 200 miles of routes that occur on soils that have a severe potential for erosion (Table 17), and 440miles of routes on soils with a high potential for supporting biological soil crusts (Table 33). This, added to anticipate increases in soil surface disturbance from future user created trails, would accelerate sediment production, potentially increasing the maintenance requirements for the livestock watering ponds within the planning area.

Impacts Alternative 2

Compared to Alternative 1, in this alternative travel would be restricted to approximately 420 miles of designated motorized and non-motorized routes, or 259 fewer miles than in Alternative 1, and all off-route travel would be prohibited except for horseback or foot travel. With approximately 259 miles of existing routes targeted for closure under this alternative, there would be a 38% reduction in the number of perennial stream crossings, or 36 fewer crossings, and a 50% reduction in miles of routes in the WIZ along perennial streams, or 5 fewer miles, which would reduce the potential for impacts (sediment and contaminant spills) to riverene values protected with instream flow water rights. Most of these benefits would occur in Sub-Regions A through D. However, across the planning area there would be a 30% reduction in the number of miles of routes crossing soils having a severe erosion potential, or 60 fewer miles, and a 38% reduction in the number of miles of routes crossing soils with a high potential for supporting biological soil crusts, or 167 fewer miles. These actions along with implementing the proposed measures in this alternative, such as prohibiting off-route travel would reduce the sediment yield potentially intercepted by livestock ponds.

Impacts from Alternative 3

Compared to Alternative 1, in this alternative travel would be restricted to approximately 271 miles of designated motorized and non-motorized routes, or 369 fewer miles than in Alternative 1. Perennial stream crossings and miles of WIZ would be reduced by -18% (15 fewer crossings) and -20% (2 fewer miles) from the existing situation, respectively, about half of the reduction of Alternative 2. Routes crossing soils with a severe erosion potential or a high potential for supporting biological soils crusts would be reduced by 67% (0.4 fewer miles) and 56% (249 fewer miles), respectively. The measures in this alternative, such as the prohibition of all off

route travel, would benefit livestock watering facilities and instream flow water rights. Potential impacts to riverine values supported by instream flow water rights and livestock ponds under Alternative 3 would trend similar to Alternative 2.

Impacts from Alternative 4

Compared to Alternative 1, in this alternative travel would be restricted to approximately 606 miles of designated motorized and non-motorized routes, or 118 fewer miles than in Alternative 1. Potential impacts to riverine values supported by instream flow water rights and livestock ponds under Alternative 4 would trend similar to Alternative 2 but to varying degrees. Perennial stream crossings and miles of WIZ would be increased by 59% (49 more crossings) and 30% (3 more miles) from the existing situation, respectively (Table 22). This increase is primarily a result of the Roubideau Creek horse trail, which increases the miles of WIZ and perennial stream crossings in Sub-Region B by 133% and 144% from the existing situation, respectively (see Table 22). Since this trail is limited to horse and foot traffic, impacts to riverine values would be limited. The remainder of the Sub-Regions would see little or no change in the miles of WIZ and stream crossings. Compared to Alternative 1, the number of miles of routes crossing soils having severe erosion potential would be increased by 2% or 5 miles, and the number of miles of routes crossing soils having a high potential for supporting biological soils crusts would be reduced by 14% or 60 fewer miles, from the existing situation. As with Alternative 2, measures in this alternative, such as prohibiting all off-route travel, would benefit livestock watering facilities and instream flow water rights.

Cumulative Effects

There are many factors affecting the water quality and hydrology. Much of the surrounding private land in this area is being subdivided and becoming increasingly developed with new routes and home sites, potentially adding to accelerated levels of sediment yield in these watersheds.

Along with the impacts caused by the development of new routes and home sites, there are impacts associated with historic livestock grazing that continue to influence the water quality with excessive sediment concentrations in the waters of the Dry Creek travel planning area and downstream users. The Dry Creek TMP is an important piece of the watershed management equation. It will determine the kinds and amounts of travel uses that will be allowed on the Public Lands within the affected watersheds. As the development of private lands for residential homes, and the demand for recreational uses on Public Lands continue to increase, the decisions made in the Dry Creek TMP will play an important role in determining the overall health of these watersheds.

LAW ENFORCEMENT

Problems with unauthorized or illegal use on public lands are numerous and growing. In addressing these problems the Law Enforcement program focuses on education, compliance checks, and issuing written warnings and violation notices. The ability of the Law Enforcement

program to increase compliance with existing use regulations is comprised of three main problems:

Manpower Limitations: At present only two law enforcement officers (Rangers) are stationed in the Uncompahgre Field Office (UFO), which cover the UFO and Gunnison Gorge National Conservation Area (GGNCA). The Rangers are responsible for enforcement activities on all public lands. In addition to enforcing use violations, the Rangers must also handle mineral, land and realty, grazing, recreation, and other program violations. Also, one of these two Rangers is responsible for the Law Enforcement program in the Gunnison Field Office (GFO).

Current Travel Management Policy: Under the BLM's current OHV regulations, motorized travel is limited to three categories of OHV designations: Open, Limited or Closed. This current OHV designation system is difficult for the public to understand and for the BLM to enforce. Although the current regulations prohibit the operation of OHV's in a closed area or trail or in a manner causing resource impacts, the planning area is not adequately signed to relay to the public which areas are Open, Limited or Closed. Many unauthorized "user created" routes have been developed over the years that visitors now regard as existing motorized routes. The creation of such routes often conflicts with other users. Unauthorized extreme jeep trails have been illegally constructed within the Dry Creek Travel Management Plan Area. Signs are posted on some "user created" routes indicating that they are closed to motorized use, but many of the signs are ignored or do not stay up for very long.

Environmental Consequences

Impacts Common to All Alternatives

In accordance with 43 CFR 8340.0-5, motorized travel within the planning area would not be affected for the following uses: fire management or suppression activities emergencies, or law enforcement vehicles being used for emergency purposes, as well as any vehicle whose use is expressly authorized by the Authorized Officer (permitted/authorized use). Law enforcement personnel would be permitted to use motorized vehicles in the planning area on designated routes, closed routes, and cross-country during official law enforcement or investigative events.

Impacts Common to Alternatives 2, 3, and 4

The primary positive impact and benefit for law enforcement in adopting a travel management plan and essentially switching to a designated route system is that the public and BLM Rangers would know the routes that are available for designated uses and seasons. This would assist Rangers in enforcing user compliance and in court proceedings. Without additional manpower, however, the implementation of the designated route travel management system proposed under either Alternatives 2, 3, or 4, would do little to alleviate the problems that law enforcement has with illegal OHV use. Some of these problems include the need for additional public education, BLM field presence, and the installation and replacement of signs and vehicle barriers.

Impacts from Alternative 1

Under Alternative 1, law enforcement personnel would continue to operate under current travel

management regulations that are difficult for the public to understand and for the BLM to enforce. This alternative also limits the ability to effectively enforce the closures of user created routes.

Impacts from Alternative 2

Alternative 2 would implement a travel management plan with a designated route management system that would improve the ability of law enforcement personnel to enforce OHV regulations and OHV restrictions. Alternative 2 would initially create a greater need for education with the users, and compliance and law enforcement actions, but this would improve over time as users become familiar with the new travel management plan and route system. The seasonal closures of some routes to prevent disturbance to wintering big game would, over time, assist law enforcement by providing fewer routes during the closure period to patrol.

Impacts from Alternative 3

Alternative 3 would also implement a travel management plan with a designated route management system that would improve the ability of law enforcement personnel to enforce OHV restrictions. This alternative would, however, require the most law enforcement presence, since the number of road and trails that would be designated for seasonal and yearlong use would be substantially reduced. This could lead to overcrowding and increased user conflicts in some areas, increased violations of OHV use on non-motorized routes, and increased attempts to establish user-created routes.

Impacts from Alternative 4

Alternative 4 would also implement a travel management plan with a designated route management system that would improve the ability of law enforcement personnel to enforce restrictions. Alternative 4 would initially create a greater need for education with the users, and compliance and law enforcement actions, but this would improve over time as users become familiar with the new travel management system. Since more routes would be available for OHV use, in the long term, and users would be distributed over more miles of routes, potentially a lower level of law enforcement presence could possibly be required.

Cumulative Effects

Cumulative impacts that would be measurable would not likely occur as a result of implementation of any alternative.

PALEONTOLOGY

The planning area spans at least three distinctive Potential Fossil Yield Classification (PFYC) areas -3, 4 and 5. Most of the area is contained in PFYC 4 (moderate to high potential), while Dry Creek and tributary drainages are in PFYC 5 areas, known to contain important fossil specimens.

Paleontology

Several notable paleontological locations occur within the area. These include the Burro Canyon formation and large areas of the Morrison formation found in Dry Creek itself, in Roubidoux Canyon, and outcroppings in various areas throughout the area. Scientific paleontological quarrying has been accomplished in many localities in the area. Continued paleontological resource inventories are being conducted and project-specific inventory would be required on those areas which rank in the Potential Fossil Yield Class (PFYC) 4 or higher. These inventories would identify those areas that require special attention or mitigation.

Environmental Consequences

Impacts from Alternative 1

Current levels of travel may impact some important paleontological localities, and secondary impacts from fossil collection and erosion may also occur due to current management policies. This alternative would allow the current level of potential impacts to continue. The most serious type of impacts would be caused by dirt bikes and ATV's traveling over steep clay slopes where fossils are eroding from the shale layers. The potential for illegal digging is high due to the high number of routes, and could result in major impacts to irreplaceable fossil resources.

Impacts from Alternative 2

Compared to Alternative 1, Alternative 2 would result in an improvement to the protection of fossils and historic dinosaur quarries. Elimination of off road driving would stop prevent the use of cross-country motorcycle and ATV use on the steep clay slopes where fossils may be exposed and disturbed by the resulting erosion. Relocation and rehabilitation of some routes could assist in preventing further erosion and disturbance on some routes.

Impacts from Alternative 3

Compared to Alternative 1, this Alternative would reduce impacts to fossils due to a major reduction in the number of available designated motorized routes and the restriction of travel to existing routes and tracks. The reduction of motorized travel would decrease the impacts caused by cross-country travel and those activities associated with motorized use. It would also reduce potential impacts to both known and unknown fossil sites.

Impacts from Alternative 4

Compared to Alternative 1, Alternative 4 would reduce impacts to fossils due to the elimination of off road travel in known fossil localities. In addition, the impacts would be moderately reduced due to fewer motorized routes in known fossil locations than under the Current Use Alternative.

Cumulative Effects

Cumulative effects on paleontological resources cannot be specifically identified until inventories are completed and paleontological resources have been identified.

NOISE

Ambient sound and noise levels vary greatly throughout the area. Ambient sound includes the wind and noise originating from vehicle traffic on Montrose County roads and privately owned lands. Other noise sources include industrial activities, farming and ranching activities, aircraft over-flights, recreational target shooting, and activities related to uses around residential areas. Many areas within the planning area are, however, relatively quiet. The preponderance of these quiet areas is found on public lands.

Vehicles on county roads are the largest noise contributors to public lands. Most of the public lands are more influenced by the noise from motor vehicles on routes than from other sources. Those Sub-Regions that border county roads are exposed to continuous high levels of traffic noise from cars and large trucks. The level of noise generated by car and truck traffic generally lessens with increased distance from the county road but the sounds of traffic can often be heard from many miles away. The degree to which the sounds of traffic noise can be heard away from the county roads is dependent on the nature of the local terrain and wind direction. Noise can be blocked or muted by the surrounding vegetation and topography.

The use of recreational vehicles on BLM routes is another major source of noise in portions of the area. As a general rule, ATVs and motorcycles produce more noise than full-size 4WDs and SUVs. ATVs and motorcycles produce more noise because their exhaust systems are not as effective at muffling noise and the machines are often operated at high rpms, whereas full-size vehicles are usually equipped with effective muffling systems and are operated at slower speeds. Consequently, the Sub-Regions with the highest noise levels are those that contain numerous routes that attract high amounts of ATV and dirt bike use.

Under Colorado State Law 08-063, state and federal agencies have the ability to educate and enforce state sound limits. The law sets a limit of 96 decibels on most OHVs and authorizes the use of the Society of Automotive Engineers 20 inch sound test. This test makes it possible to field test OHVs for sound education and enforcement purposes. BLM OHV crews and Law Enforcement personnel will be trained in test procedures. Education and enforcement of sound limits can have a significant effect on noise emissions throughout the planning area.

Other than implementing the state sound emission limits, the BLM has very little ability to change the noise patterns on the non-federal lands in the planning area. The noise on and from these non-federal lands can also be expected to increase as new subdivisions are created and as traffic on the major local routes increases. These increases are fueled primarily by increasing rural residential development and recreational uses.

Noise

Currently, visitors to the public lands can find a variety of areas that vary with the amount of noise that may or may not affect their recreational experiences.

Environmental Consequences

Impacts from Alternative 1

Noise levels under this alternative would change in a variety of ways. In most areas, noise levels would increase, varying from slight increases in some areas (the less roaded Sub-Regions) to major increases in others. Though some increases in noise levels would come from increasing development on adjacent private lands, most of the increases on Public Lands would come from recreational motorized vehicle use. Overall, under this alternative, noise levels would experience a slow but gradual increase throughout the planning area. A variety of noise levels would still be able to be found, as not all Sub-Regions would experience the same levels and types of increases in noise. The levels of noise from target shooting would generally remain the same but could experience slight increases from increased levels of recreational use in some areas. Disturbance to other recreation users, adjacent private property owners, and wildlife would continue to result from the use and policies.

Impacts from Alternative 2

Compared to Alternative 1, under Alternative 2, which limits motorized use to designated routes, noise levels can be expected to increase in some of the Sub-Regions, while decreasing in other Sub-Regions. Lower levels of noise are anticipated in areas where routes are closed or are converted from motorized to non-motorized use. Sharp decreases in noise levels resulting from decreased amounts of motorized vehicle use would be found in Sub-Regions A and E. The remaining Sub-Regions would generally retain current noise levels, with some road closures offset by overall increases in use levels. Overall, the proposed closure of certain routes would result in decreased noise levels in the immediate geographic vicinity of the closed road. Conversely, those routes that remain available for motorized use or the new routes to be constructed would lead to increases in noise levels originating from these routes. In the Pplanning area as a whole, there would be an increase in the number and size of areas where low levels of noise are found, as well as some localized areas where noise levels would increase. Less disturbance to wildlife, adjacent property owners, and other recreation users would occur in some Sub-Regions.

Impacts from Alternative 3

Compared to Alternative 1, under this alternative, which limits motorized use to many fewer, designated routes, noise levels under this alternative would be expected to decrease. The decrease would be slight in areas that are currently relatively quiet and greater in those Sub-Regions with the largest amount of road closures. Under this alternative, noise levels in Sub-Region E, D, G, and F would drop sharply. Noise levels in Sub-Regions A and C would drop moderately. The overall increase in visitors would probably result in a moderate to high increase in noise levels on those Public Land routes that remain available for motorized use and on adjacent Federal, state, and local roads. This would be caused by users of motorized vehicles

shifting their use to those routes that remain open. Less disturbance to wildlife, adjacent property owners, and other recreation users would occur in some Sub-Regions.

Impacts from Alternative 4

Compared to Alternative 1, under this alternative, which limits motorized use to slightly fewer, designated routes, noise levels under this alternative would be expected not to be at the same levels as those under Alternative 1. This increase would be slight in areas that are currently relatively quiet and greater in those Sub-Regions that currently receive a moderate to high amount of motorized use. This increase in noise levels would come from the continuation of use on some routes, the addition of new routes in certain areas, and the overall gradual increase in use throughout the planning area. The overall increase in visitors would probably result in low to moderate increases in noise levels on those Public Land routes that remain open and on adjacent Federal, state and local roads. This increase is mostly based on the greater availability of motorized routes on Public Lands than under Alternative 2. Overall, less disturbance to wildlife, adjacent property owners, and other recreation users would occur in some Sub-Regions.

Cumulative Effects

In addition to growth in recreational travel, other reasonably foreseeable actions that could affect regional ambient sound and noise levels over the next 10 years on private and public lands include residential growth, new road construction on private lands, fuels reduction projects, utility corridor maintenance and upgrades, and new buried utility rights-of-way. Activities on public lands in the travel planning area that could also potentially impact ambient sound and noise levels and require mitigation include, Forest Service planning and projects, Uncompahgre Plateau Project activities, local land use planning, soil research, BLM Uncompahgre Field Office Resource Management Plan revision, continued population growth, vegetation treatments, county road upgrades, special recreation permits and activities, and utility rights of way and corridors. The cumulative effects to ambient sound from these activities in addition to noise from all action alternatives will be long-term and most adverse and dispersed in Alternative 1 and 4, contained and long-term in Alternatives 2 and 3.

RANGE MANAGEMENT

There are 23 grazing allotments in the planning area. The allotments range from an elevation of 5,040 feet in the north to 8,000 feet along the southern portion. The allotments are comprised of gently sloping mesa tops dissected with deep canyons draining from southwest to northeast. The vegetation is consists of cool and warm season grasses, shrubs, and forbs. The riparian areas support a variety of native riparian vegetation with conservative grazing prescriptions, usually associated with larger grazing allotments. Allotments are used by either sheep or cattle and season of use on allotments varies from fall, winter and/or spring use.

The Dry Creek Travel Management Plan (TMP) would have some affect on the grazing permittees. There would be a need for permittees to work closely with Field Office Rangeland Management Specialists (RMS) in terms of where to put camps and livestock supplements.

Cleaning of ponds, mending of fences, and maintenance of range improvements will still be incorporated into ranching operations regardless of route closures. Use of the allotment during the permittees permitted use period would continue in all alternatives whether the area was closed for wildlife protection to the general public or not. Motorized vehicular access by permittees for allotment and livestock management will continue to occur according to the terms and conditions authorized, in the CFR and valid grazing permits. Cross country motorized vehicular travel usually does not occur by ranchers unless authorized by BLM, or during extreme emergencies such as calving difficulty or livestock injury or death.

Environmental Consequences

Impacts from Alternative 1

There are approximately 700 miles of routes available for recreational and other uses. Of these 700 miles or routes, approximately 677 miles, or 96%, are available for travel using most types of motorized and mechanical vehicles. In Alternative 1, the public lands, with the exception of the Camel Back Wilderness Study Area (WSA) would continue to be managed such that unplanned and poorly located routes would continue to be developed by cross-country vehicular use. In this alternative routes would continue to proliferate and livestock would have very few areas, if any, to go for calving and caring for young without large amounts of potential activity or harassment from travel. Permittees locating sheep camps in the fall/winter would have a greater challenge in finding areas where these camps would not be as accessible to the general public, potentially resulting in more vandalism and human disturbance to these camp areas. Although most camps are usually not vandalized, some in high use areas have been broken into. The potential for additional vehicular access, combined with the available existing routes, could increase livestock and recreational user conflicts in this alternative. Within sheep camps there are typically sheepdogs, and in locations where sheep camps and grazing cannot be placed away from concentrated recreational trails use, conflicts are more likely to occur.

Impacts from Alternative 2

Approximately 60% of the total existing routes, or 420 miles, would be designated and available for a variety of uses and vehicles in this alternative, compared to Alternative 1. However, not all these routes would be available for travel or use by all uses and by all vehicle types. The route network in this alternative was proposed with quality recreation experiences in mind while maintaining open mesa tops for wildlife and livestock purposes. Quality recreation routes that enhance recreation opportunities while eliminating the availability of some routes would tend to decrease livestock and recreational user conflicts. This reduction in the number of miles of available routes would result in decreased human pressure noise near livestock during the calving seasons, reduce the potential sheep dog and route and trail user conflicts in the fall, and help reduce the likelihood of human vandalism and disturbance at sheep camps. This would occur due to the ability of livestock to more likely find lower traffic use areas and through the potential for permittees to place sheep camps away from higher use areas. Designated routes that have been planned with BLM and community involvement usually provide a more acceptable array of recreational opportunities. Even though this alternative provides fewer available route miles, compared to Alternatives one and four, implementing this alternative would still provide

an ample quantity of quality recreational benefits and opportunities, and reduce conflicts between all users. This alternative would also potentially have positive influences on the ranching community who use the area as part of their viable economic base of operation.

Impacts from Alternative 3

Compared to all alternatives, implementing this alternative would result in fewer miles of available designated routes for motorized and mechanical vehicle uses. Approximately 45%, or 336 miles of the total existing routes would be designated and available for a variety of uses and vehicles in this alternative, compared to Alternative 1. However, not all these routes would be available for travel or use by all uses and by all vehicle types. Quality recreation routes that enhance recreation opportunities while eliminating the availability of some routes would tend to decrease livestock and recreational user conflicts. This is the most livestock-friendly option with large areas where livestock and sheep grazing could occur with little user conflict while still providing quality recreational opportunities, even though less than in Alternative 1. This reduction in the number of miles of available routes would result in decreased human pressure noise near livestock during the calving seasons, reduce the potential sheep dog and route and trail user conflicts in the fall, and help reduce the likelihood of human vandalism and disturbance at sheep camps. This would occur due to the ability of livestock to more likely find lower traffic use areas and through the potential for permittees to place sheep camps away from higher use areas. Designated routes that have been planned with BLM and community involvement usually provide a more acceptable array of recreational opportunities. Even though this alternative provides fewer available route miles, compared to Alternatives one and four, implementing this alternative would y still provide an ample quantity of quality recreational benefits and opportunities, and reduce conflicts between all users. This alternative would also potentially have positive influences on the ranching community who use the area as part of their viable economic base of operation.

Impacts from Alternative 4

Approximately 83%, or 617 miles of the total existing routes would be designated and available for a variety of uses and vehicles in this alternative, compared to Alternative 1. However, not all these routes would be available for travel or use by all uses and by all vehicle types. This alternative would result in a higher route density (miles of routes per square mile of public land) than Alternatives 2 or 3. The route network in this alternative would result in nearly the same mileage of routes located on large open mesa tops or valleys as in Alternative 1, and potential conflicts between recreation trail users and livestock grazing or wildlife and habitat use would continue. This is the next-to-least livestock-friendly alternative being considered, with very few or no large areas where livestock and sheep grazing could occur with little user conflict. This alternative would not reduce livestock and recreational user conflicts and potential vandalism at sheep camps, but rather has the potential to increase the occurrences.

Cumulative Effects

In addition to growth in recreational travel, other reasonably foreseeable actions that could effect range management over the next 10 years on private and public lands include residential growth,

fuels reduction projects, utility corridor maintenance and upgrades, and new buried utility rights-of-way. Activities on public lands in the travel planning area that could also potentially impact range management include, Forest Service planning and projects, Uncompahgre Plateau Project activities, local land use planning, soil research, BLM Uncompahgre Field Office Resource Management Plan revision, continued population growth, vegetation treatments, county road upgrades, special recreation permits and activities, and utility rights of way and corridors. The cumulative effects to range management will be long-term and most adverse and dispersed in the Alternative 1 and 4, limited and long-term in Alternatives 2 and 3.

REALTY AUTHORIZATIONS

Land status in the planning area consists of mostly large tracts of public lands and smaller tracts of private land that are within the area or on the perimeter. South and west of the area are lands administered by the United States Forest Service (USFS).

There are several rights-of-way (ROWs) within the planning area, including 115kV power transmission lines in Sub-Regions A, C, E, D, and F. TransColorado Gas Transmission Company holds a BLM ROW for a 22" gas pipeline that crosses into or is adjacent to Sub-Regions C, D, and E. Power transmission lines include high-voltage lines operated by Western Area Power Administration (WAPA) and by Tri-State Generation and Transmission Association (Tri-State). Each ROW holder is responsible for maintaining BLM ROWs, including routes, according to stipulations in each grant. The BLM has had discussions with WAPA and Tri-State to jointly reduce the amount of potential wildfire fuels within and outside their electrical transmission ROWs to protect major transmission lines from the impacts of wildfire. Treatments would be scheduled on a yearly basis and affected ROW holders would be contacted as treatments are scheduled. Access for maintenance of these facilities is currently available, and most existing routes are available for use by the public. Avoidance of ROW facilities and yearly coordination with ROW holders would be the techniques utilized to reduce conflicts on and adjacent to ROWs. Many transmission facilities were constructed as many as 50 years ago, and significant repair and/or replacement would be necessary. Continuous and uninterrupted access to each of these facilities is currently available.

The use of existing, designated routes when possible would be encouraged by BLM rather than constructing new routes for access needs for existing and proposed ROW construction, maintenance, or associated resource management. Future realty program access needs would be evaluated using travel management plans in place and existing road networks. Before construction occurs, environmental assessments are prepared for future routes for authorized activities, and mitigation developed as necessary on a case by case basis.

No existing utility corridors are located in the area, however, there is a proposed ROW corridor, the West-wide Energy Corridor that would parallel and follow the TransColorado gas pipeline ROW. The corridor is proposed to be 3,500 feet wide, with the existing pipeline being the centerline of the corridor. If the corridor is approved, any entities proposing linear utilities in the general area would be required to first consider and examine this corridor.

During the analysis phase of this EA and travel management plan, BLM discovered that an access road currently used by the public and commonly known as the West Transfer Road

crosses a small private in-holding. This road is an important access route planning area. The current land owner has never posted the property nor considered closing it, and the public has historically used the road to access public land in Sub-Region C.

Environmental Consequences

Impacts Common to All Alternatives

Continuous and uninterrupted access to all authorized facilities would be required. The existing ROWs, their permitted uses, terms and conditions, and the permitted access to authorized ROWs would not be affected by any alternative.

Under Alternative 1, there would be no impact on existing land status, realty authorizations, or access. The uses of existing routes and cross-country travel would not be affected by this alternative. Under Alternative 1, there would be no change to the existing situation in that all existing routes would be available for use for realty authorizations.

Under Alternatives 2, 3 and 4, access would be along designated routes only, and depending on the alternative, would vary in the degree of impact based on the number of miles of routes available. See Appendix 4 for maps of routes for each alternative. New routes for uses on public lands may be authorized in rights-of-way grants or other authorizations on a case-by-case basis after appropriate environmental analysis. Access along the potentially resulting new routes may be limited to the realty authorization holder, or these routes could be available for public use.

BLM would continue to pursue acquisition of a public easement on the West Transfer Road along a short segment of public land.

Cumulative Effects

Considering the cumulative effects, population growth and nearby development of private lands would result in more requests for services needing utility extensions or utility corridors in the planning area, which would increase effects to soils, visual resources, vegetation, and water resources for all alternatives. However, effects would be mitigated in Alternatives 2, 3, and 4 by limiting access to only what is absolutely needed by the companies to service their facilities and limiting those access routes to administrative use only as needed rather than leaving them open to the general public.

RECREATION

Federal agencies are major contributors to the recreation amenities in Colorado's southwest region, managing over 66% of the entire land base, of which two million acres are managed by the Bureau of Land Management (BLM). The Uncompahgre Field Office (UFO) manages approximately half of those acres and approximately 110,000 acres would be affected by the alternatives and travel management plans presented in this document.

Recreation

Recreational use has increased significantly over the last fifteen years. This increase can be attributed to population growth in Colorado (30.6% increase in population from 1990 to 2000; 13% increase from 2000 to 2007). Approximately a million Colorado residents live within a three hour drive of the area. Population growth within Delta, Montrose and surrounding counties (i.e. Mesa County) also has a direct impact on recreation use because many residents and their families and friends recreate on public lands near their homes. Montrose County population increased by approximately 62% from 1990-2007. For the same period, Mesa County and Delta County populations increased by 49% and 45%, respectively.

Colorado Travel Year 2006 Longwoods International Report (*Longwoods International, 2006*) on overnight travel and tourism, which recorded why people visit Colorado, illustrates the importance of the outdoors and public lands to the experience of Colorado visitors who cite mountains, wilderness, and natural environment as important elements of their vacation experience. The Montrose area and the Black Canyon of the Gunnison National Park are among the most popular destinations for overnight pleasure trips within Colorado's Southwest Travel Region. The Uncompahgre Plateau is a regional and national recreation destination for many off-highway vehicle enthusiasts– primarily because of the popularity, scenery, and year round availability and variety of recreational and technical four wheel-drive riding opportunities.

Statewide, OHV sales have increased approximately 28% from 2000 to 2005. In the local area, businesses selling OHVs actively market the public lands to their customers.

There is currently only one developed staging area, located at the beginning of Rim Road/Tabeguache Trail. Staging areas provide users a location to meet, unload and load vehicles, and begin rides. Visitor data for the majority of the public lands is very limited. Traffic counter data is available only along the Rim Road and adjoining routes within the area. In 2006, BLM estimated 212,338 visits for all recreational purposes to public lands.

The increase in recreation use of the public lands in and adjacent to the area has had a direct effect on the condition of the existing routes. Many routes were constructed for or developed for specific uses such as timber cutting, range improvements, utility corridors, and access to Forest Service. Most of these routes were not designed for the type and amount of use that they are receiving from the recreating public. In popular areas, the rapid increase in use has lead to an increase in user created routes, most of which are not planned or designed, and many are poorly located on the land. Without a designated, identified, advertised, and mapped system of routes, visitors are uncertain about what routes are available for their use and are more likely to develop additional user created routes and continue to use new user-created routes created by others. The substantial increase in use on public lands has impacted both resources and recreation settings. The increase in recreation use is complimented by the "urban interface", or the close proximity of public lands to private lands and the local communities and amenities. In addition, the use season has been extended on much of the public land, which is snow free for most of the year, increasing year-round recreation use. Increased residential subdivision development adjacent to and near the area has contributed to the growing use on public lands.

Recreation

Activities, Experiences, and Benefits in the Planning Area

The planning area, divided into seven Sub-Regions, provides a wide variety of recreation settings, opportunities, experiences, and benefits for visitors, communities, and the environment. Proposed travel management decisions must be evaluated for their impacts in achieving or sustaining recreation settings and providing targeted opportunities, experiences, and benefits to visitors, communities, and the environment.

The Camel Back Wilderness Study Area (WSA) (Sub-Region B) has a predominantly naturally appearing landscape. The WSA provides visitors with opportunities for non-motorized/non-mechanized activities in a backcountry setting – hiking, backpacking, hunting, fishing, and wildlife observation. Contacts with other people tend to be infrequent and group sizes small. Evidence of use such as fire rings and dispersed campsites can be found intermittently throughout the Sub-Region. Experiences that the WSA provides include access to back country recreation, solitude, risk taking adventure, spending time with friends and families, and enjoying nature. Personal benefits to visitors include improved physical fitness, stress relief, enhanced environmental awareness, and improved outdoor knowledge and skills. Big game hunting in this area provides recreational opportunities and economic benefits to local communities.

Semi-primitive areas exist in most of the Sub-Regions. These areas are located farther from local communities and urban interface areas. These areas have a naturally-appearing landscape except for primitive routes. Recreation opportunities are based on motorized and non- motorized activities. Contacts with other people are more frequent and group size may be larger. High use areas (such as campsites, trailheads) show signs of frequent use. Facilities may include maintained and marked trails, simple trailhead developments, signs, and basic toilets. Experiences that these areas provide include enjoying diverse recreation opportunities, developing skills and abilities, enjoying nature, spending time with family and friends, and participating in group outdoor events. Personal benefits to visitors include stress relief, improved outdoor skills, and enhanced environmental awareness. These semi-primitive areas provide direct and substantial economic benefits to local communities because of their importance and array of opportunities for recreational tourism. Sub-Region D specifically provides local economic benefits related to motorized recreation. Big game hunting also provides economic benefits to local businesses and communities.

Roaded natural areas dominate the area. These areas on public lands are often adjacent to communities, rural residential subdivisions and along improved routes. These areas have natural landscapes that are partially modified by routes and utility lines. Recreation opportunities are based on motorized and non-motorized activities in a front country setting. Contacts with other people are common, and large groups may be present. Improved facilities such as developed campsites and restrooms may be present. High use areas, such as routes, campsites, and trailheads, show signs of frequent use. Experiences that these areas provide include enjoying diverse recreation opportunities, developing skills and abilities, enjoying nature, spending time with family and friends, and participating in group outdoor events. Personal benefits to visitors include physical fitness, stress relief, improved outdoor skills and enhanced environmental awareness. These public lands provide benefits to local communities because they are easily

accessible to residents for recreation. These are often areas with the highest levels of user conflict and resource impacts.

Commercial and Special Recreation Uses

BLM evaluates issues, manages, and monitors Special Recreation Permits (SRPs) for commercial and competitive recreation uses and organized group events on public lands and waters. The benefits and impacts of these activities are evaluated by BLM through the NEPA process when permit applications are received. In FY2007, approximately 11 SRPs were being used and active. These permits were issued for a variety of activities and events including Land Rover tours, hunting (big game and mountain lion), and a mountain bike event. In the past, there have also been technical four wheel-drive and motorcycle events.

The recreation opportunities provided by commercial and special recreation uses produce important benefits for visitors, businesses, communities, and the environment. The road and trail system on public lands is essential to all of these commercial and special recreation uses, and the impacts of travel management decisions to these activities was considered in developing the alternatives. Each of the alternatives would allow the activities and events currently authorized by SRPs to continue. New SRP applications would be evaluated through the NEPA process to determine conformance with travel management decisions and to develop potential stipulations for SRP operations.

Other Important Recreation Planning Considerations: In addition to the above, the following would be considered.

> Another important recreation planning tool is to determine the recreation niche or distinctiveness of a geographic area and strive to preserve those features and qualities. The following areas possess several distinctive features and attractions that define its recreation niche.
>
> Sub-Region D is internationally, nationally, and regionally known for these distinctive and unique recreation attractions:
>
> 1. Technical four-wheel drive opportunities
> 2. Technical single-track opportunities for motorized and non-motorized users
> 3. Tabeguache Trail
>
> The rest of the area is regionally distinctive for:
>
> 1. Solitude and unconfined recreation within the Camel Back WSA,
> 2. Backcountry horseback riding opportunities, and
> 3. Year-round recreational opportunities close to town.
>
> Road and Trail Assessment: Qualifying and quantifying the benefits of a recreational travel network is inherently complex. Preferences and attitudes about what is fun, what benefits are derived, and why people are engaging in those activities vary by individual, group, and even community.

Recreation

During the route inventory process for this travel planning effort, BLM learned that many of the parallel routes, spur routes leading to private lands, and spur routes leading to range improvements were of little or no recreation value and could be considered for possible elimination and closure in the eventual route network to be designated through this travel planning effort, with probable minimal impacts to recreation users.

Recreation Management and Implementation: Appropriate recreation management is essential to adequately develop and implement the decisions made in any travel management plan. The recreation guidelines and BLM's OHV National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands provide direction for proper management. Some of the more important points include: educating recreationists; providing clear and consistent maps; signing routes; developing brochures; increasing partnerships with user groups and volunteer efforts; increasing on-the-ground presence; developing support facilities in appropriate locations; developing an inventory and monitoring of recreational uses; and developing recreation plans, capacity models, and adaptive management that would ensure that the DFC goals and the Standards for Public Land Health are achieved.

Important characteristics for designing, implementing, and managing a good travel plan and route system for recreationists includes: developing user facilities, such as appropriate staging areas, parking lots, and trailheads; locating routes that access desirable features, overlooks, and recreation areas; providing loop opportunities rather than routes that dead-end; locating routes so that they are easily constructed, maintained, and sustained; and providing routes that offer different experience levels.

Off-Route Parking, Camping, and Game Retrieval Policy: For BLM Public Lands and National Forests the distance that OHVs are currently permitted to drive off existing or designated routes for parking, camping and game retrieval is 300 feet. This regulation applies generally to most BLM and Forest Service-managed lands, with the exception of developed recreation facilities and other areas of concentrated use where parking or camping is restricted to designated parking areas and camping spurs.

Due to higher levels of public use on the Public Lands and National Forests, BLM and Forest Service managers are concerned that the long-standing 300 foot regulation is outdated and no longer provides adequate protection of vegetation and other resources. One of the major concerns with the 300 foot regulation is that new routes are often created through repeated use, and these new routes in turn become the starting points for additional 300-foot long or longer extensions. As a result of these concerns, both the Forest Service and BLM are revising their regulations to decrease or eliminate the distance that motor vehicles can legally drive off routes to park, camp, and retrieve game.

Environmental Consequences

Impacts from Alternative 1

The Planning Area currently contains approximately 700 miles of existing routes. These routes and the public lands offer a great deal of varying levels of motorized and non-motorized recreational use and access. These routes would continue to be available for all forms of motorized and non-motorized uses. Decisions in the current RMP/Record Of Decision for the Uncompahgre Field Office restrict motorized travel in certain parts of the area to designated routes from December 1 through April 30 annually or yearlong. See Appendix C, Maps 1 and 2, pages 49 and 50, RMP. However, no routes have been designated on the ground via travel management planning, which would implement these seasonal or yearlong route designations and restriction decisions. In this alternative, these decisions would continue to not be implemented until further travel management planning is completed, resulting in continued, yearlong, on-route and cross-country travel. A high potential exists for new user-created routes to be developed through use by visitors and others.

Although this alternative provides a high number of motorized access routes, it does not constitute a travel management plan or route system that would resolve of the existing issues, nor does it consider good recreation planning and design factors that could enhance recreation opportunities and reduce user conflicts and impacts. Loop routes, adequate parking, staging areas and other user facilities, and adequate public information would not be developed and made available. Poorly located and planned existing routes would continue to be used, resulting in a continuation of impacts associated with this use, including more new user-created routes that would not be placed in sustainable locations, and desirable destinations and other features would not get incorporated into the travel system for the public.

Alternative 1 would provide only a limited number of non-motorized routes for long distance horseback riding, mountain biking, and hiking. Alternative 1 would not adequately respond to the needs and issues identified by non-motorized recreation users.

For recreation uses authorized by SRPs, the activities and events currently authorized would continue, assuming renewal of permitted activities. This alternative would provide the highest level of motorized access and would enhance opportunities for commercial outfitters offering motorized recreation activities. It would not enhance opportunities for commercial outfitters seeking to offer non-motorized activities (hunting, mountain biking, horseback riding, and hiking).

Off-Route Parking, Camping, and Game Retrieval Policy: Under this alternative, the distance and location that motorized and mechanized travel could be driven off existing routes for parking, camping and game retrieval would remain unrestricted. This would continue to result in continued and increased impacts to soils and vegetation and in other impacts, such as increased litter, dumping, and other illegal activities.

Summary: Alternative 1 would not provide a planned transportation system that would adequately address user conflicts or enhance recreation opportunities. This alternative would not

respond to the issues and concerns related to off-route parking and off-route motorized or mechanized use identified by the public. Alternative 1 would not be compatible with the desired future conditions for all of the Sub-Regions except for Sub-Region B, and it does not adequately comply with the consideration and importance of BLM recreation guidelines. Cumulative impacts concerning noise, route proliferation, resource impacts, safety, and user conflicts would continue or increase as a result of implementing this alternative.

Impacts from Alternative 2

Approximately 419 miles of motorized and non-motorized routes would be available for use in this alternative, or 283 fewer miles than would be available in Alternative 1. This alternative would result in the adoption of a travel management plan that would create a system of planned and designated routes more favorable to sustaining recreation settings and providing targeted recreation opportunities and benefits than Alternative 1. There would no longer be OHV designated "Open" areas where cross-country motorized travel would be permitted. Mechanized vehicles such as bicycles would be restricted to designated routes, and traveling off-route to park, camp, and for other legitimate purposes, would be restricted. This alternative would improve new, motorized and non-motorized recreation by providing opportunities through the construction of new routes and by the development of loop routes. This would, in turn, improve the overall recreational experience for users.

Routes that would not be included in this alternative or designated for motorized or mechanized use include those that provide little recreation benefit, such as: short spurs, parallel routes, poorly located routes, and routes to range improvements. Compared to Alternative 1, much of the difference in available miles of routes in Alternative 2 would be offset by improvements to the travel system (connecting routes, new routes, and route conversions) and, in turn, would improve the overall recreational experience for motorized and non-motorized users, such as the potential for reduced user conflicts. Overall, the alternative includes loop routes, adequate parking and staging areas, and better route location for motorized and non-motorized travel.

For recreation uses authorized by SRPs, Alternative 2 would allow the activities and events currently authorized to continue. It would enhance opportunities for commercial outfitters because new routes would be planned, designed, designated and developed over time. It would benefit commercial big game (elk and deer) outfitters by somewhat reducing human contact with these species. This would enhance the experience of their clients and potentially increase success in tracking and hunting elk and deer.

Off-Route Parking, Camping, and Game Retrieval: Under this alternative, the distance that vehicles would be permitted to travel off most designated routes for parking would be changed from 300 feet to a distance of one vehicle width from the edge of the route, and in such a manner so as to be safe and not interfere with other traffic.

However, specific areas would be identified where vehicles would be permitted to travel a distance of 300 feet from specific, designated routes to a campsite to car-camp and park.

Short spur routes would also be designated that would allow for car camping opportunities.

Dispersed camping, or camping in other than developed campgrounds or sites, would continue to be allowed in most of the area, but users would be required to park adjacent to and at a safe distance (one car-width) off designated routes, and then walk to the campsite.

Big game retrieval would continue to be allowed using wheeled, muscle-powered game carts or wagons only to retrieve big game from all available designated routes only during Colorado Division of Wildlife (CDOW) authorized big game hunting seasons. The use of wheeled, muscle-powered game retrieval devices would not be permitted within the Camel Back WSA (Sub-Region B).

Summary: Alternative 2 would restrict vehicular access off-routes for dispersed car-camping and other vehicle-related recreation activities; however impacts to soils and vegetation, other impacts, such as increased litter, dumping, and other illegal activities would be reduced as a result of this change. Alternative 2 would improve the overall transportation system for motorized and non-motorized recreation and would result in decreased short term, long term, and cumulative impacts. Alternative 2 would meet the desired future conditions and niche characteristics for all Sub-Regions.

Impacts from Alternative 3

Approximately 271 miles of routes would be available for use in this alternative, or 431 fewer miles than would be available in Alternative 1. This alternative would result in the adoption of a travel management plan that would create a system of planned and designated routes more favorable to quite recreation opportunities and settings and would provide limited targeted recreation opportunities and benefits than either Alternative 1, or Alternative 2. Potential environmental impacts would be much less than those from implementing Alternative 1. Fewer overall motorized and non-motorized vehicle travel opportunities, fewer new routes and user facilities would be constructed, and fewer loop travel opportunities would be available to the public than either in Alternative 2 or Alternative 1.

For recreation uses authorized by SRPs, compared to Alternative 1, Alternative 3 would potentially impact mountain lion outfitters and their clients because of the decrease in miles of available routes for deploying hunters and convenient tracking points. However, all public lands would continue to be available for hunting on foot.

Summary: Overall, this alternative would result in greatly increased short term, long term, and cumulative impacts to recreation uses and users, and result in a travel management plan that would not take advantage of the many destination recreation opportunities the community seeks out. Implementing this alternative would mean that the recreational opportunity goals would potentially be harder to achieve in Sub-Regions C, D, and E.

Impacts from Alternative 4

Approximately 605 miles of routes would be available for use in this alternative, or 97 fewer miles than in Alternative 1. Potential impacts from Alternative 4 would be less than those from

implementing Alternative 1. This alternative would result in the adoption of a travel management plan that would create a system of planned and designated routes more favorable to all forms of motorized recreation opportunities and settings than providing a balance between non-motorized opportunities, motorized opportunities, and quieter activities, such as hiking, horseback riding, and dispersed back-country activities. More user facilities would be constructed. This alternative would not provide all targeted recreation opportunities and benefits compared to Alternative 2 or Alternative 3. This alternative would increase the opportunities for dispersed car-camping, touring, and other vehicle-related recreation activities. This alternative would be compatible with the Sub-Regions DFCs except for Sub-Regions A and E.

Summary: Alternative 4 would moderately improve the transportation system for motorized and non-motorized recreation. Although the miles of available routes are increased compared to Alternatives 2 and 3, this alternative only partially incorporates those factors that make a good travel plan and route system. See Recreation Management and Implementation in the Affected Environment section above. This alternative would move the recreational opportunities away from being achieved in Sub-Regions A and E.

Cumulative Effects

Population growth and residential development of surrounding private lands, along with other resource impacting trends, will occur throughout the greater region that will result in increased amounts of recreational usage on public lands. Activities on public lands in the travel planning area that could also potentially impact recreation and require mitigation include, Forest Service planning and projects, Uncompahgre Plateau Project activities, local land use planning, soil research, BLM Uncompahgre Field Office Resource Management Plan revision, continued population growth, vegetation treatments, county road upgrades, special recreation permits and activities, utility rights of way and corridors, fuels reduction projects, and utility corridor maintenance and upgrades. The cumulative effects to recreation from these activities in addition to action alternatives will be long-term and most adverse and dispersed in Alternative 3 and 1, contained and long-term in Alternatives 2 and 4.

SOCIO-ECONOMICS

The planning area includes parts of Delta and Montrose counties.

Population:

Table 57
Population Growth between 1990 and 2007

Area	1990	2007	1990-2007 Percent Change
Colorado	3,294,394	4,861,515	47.6%
Delta County	20,980	30,334	44.6%
Montrose County	24,423	39,527	61.8%

Source: U.S. Census Bureau, 2007 Population Estimates, Census 2000, 1990 Census

Between 2005 and 2025, the population within Delta County is projected to grow 72% and 77% within Montrose County. The state as a whole is projected to grow 45 % for the same period. (From State of Colorado Population Projections, State Demography Office). Part of this growth can be attributed to the abundance of nearby public lands managed by the BLM and the US Forest Service.

Employment and Economy: Between 1991 and 2001, the total number of employed people increased by 48.6% in Delta County and 49% in Montrose County (See Table 58). The greatest increase in employment occurred under the Construction sector in both counties (136% increase in Delta County, 232% increase in Montrose County). The percentage of total employment growth for Delta and Montrose Counties between 1991 and 2001 was greater than total employment growth for the state. Employment in Colorado between 1990 and 2025 is expected to increase 27 %.

Table 58
Sector Employment - Numbers of Jobs

Sector	Colorado		Delta County		Montrose County	
	1991	2001	1991	2001	1991	2001
Agricultural	56,730	81,702	1,503	1,904	1584	1913
Mining	23,215	17,321	106	220	167	147
Construction	89,072	221,880	305	720	587	1949
Manufacturing	192,836	207,198	381	587	1114	1696
Transportation, Communications and Utilities	109,129	160,336	318	345	919	945
Wholesale and Retail Trade	424,411	594,903	1,621	2,463	2641	4005
Finance, Insurance and Real Estate	144,911	207,012	326	482	604	765
Services	554,359	880,204	1,850	3,077	2720	4319
Government	338,302	391,563	1,628	2,146	2177	2870
Total Employment	1,932,965	2,762,119	8,038	11,944	12,513	18,609

Source: State of Colorado Jobs by Sector (SIC based), State Demography Office

According to a 1999 model of the distribution of tourism employment, 8% of total employment was generated by tourism in Delta County, and 9% of total employment was generated by tourism in Montrose County. About 8% of total employment in Colorado was reported to tourism (Tourism Jobs Gain Ground in Colorado page 3, Center for Business and Economic Forecasting, Inc., April 27, 2001).

Income: Between 1990 and 2005, total per capita personal income for the state increased 92%. During this same period, total per capita personal income increased 84% in Delta County, and

91% in Montrose County (From US Department of Commerce, Bureau of Economic Analysis), probably due to increases in number of jobs related to the Services and Construction Sectors.

As shown in Table 59, the per capita personal income for Delta County in 2005 was $23,612, an increase of 84% over the 1990 income but $13,898 below the state average. For Montrose County in 2004 the per capita personal income was $27,402, an increase of 91% since 1990 but $10,108 below the state average.

Table 59
Per Capita Personal Income for 1990 and 2005

	1990	2005
Colorado	19,575	37,510
Delta County	12,843	23,612
Montrose County	14,393	27,402

Source: US BEA 2007

The *Longwoods International Colorado Travel Year 2006* report stated that Colorado is ranked 9th in the country for outdoor trips and that outdoor trips now comprise the largest segment among those visiting Colorado on marketable leisure trips. The report illustrates the importance of the outdoors and public lands to the experience of Colorado visitors who cite mountains, wilderness, and lakes/rivers as important elements of their vacation experience. Montrose, the Gunnison Gorge National Conservation Area (NCA), and the Black Canyon of the Gunnison National Park are among the most popular destinations for overnight pleasure trips within the locale of the area. The Gunnison River and Gunnison Gorge in the NCA are regional and national recreation destinations – primarily because of the popularity and variety of the heavily marketed whitewater boating opportunities and gold medal trout stream fishing. In addition to these major tourist attractions, the routes on the public lands also provide opportunities for various types of motorized, mechanized, and non-motorized recreation uses.

Off-highway vehicle (OHV) use, which includes all-terrain vehicles (ATVs), dirt or dual purpose motorcycles, snowmobiles, and 4-wheel drive vehicles, has increased 58% since 1995 (*Colorado and the Colorado Market Region, July 2007*) and the economic contribution of OHV use in Colorado is estimated to be between $204 million and $231 million, according to the Colorado Off-highway Vehicle Coalition (COHVCO).

Tourism has grown in the Southwest Region fairly steadily since 2000 based on total travel impacts as measured by direct travel spending, tourism-related employment wages, and state and local taxes.

Environmental Consequences

Impacts from Alternative 1

Alternative 1 would basically maintain the status quo. No significant changes to the area's population, employment, and income would result by implementing this alternative. A potential slight increase in the local economy of the City of Montrose could occur if more technical 4WD

routes were established. Recreation behaviors, however, would evolve under less intensive management and travel restrictions, such as cross-country use, trespass, creation of new routes, and uncontrolled motorized/mechanized play would increase in intensity and scale

Impacts from Alternative 2

Alternative 2 would provide about 242 fewer miles of motorized and non-motorized routes than Alternative 1. Alternative 2 would also allow development of some new planned and designed additional routes. Under Alternative 2, the local economy in Montrose County, and particularly the City of Montrose, would benefit economically from a total of about nine miles of additional routes for technical four wheel driving, ATV, mountain biking and hiking. The other designated motorized and non-motorized routes and would not result in significant, measurable economic benefits, and the combination of travel uses on the public lands would probably not have a major affect on population, employment, or income. Recreation behaviors, however, would evolve under more intensive management and travel restrictions that would mitigate increased cross-country use, trespass, creation of new routes, and uncontrolled motorized/mechanized play.

Impacts from Alternative 3

Alternative 3 would provide about 271 miles of designated motorized and non-motorized routes, about 366 fewer miles of existing routes than in Alternative 1. Under Alternative 3, numerous motorized routes would be proposed to be closed, which could potentially slightly impact the economy of Montrose County, particularly the City of Montrose, because of a reduction of about six miles of technical 4WD vehicle routes. Recreation behaviors, however, would evolve under more intensive management and travel restrictions that would mitigate increased cross-country use, trespass, creation of new routes, and uncontrolled motorized/mechanized play.

Impacts from Alternative 4

Impacts would be similar to those from implementing Alternative 2, in that about 606 miles of designated routes would be provided, about 85 fewer miles of existing routes than in Alternative 1.

Cumulative Effects

Cumulative impacts that would be measurable would not likely occur as a result of implementation of any alternative.

VISUAL RESOURCES

The planning area offers a great diversity of landforms and vegetation. The area is highly valued by the public and local communities for its scenic quality. The area contains rugged canyons and opens onto mesa tops that provide 380 degree scenic vistas of the Grand Mesa, San Juan, West Elk and Sawatch mountain ranges. The public lands have been inventoried for their visual characteristics, and were classified as Visual Resource Management (VRM) Class III in the current RMP. This means that planning for and implementation of man-made features on public

lands would consider these objectives and projects would be designed such that visible changes that attract attention could occur, but would not be so intrusive as to dominate the landscape.

On public lands, the existing man-made features not considered part of a natural landscape include routes, fences, structures, utility lines and rights-of-way, and land treatments (vegetative chaining, roller chopping, etc.). On private lands, most of the same features exist, in addition to residential and commercial development. Routes, as well as other man-made features are considered to be visual intrusions but they also provide a means for the public to experience and enjoy the outstanding scenery. These features have become part of the existing landscape character. Many of the routes have been in existence for decades and were developed by ranchers and loggers.

The VRM class and management objectives were considered along with many other resource values, such as soil and water values, wildlife and wildlife habitat, vegetation conditions, duplicated routes, safety, and cultural resources during this planning and analysis process. Some existing routes were chosen to be closed and rehabilitated or relocated in order to better meet objectives for land health and other resource management objectives, including for the visual resources. VRM Class III objectives were considered during the planning and analysis process for new proposed or relocated routes to ensure VRM objectives were achieved. The VRM objective for Class III lands is to partially retain the existing character of the landscape.

The BLM visual resource management system and process was designed and is used to help ensure that as man-made features or surface-disturbing activities are proposed and constructed on public lands, existing landscape character and the visual resources are considered. The BLM Manual 8410-1 Visual Resource Management defines and categorizes visual resource management (VRM) classes that provide objectives for these resources as projects are proposed and implemented in the landscape. These VRM classes are determined through an inventory process described in the manual mentioned above, and are used to provide guidance to BLM and project proponents when contemplating proposed surface disturbing activities. Class I areas are intended to protect an area from visible change, Class II areas allow for visible changes that do not attract attention, Class III areas allow for visible changes that attract attention but are not dominant, and Class IV areas allow for visible changes that can dominate the landscape.

Typically, a land use allocation such as the Camel Back Wilderness Study Area (WSA) would be classified as VRM I which would afford the highest degree of protection for visual resources. However, the WSA was designated after the original VRM inventory was completed in the current RMP, and thus is also classified as VRM Class III. However, the WSA is being managed according to the interim management policy for lands under wilderness review, and is protected due to this policy. The VRM classification for the WSA, along with all public lands in the planning area, would be re-examined during the update of the current RMP Revision.

Environmental Consequences

Impacts Common to All Alternatives

Existing man-made features, including fences, routes, vegetation manipulations, routes, and utility

facilities would continue to result in visual impacts in the landscapes. Most of the features have been in place for a number of years, and have become part of the characteristic landscape.

Impacts Common to Alternatives 2, 3, and 4

Some existing routes and disturbed areas would be closed and rehabilitated, resulting in a decrease in visual impacts, and VRM Class III management objectives being met in those landscapes.

Vegetation along those routes lending themselves to providing outstanding viewing opportunities to middle and back ground landscapes would be treated to provide viewing opportunities in a safe and environmentally acceptable manner. This action would improve the overall scenic experience while traveling in the planning area.

Changing existing OHV designations to "Limited to Designated Routes Seasonally or Yearlong", and restricting all OHV travel to designated routes seasonally or yearlong would result in a decrease or elimination of new user-created routes, preventing future visual impacts from occurring. Restricting cross-country vehicular usage for camping or other activities would prevent future surface disturbances and associated visual impacts from occurring.

Potential visual impacts from new routes or travel management support facilities would not exceed visual resource management objectives as a result of good design and site location.

The management objectives for these VRM Class III public lands would be met.

Impacts from Alternative 1

This alternative provides 702 miles of existing motorized public and administrative routes in a variety of locations, terrain, and soils). Over time, because of the increase in travel use anticipated for all purposes, the associated visual impacts from these routes would exceed that allowable on these VRM Class III lands, as the routes would begin to dominate the landscapes.

New user-created routes and soil and vegetation disturbances related to OHV use, including parallel routes, multiplicity of routes going to one destination, and routes that serve no known purpose, would continue to be established through vehicular or other uses, resulting in more visual contrast or impacts in some landscapes and terrain types that offer visual exposure over a wide area. Many existing routes would continue to be widened by the usage of larger vehicles on narrow routes, such as single track or ATV two-track routes, resulting in additional vegetation removal and soil disturbances

Impacts from Alternative 4

This alternative would provide 617 miles of routes, only about 118 fewer miles of routes than Alternative 1, and thus there would be less reduction in mitigating existing visual intrusions. The resultant impacts to the visual resource would be very similar to Alternative 2.

Cumulative Effects

In addition to growth in recreational travel, other reasonably foreseeable actions that could affect visual resources over the next 10 years on private and public lands include residential growth, new road construction on private lands, fuels reduction projects, utility corridor maintenance and upgrades, and new buried utility rights-of-way. Activities on public lands in the travel planning area that could also potentially impact visual resources and require mitigation include, Forest Service planning and projects, Uncompahgre Plateau Project activities, local land use planning, soil research, BLM Uncompahgre Field Office Resource Management Plan revision, continued population growth, vegetation treatments, county road upgrades, special recreation permits and activities, and utility rights of way and corridors. The cumulative effects to visual resources from these activities in addition to action alternatives will be long-term and most adverse and dispersed in Alternative 1 and 4, contained and long-term in Alternatives 2 and 3.

CUMULATIVE EFFECTS SUMMARY

Introduction

This section discloses the cumulative effects from all alternatives. Cumulative effects were analyzed above for each resource. This section will analyze additional known cumulative impacts that may not have been identified above.

The Council on Environmental Quality (CEQ) regulations defines cumulative effects as "...the impact on the environment which 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 actions". The cumulative effects are the direct and indirect incremental effects of the impacts from implementing the proposed changes and projects in each of the alternatives, when added to other past, present, and reasonably foreseeable actions (40 CFR Part 1508.7). Past activities are those activities whose effects are still present on the landscape. These activities will continue into the future. Future activities are those reasonably foreseeable actions that may add to the cumulative effects on resources and social impacts. Guidance for implementing NEPA (Public Law 91-190, 1970) requires that federal agencies identify the timeframe and geographic boundaries within which they will evaluate potential cumulative effects of an action and the specific past, present, and reasonably foreseeable projects that will be analyzed. For this EA, the timeframe is five to 10 years, from approximately 2009 to 2020. This encompasses a range within which data are reasonably available and forecasts can be reasonably made. The geographic boundary of the analysis area is the planning area and the surrounding Forest Service-managed and private lands, and the nearby communities.

Cumulative Effects Summary

Major specific actions and activities with the potential to cumulatively affect the resources evaluated in this document are identified below. These actions are generally summarized in the narrative following the table below. Some resources would be affected by several or all of the described activities, while others would be affected very little or not at all.

Alternative 2, 3 and 4 are action alternatives and each prohibit all cross country motorized and non motorized vehicular travel, propose changing all existing OHV designations such that all motorized and mechanized travel would be limited to designated routes except for hiking and horseback riding, and implementing unique and different travel plans with different sets of selected routes that would be available, travel use conditions and design features, and travel management support facilities. These three alternatives would be nearly identical in the degree and nature of cumulative effects that would occur as a result of prohibiting all cross country motorized and non motorized travel in order to prevent new, user created routes on public lands. By implementing a travel plan the public would be aware of the routes that would be available for use and which routes would not be available, and fewer conflicts would occur. Reductions of cumulative impacts would occur throughout the entire planning area as a result of this prohibition. In this manner, the three action alternatives are very similar.

The cumulative effects from Alternatives 3 and 4 would differ from Alternative 2 only in the degree of the reduction of effects that would occur to the resources. Alternative 3 would close more existing routes and apply different conditions of use on routes than Alternative 2, and Alternative 4 would close fewer routes than Alternative 2, and apply somewhat different conditions of use on travel. Closing more routes would result in incrementally fewer effects than closing fewer routes.

Past, Present, and Reasonably Foreseeable Actions Considered in Determining Cumulative Effects

Past, Present, and Reasonably Foreseeable Actions	Past	Present	Future
Forest Service Planning	✓	✓	✓
Uncompahgre Plateau Project	✓	✓	✓
Local Land Use Planning	✓	✓	✓
BLM-USGS Soil Research	✓	✓	✓
BLM Uncompahgre Field Office Resource Management Plan and Revision			✓
Continued population growth		✓	✓
Uncompahgre Field Office Vegetation Treatments	✓	✓	✓
Possible Upgrading Of Some Major County Roads In Or Through The Planning Area			✓
BLM Special Recreation Permits	✓	✓	✓

Planned BLM vegetation treatments, UP biological treatments, upgrading some county roads, and the growth in applications for rights of way and special recreation use permits could add to impacts from the demand of access onto or through public lands, along with potential transportation elements to facilitate implementation of local master plans.

Cumulative Effects Summary

Forest Service Planning
Resumption of the US Forest Service Grand Mesa, Uncompahgre, and Gunnison National Forests Forest Plan Revision has been delayed until at least early 2009. Their plan is being revised as part of a public process, including an EIS. The Uncompahgre National Forest Travel Management Plan was completed in 2000. It was the result of extensive collaboration with many users of the Forest. The Uncompahgre Travel Management EIS and decision maps provide detailed information on Forest Service-managed lands and the travel management decisions adjacent to the planning area. The planning area is adjacent to a portion of the Uncompahgre National Forest, and planning was coordinated with their office in Montrose and Delta.

Coordination of BLM activities sometimes results in BLM adopting standards or specifications that match with Forest Service guidelines, and vice-versa. An example would be having conditions of use on routes that are consistent when routes cross common jurisdictional lines. Alternative 1 would result in continued inconsistency with potential continued resource damage with proliferation of new routes. Alternative 2, 3, and 4 would provide consistency in route designation as BLM collaborated closely with the Forest Service. Thus the cumulative impacts would be dramatically decreased for sensitive biological soil crusts and erosive soils, in streams, riparian and wetland habitat, vegetation types, on visual resources, to terrestrial and aquatic wildlife species and habitat, special status plants and animals and their existing and potential habitat, migratory bird habitat, and other related resources, and increased for all resources for Alternative 1.

The Uncompahgre Plateau Project

The Uncompahgre Plateau Project (UP) was formalized in 2001 by the Public Lands Partnership (PLP), Bureau of Land Management (BLM), Colorado Division of Wildlife (CDOW) and U.S. Forest Service (USFS). The Uncompahgre Plateau Project is a joint land management effort between the Public Lands Partnership (representing Delta, Montrose, Ouray, and San Miguel counties) and the other partners. These organizations formed this partnership to restore and sustain the ecological, social, cultural and economic values of the Uncompahgre Plateau. The project area, located in Southwest Colorado, comprises over 1.5 million acres of private, state and federal lands. The overarching goal of the project is to improve the ecosystem health and natural functions of the landscape across the Uncompahgre Plateau through active restoration projects. The planning area for the Dry Creek Travel Management Plan is within the project area.

Implementation of treatments can affect wildlife solitude and habitat forage, fragment migration routes, and add sediment to waterways on a short term basis, and require more temporary new routes, but mitigation and design features in UP plans would mitigate these impacts to vegetation (wildlife habitat, sensitive species and habitat, potentially more weeds introduced), soils, and potentially to water courses. Therefore cumulative effects for Alternatives 2, 3, and 4 would again be decreased as compared to Alternative 1 which is the existing situation.

Local Land Use Planning

Delta County completed its current master plan in October 1996. The city of Delta completed a comprehensive plan in March 1997, the city of Montrose completed a comprehensive plan update in March 2008, and Montrose County has an update of their master plan underway. These plans will continue to provide tools for growth and outline management direction for projected land use, transportation planning and elements, planning policies, and zoning surrounding the majority of the planning area. The Town of Olathe has discussed updating their Master Plan.

Local master plans could impact public lands by authorizing new subdivisions, open space identification, needs for travel element updates, relocations, or new construction. The cumulative impacts of combining additional new uses on private land and open OHV designations as written in Alternative 1 is major. As a result of local land use planning, cumulative impacts to all resources will also increase for Alternatives 2, 3, and 4 due to the increased number of people and vehicles accessing private lands but will be mitigated by designating and signing roads and trails and closing areas seasonally to protect wildlife.

BLM-USGS Soil Research

The BLM is working with the USGS on Mancos soil research on public lands east of Montrose and other similar adobe watershed areas.

They are analyzing impacts from surface-disturbing activities on the adobe hills and the alluvial bottoms in the Mancos Shale areas. The studies are intended to provide information on how OHV use, grazing, and other surface-disturbing activities on these highly erosive soils need to be managed to meet the BLM's public land health standards.

Research could result in improvements in outcomes for projects that otherwise would create undesirable effects to sensitive resources, such as soil and water, and could hasten rehabilitation.

BLM Uncompahgre Field Office Resource Management Plan and Revision

The existing Field Office Resource Management Plan/Record of Decision (RMP) was signed in 1989. The issues addressed in the RMP were coal leasing, salinity, forestry, recreation, cross-country vehicles, wilderness, and lands. Decisions were made in most resource management programs that affected travel management in the planning area. Over time, several amendments have been made to the existing RMP, including for fire management, lands management, and the Gunnison Gorge NCA land use plan. The RMP and amendments include many actions that have already been implemented, some of which have taken place within the planning area, and also decisions that have not been implemented. Route by route travel analysis has not been done for the area. The BLM Uncompahgre Field Office plans to revise its 1989 Resource Management Plan beginning in the spring of 2009.

Not conducting travel planning as a follow up to implement OHV decisions regarding limiting travel to designated routes has resulted in cumulative impacts. A large number of the existing routes were established as a result of the under-management of OHV travel. Therefore, it can be

assumed that cumulative impacts for Alternative 1 would also continue to increase. The next revision will set schedules for travel planning in the adjacent public lands, which will contribute long term improvements in Alternatives 2, 3, and 4.

Continued Population Growth

Between 2005 and 2025, the population within Delta County is projected to grow 72%, and 77% within Montrose County. This growth is expected to result in more private agricultural or undeveloped land being converted into residential or commercial uses. The entire eastern, southern, and southwestern edged of the planning area are in private ownership. Most of the private land on the eastern edge is irrigated agricultural land, with mixed residential development. With this growth, new management challenges including travel management will face the land management agencies surrounding the communities, and the nearby communities themselves.

Population increases in and around the planning area would result in more demand for public land access for a variety of purposes, both motorized and non motorized. As motorized, mechanized, and non-motorized quiet use demand escalates and increases, there would be more requests for routes throughout the planning area, and perhaps displacement of non-motorized users to already restricted areas. This would lead to widespread on-site and off-site impacts on nearby federal lands and private lands and potentially a loss of the values for which visitors come to the area to seek.

Routes established as a result of increased population growth and increases in volume of motorized uses contribute to surface runoff which ultimately reaches perennial and intermittent steams, ponds, riparian habitat, and wetlands and affects the physical and biological components of these areas. Urbanization near the planning area has contributed in the development of user created routes that contributes to cumulative soils, vegetation, and watershed impacts. Cumulative effects on aquatic and riparian resources can be mitigated through the application of watershed conservation practices to all well-designed and located agency routes during their construction, reconstruction, and maintenance as outlined in Alternatives 2, 3, and 4.

Cumulative actions considered include regional and local growth entailing additional vehicle traffic within and through the planning area. Although vehicular travel on unpaved roads can be heavy during the late spring, summer, and the fall, the most heavily used major county roads receive magnesium chloride treatments which “holds” soils and road base in place and abates erosion and fugitive dust. Sustained and heavy traffic use on the approximately 670 miles of remaining dirt routes and trails in the planning area does create erosion and fugitive dust, noise, and other major disturbance factors throughout the planning area.

Population growth, private land development adjacent to or near the planning area, and the increase in popularity of recreational vehicle riding, combined with the extremely high number of existing route miles in the planning area and the likelihood of the continuation of user created routes being created, incremental increases in impacts would occur to soils, cultural

properties, water quality, air resources, floodplain functions, riparian and wetland habitat, sensitive plant and animal species and habitat, vegetation (removal, impacts, or weed invasion increases), and aquatic and terrestrial species and habitat. At the heart of these impacts is the likelihood of an exponential increase in the rate of establishment of new, user created routes from the 700 miles of current existing routes as discussed in Alternative 1. Any additional limitations to the transportation system could cause crowding of users and may increase safety concerns and conflicts as discussed in Alternatives 2, 3, and 4.

Alternative 1 considered in this analysis would very likely result in violations of air quality standards during the next five to 10 years due to the continuation of new user created routes and the increase in use volume as a result of population growth.

Uncompahgre Field Office Fuel Reduction Projects

Several projects have been implemented in the past, and several projects have been proposed and evaluated in the Field Office that have or would reduce the amount of standing and downed wildfire fuel in the planning area. These projects have and would make the public lands, where this activity occurs, less likely to incur wildfires, and land health conditions could be improved. Use of roads or need to travel cross country with motorized vehicles to accomplish projects would be analyzed for each case however cumulative use of roads to accomplish projects would be negligible. Overall land health conditions could be improved.

Implementation of treatments can affect wildlife solitude and habitat forage, fragment migration routes, and add sediment to waterways on a short term basis, and require more temporary new routes, but mitigation and design features in project plans would mitigate these impacts to vegetation (wildlife habitat, sensitive species and habitat, potentially more weeds introduced), soils, and potentially to water courses.

Cumulative effects for implementing the projects would be similar for Alternatives 1, 2, 3, and 4 but with the additional mitigation outlined for Alternatives 2, 3, and 4 effects would be minimized through rehabilitation of roads and trails that are needed for the project but are not part of the transportation plan.

Possible Upgrading of Some Major County Roads in or Through the Planning area

At least two, and perhaps three major county graveled roads located within and that pass through the planning area could be upgraded, partially relocated, and or paved during the next 10-15 years in order to provide better and quicker access to private and public lands. Private high-scale developments on the Ouray and Montrose County lines have generated increased traffic by construction, visitor, and resident uses. Property owners and users are requesting the counties to pave and improve the roads. This upgrading could require some BLM right of way actions or modifications, reconstruction, and relocating in segments to eliminate dangerous curves or poorly located segments, which could also directly impact public lands adjacent to these roads.

Routes established as a result of increased population growth and increases in volume of motorized uses contribute to surface runoff which ultimately reaches perennial and

intermittent steams, ponds, riparian habitat, and wetlands and affects the physical and biological components of these areas. Urbanization near the planning area has contributed in the development of user created routes that contributes to cumulative soils, vegetation, and watershed impacts. If county roads passing through the planning area or within the planning area are upgraded in the life of this analysis, easier and quicker access to the lands in the planning area would be available, adding to the cumulative effects from increases in use of motorized vehicles for all alternatives but especially Alternative 1. Cumulative effects on aquatic and riparian resources would be mitigated through the application of watershed conservation practices to all well-designed and located agency routes during their construction, reconstruction, and maintenance as outlined in Alternatives 2, 3, and 4.

BLM Special Recreation Permits

BLM issues and manages Special Recreation Permits to groups or individuals for organized, commercial, or competitive purposes and events. The BLM has had a growing number of requests for consideration of all types of Special Recreation Permits. In FY2007, approximately 11 SRPs were being used and active. These permits were issued for a variety of activities and events including 4-WD vehicle tours, hunting (big game and mountain lion), and a mountain bike event. In the past, there have also been technical four wheel-drive and motorcycle events permitted. The recreation opportunities provided by commercial and special recreation uses produce important benefits for visitors, businesses, communities, and the environment. The road and trail system on public lands is essential to all of these commercial and special recreation uses, and the impacts of travel management decisions to these activities was considered in developing the alternatives. Each of the alternatives would allow the activities and events currently authorized by Special Recreation Permits to be considered in the future, under certain circumstances. New applications would be evaluated through the NEPA process and with public input to determine conformance with travel management decisions and to develop potential stipulations for operation, maintenance, and monitoring of permitted activities.

In Alternative 1, requests for these permits for competitive, commercial, or organized events would continue, possibly resulting in more disturbances in the planning area to soils, water, vegetation and opportunities for solitude due to the fact that areas would be designated as open. While SRP requests will probably increase in the next 15 – 20 years for Alternatives 2, 3, and 4. Decisions will conform to the travel management plan thus mitigating cumulative effects from this activity.

Proposed Action – Alternative 2

Alternative 2 would result in reductions in the incremental cumulative effect that would occur from continuing with Alternative 1. This alternative would result in incremental decreases in existing and potential effects by closing routes, rehabilitating routes, and implementing the conditions of use and other measures in this alternative. The land health of the planning area would be improved, air quality standards would not be violated, and other resources would realize the benefits of this alternative.

Effects include reductions in impacts from applying conditions of use, implementing travel

management support facilities, closing existing routes and prohibiting potential new cross country routes. Cumulative physical effects from past, present, and future action relative to Alternative 1 would be reduced on sensitive biological soil crusts and erosive soils, in streams, riparian and wetland habitat, vegetation types, on visual resources, to terrestrial and aquatic wildlife species and habitat, special status plants and animals and their existing and potential habitat, migratory bird habitat, and other related resources.

The cumulative effects from reasonably foreseeable actions above and the effects of Alternative 2 would, when combined, not result in adverse impacts to those resources managed by BLM in the planning area.

Irreversible and Irretrievable Commitments of Resources

Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. Irretrievable commitments are those that are lost for a period of time such as the temporary loss of wildlife habitat in a right of way linear clearing.

The implementation of any of the alternatives, including the no-action alternative, would have no irreversible commitment of resources. The alternatives define the road and trail system, and propose closing of some routes not needed or that would be closed for other reasons. Some limited new route construction and the construction of some new travel management support facilities would be implemented, all of which could be rehabilitated if necessary.

Irretrievable commitment of resources would occur under all alternatives. Irretrievable commitments of resources from roads and trails exist because the travelway changes the natural landscape to a non-natural, out-of-vegetative-production landscape. The road and trail designations of Alternatives 2, 3, or 4 would create temporary losses associated with maintenance of roads and trails or new support facilities. Resources affected would be scenery, vegetation (including rangeland, riparian area vegetation, and woodland stands of pinyon and juniper, and associated wildlife or other animal or plant habitats. Implementation of any of the alternatives would commit these resources over the life of the road or trail.

The alternative with the highest number of miles of designated roads and trails would also cause irretrievable commitments of the most resources. The alternatives ranked from most to least for irretrievable commitment of resources are alternatives 1, 4, 2, and 3.

Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

The National Environmental Policy Act (NEPA) requires the consideration of the relationship between the short-term uses of man's environment and the maintenance and enhancement of long-term productivity which would be involved in implementing any of the alternatives being considered in an environmental document. As declared by Congress, this includes using all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under

which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans (NEPA Section 101).

Alternatives 3, 2, 4, and 1, from most to least, have the potential to improve long-term productivity by reducing the number of existing miles and trails on the landscape. Once closed, these areas will have the potential to revert to vegetated conditions.

PERSONS / AGENCIES CONSULTED

Southwest Resource Advisory Council (SWRAC)
U.S. Fish and Wildlife Service
Colorado State Historical Preservation Officer
Southern Ute Tribal Council and the Ute Mountain Ute Tribal Council
Colorado Division of Wildlife (CDOW)
USFS Ouray Ranger District
Montrose and Delta County Commissioners
State Historic Preservation Office (SHPO)

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INTERDISCIPLINARY TEAM

Interdisciplinary Team

Areas of Responsibility	Reviewers
Air Quality	TBD
ACEC	** NA
Cultural Resources, Paleontology	G. Hadden
Environmental Justice	B. Krickbaum
Farmlands (Prime and Unique)	D. Murphy
Floodplains	D. Murphy
Invasive, Non-Native Species and Range Management	L. Rogers
Migratory Birds	M. Siders,
Native American Religious Concerns	G. Hadden
Threatened, Endangered, and Sensitive Species, Wildlife (Aquatic and Terrestrial)	M. Siders
Wastes, Hazardous or Solid	Allen Kraus
Water Quality, Surface and Ground, Soils, Hydrology/Water Rights	D. Murphy
Wetlands & Riparian Zones, Vegetation	A. Clements
Wild and Scenic Rivers and Wilderness, Access and Transportation, Recreation, and Visual Resources	J. Jackson
Realty Authorizations and Geology and Minerals	T. Pfifer and R. Ernst
Fire	D. Huisjen
Law Enforcement	J. Maloney
Forest Management, Socio-Economics and Noise	TBA

GLOSSARY

Activity plan: A detailed, site specific plan for management of one or more resource programs. An activity plan provides additional specificity needed to implement RMP decisions. Activity plans are completed only if necessary. When multiple programs are addressed, activity plans may be called Integrated Activity Plans or Coordinated RMPs.

Dispersed camping: Camping on public land in locations that are not formally developed and that do not contain camping facilities, such as graveled roads, utilities, toilets, or picnic tables.

Landscape: A defined land area that forms a management unit or basis of analysis.

Glossary

Landscape: A defined land area that forms a management unit or basis of analysis.

Mechanized Travel: Moving by means of mechanical devices such as a bicycle; not powered by a motor

Motorized Vehicle: Moving by means of vehicles that are propelled by motors such as cars, trucks, all-terrain vehicles (ATV), Sport Utility Vehicles (SUV), motorboats, and snowmobiles. Synonymous with off-road vehicle.

Non-Motorized Use: Moving by foot, stock or pack animal, boat, or mechanized vehicle such as a bicycle.

Off-Highway Vehicle: This term is synonymous with the term off-road vehicle (or ORV). Whereas off-road vehicle is used in the regulations and includes any motorized vehicle, the term off-highway vehicle (OHV) is a more contemporary term.

Off-Road Vehicle: Any motorized vehicle capable of, or designed 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; and (5) any combat or combat support vehicle when used in times of national defense emergencies.

OHV Area Designations:

•Open area means 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 subpart 8341 and 8342 of this title.

•Limited area means an area restricted at certain times, in certain areas, and/or to certain vehicular use. These restrictions may be of any type, but can generally be accommodated within the following type of categories: Numbers of vehicles; types of vehicles; time of season of vehicles use; permitted or licensed use only; use on existing routes; use on designated routes; and other restrictions.

•Closed area means an area where off-road vehicle use is prohibited. Use of off-road vehicles in closed areas may be allowed for certain reasons; however, such use shall be made only with the approval of the authorized officer.

Standards for Public Land Health: A description of conditions needed to sustain public land health; the standards relate to all uses of the public lands in Colorado.

Resource Management Plan (RMP): A BLM multiple use planning document, prepared in accordance with Section 202 of the Federal Land Policy and Management Act, that

a. establishes resource conditions goals and objectives to be attained;
b. allocates resources and identifies allowable uses;
c. identifies land areas for limited, restrictive, or exclusive uses; and
d. provides guidance for implementation of the decisions made in the plan.

Glossary

Routes: Multiple roads, trails, and primitive roads; a group or set of roads, trails, and primitive roads that represents less than 100% of the BLM transportation system. Generically, components of the transportation system are described as "routes".

Transportation Management Plan: A document that focuses on all aspects of transportation in a land area. Transportation planning can also be accomplished within Integrated Activity Plans, or Coordinated RMPs where multiple resource programs are planned for concurrently.

Appendices

APPENDIX INDEX

Appendices

Appendix 1

Definitions of Travel Use Categories

The Travel Use Categories define the individual routes in terms of the types of uses that are permitted on them. There are 9 categories, of which the first 6 represent the types of designated travel uses that apply to those routes that are available for use by the public and that are controlled by BLM. The 7th category, Non-BLM, are available to use by the public but are controlled by other jurisdictions that regulate use of the roads. The other two categories are routes that are controlled by BLM but that are not available for public use with motorized or mechanized vehicles.

It is important to understand that each Travel Use Category is named for the type of use that it is primarily suited to accommodate. The other travel uses included in the category should be considered as secondary uses. This distinction is important so that it is recognized that just because secondary uses are allowed does not mean that all of the routes in the category are suitable for those uses. All the Travel Use Categories are shown with symbols and/or color codes on the maps of alternatives.

The most inclusive travel uses class is the **4WD/2WD (Open)** category, including all of the various types of routes commonly found on public lands, ranging from maintained dirt and graveled routes to low standard primitive four-wheel drive routes. These routes are designed to accommodate conventional size motor vehicles but are also available for use by ATVs, motorcycles, bicycles, horses, and foot travel.

The **Specialized Routes** category includes routes that are intended for use by modified high clearance 4x4 technical 4WD vehicles and motorized and mechanized trials bikes only.

The **ATV 2-Track** category includes routes that are intended for use by motorized modes of transportation 50 inches or less in width and weighing no more than 800 pounds, but are also available for motorcycles, bicycles, horses, and foot travel.

The **Motorized Single Track** category includes routes that are intended for motorized modes of transportation 24 inches or less in width but are also available for use by bicycles, horses, and foot travel.

The **Non-Motorized Single Track** category includes routes that are intended for mechanized modes of transportation 24 inches or less in width but are also available for use by horses and foot travel.

The **Non-Motorized/Non-Mechanized Single Track** category includes routes intended to accommodate horseback riding but are also available for foot travel.

The **"Non-BLM"** category includes county, state, and Federal highways and roads. As a general rule most of the Non-BLM roads are public roads limited to use with street-legal vehicles and are not open to ATVs or other unlicensed motorized vehicles. Most are paved or graveled roads designed to accommodate high-speed traffic. There are, however, a few county roads that are low standard dirt roads. The BLM does not have jurisdiction over these roads and is not proposing any travel management designations, or restrictions, for these routes in this plan.

The **"Administrative Access Only"** category consists of existing routes that are not designated for specific recreational travel uses, and are not available to the public for motorized or mechanized travel. Many Administrative Access routes, however, will remain available for administrative uses by authorized personnel and permit holders with motorized or mechanical vehicles, and where legal public access exists are also available to the public for foot and horse travel.

The last category includes the **"Closed"** routes. These Closed routes are those that are neither available for use by the public nor needed for administrative uses.

Appendices

Appendix 2

Acres in OHV Designations by Sub-Regions for Each Alternative in Planning Area

OHV Designations on Public Lands in Planning Area	SUB-REGIONS	Alternative 1 (Acres)	Alternative 2 (Acres)	Alternative 3 (Acres)	Alternative 4 (Acres)
TOTAL LDR-Y/S (12/1-				Same as Alternative 2	Same as Alternative 2
Limited to Designated Routes – Yearlong/ Seasonally 12/1-4/15 (LDR-Y/S 12/1 to 4/15) by Sub-Region. See Appendix 4 for maps of routes in Alts. 2, 3, & 4 that would be subject to these seasonal closures – all other routes would be available yearlong unless noted otherwise	**A**	0 This OHV Designation is not applicable to this alternative in Planning Area	18,045		
	C		26,632		
	D		28,139		
	E		6,851		
	F		11,535		
	G		8,694		
TOTAL OPEN		**28,557**	0 This OHV Designation is not applicable to this alternative in Planning Area		
Open by Sub-Region	**A**	13,271			
	C	8,362			
	D	6,923			
	E	0			
	F	0			
	G	0			
TOTAL LDRY		**1,964**	0 This OHV Designation is not applicable to this alternative in Planning Area		
Limited to Designated Routes Yearlong by Sub-Region	**A**	1,328			
	C	0			
	D	0			
	E	0			
	F	0			
	G	636			
TOTAL LDRS – 12/1 - 4/30		**69,375**	0 This OHV Designation is not applicable to this alternative in Planning Area		
Limited to Designated Routes 12/1-4/30 by Sub-Region	**A**	3,446			
	C	18,270			
	D	21,216			
	E	6,851			
	F	11,535			
	G	8,058			
TOTAL CLOSED (in all Alternatives – Existing Camel Back WSA-Sub-Region B)	**B - Closed in all Alternatives**	**10,668 Camel Back WSA**	**10,668 Camel Back WSA**	**10,668 Camel Back WSA**	**10,668 Camel Back WSA**

Appendices

Appendix 3

Sub-Region General Settings and Desired Future Conditions

An important initial step in this planning process was to divide the area into somewhat homogenous and unique geographic divisions called Sub-Regions. These divisions were helpful in describing common values, resources, and features, and ensuring that the special qualities and travel opportunities that exist in different portions of the planning area were considered. Additional factors that were considered were existing route density, access availability, limitations and issues, Camel Back Wilderness Study Area (WSA) boundary, logical topographic or administrative features, important or sensitive natural and biological resources, and well-established recreational uses.

A total of seven Sub-Regions were defined for the area. Issues and concerns for all seven Sub-Regions are included and grouped in the discussion of issues in Appendix 5. Although the public lands in the Sub-Regions currently contain OHV designations of Open, Closed, or Limited to Designated Routes Seasonally/Yearlong, no routes have been designated on the ground via travel management planning, RMP decisions or RMP amendments. Except for public lands in the Camel Back Wilderness Study Area, which is designated as Closed, motorized and non-motorized travel currently travel on-route and cross-country yearlong.

Desired Future Conditions (DFC) are vision statements that describe the major goals of the TMP and that directly respond to the major issues and concerns that were identified through public involvement. The DFCs provide a snapshot of what the area would be like and represent once the TMP is implemented and issues and concerns are addressed. The following DFCs define the overall goals:

> MAINTAIN AND IMPROVE PUBLIC LAND HEALTH – Public Land Health would be improved and meet Public Land Health Standards, or be moving towards being in compliance with the Public Land Health Standards when the TMP is implemented, along with establishing and following all the best management practices.
>
> IMPROVE MOTORIZED AND NON-MOTORIZED RECREATIONAL EXPERIENCES – Recreational transportation elements and the mixes of motorized and non-motorized recreational uses on Public Lands are contributing to the lands being in compliance or moving towards being in compliance with the Recreation Management Guidelines for Meeting Public Land Health Standards and other applicable recreation management planning standards. User conflicts and safety issues are satisfactorily resolved. User experiences and opportunities are being adequately provided. Visitors would be successful in achieving the reasons, benefits, and experiences sought by them because the TMP, when implemented, would provide a wide variety of difficulty and physical, social, and managerial settings for a wide range of visitors, whether in groups or as individuals.
>
> PROVIDE APPROPRIATE, SUSTAINABLE, AND REASONABLE ACCESS – The

planning area receives a high amount of route use, due in part to the location of the area in relation to Montrose and Olathe, and in part due to the regional use the area receives. The Public Lands are served by an effectively and efficiently managed and maintained system of routes that provides access and travel opportunities to visitors for authorized uses for motorized and non-motorized travel. Safe and reasonable recreational and administrative access uses would be provided using public input. Maintenance would be conducted to help achieve this and other desired future conditions.

IMPROVE NATURAL VALUES – Some areas would be managed to achieve higher standards than others, as they are special landscapes and possess unique values that require these higher standards.

Descriptions of General Settings and Desired Future Conditions of each Sub-Region are below. See Table 2 for the existing inventoried miles of various types of routes within each Sub-Region. See Appendix 2 for acres of existing OHV designations in each Sub-Region. All acre and mileage figures are approximate.

SUB-REGION A

General Setting:
Sub-Region A contains a total of 19,471 acres of public lands and 1403.5 acres of private lands. The Sub-Region is characterized by two long mesas or ridges and associated steep drainages. Monitor Mesa is the predominant landscape feature. Portions of Roubideau, Potter, and Monitor Creeks are within the Sub-Region. Existing OHV designations in the Sub-Region are: 13,271 acres "Open", 3,466 acres "Limited Seasonally", and 1,328 acres "Limited" year-long. Uses occurring within the Sub-Region are cattle ranching (grazing), wood collecting, utility right-of-ways, walking/running, hiking, mountain bike riding, horseback riding, hunting, fishing, picnicking, camping, viewing scenery, wildlife watching/birding, four-wheel driving, and ATV riding. The southern boundary of the Sub-Region is adjacent to the Uncompahgre National Forest. The northwestern boundary is 25-Mesa Road, and the eastern boundary is adjacent to private lands on California Mesa, the Sub-Region B - Camelback Wilderness Study Area (WSA), and Potter Creek. Major access into the Sub-Region is via 25-Mesa Road, and A-49 Road that parallels Roubideau Creek. Approximately 90 miles of routes are located in the Sub-Region.

Desired Future Conditions**:**
Protect and improve elk, deer, bighorn sheep and special status plant and animals' habitat, and preserve riparian habitat while maintaining appropriate and adequate access for public and/or administrative uses.

SUB-REGION B

General Setting:
This Sub-Region contains the 10,668 acre Camel Back Wilderness Study Area (WSA), and 161 acres of private land on the southern boundary of the Sub-Region, and is located between Sub-Regions A and C. The Sub-Region is characterized by a series of deep

canyons and long mesas and buttes. The largest mesa is Winter Mesa, at an elevation of about 7,000 feet. Camelback ridge is a large, isolated mesa between Roubideau Creek and Criswell Creek. The Public Lands in the WSA are currently designated "Closed" to all motorized travel. Mechanized travel using mountain bikes, and the use of other mechanical devices, such as muscle-powered big game wheeled game carts or wagons, is also prohibited in the WSA under the guidance and policy in BLM Handbook 8550-1, *Interim Management Policy for Lands Under Wilderness Review*, Chapter I.B.11, pages 15 and 16. The southern boundary of the Sub-Region is the Uncompahgre National Forest and the eastern boundary is generally the top of the eastern slope above Roubideau Creek. Approximately 20 miles of routes are available for hiking or horseback riding by the public in the Sub-Region. There is one existing route approximately 5 miles long where motorized travel is authorized only for BLM and grazing permittee administrative purposes to maintain rangeland improvements. The western boundary is primarily Potter Creek. Public recreation use occurring in the Sub-Region consists of hiking, horseback riding, mountain bike riding, hunting, sightseeing, photography, and miscellaneous non-motorized overnight and day-use recreation activity. The Camel Back WSA under all alternatives would be managed in accordance with the BLM Handbook 8550-1.

Desired Future Conditions:
Maintain Camel Back Wilderness Study Area values and qualities for which the lands were designated.

SUB-REGION C

General Setting:

Sub-Region C is located adjacent to and between Sub-Regions A, B, and D, and contains a total of 27,882 acres of public lands and 1191.3 acres of private land. The Sub-Region is characterized by long canyons, narrow ridge and mesa tops, and steep drainages. Roatcap Gulch, Middle Fork, East Fork, Big Sandy Wash, and Coalbank Canyon are major drainages in the Sub-Region. Existing OHV designations in the Sub-Region are: 8,362 acres "Open" and 18,270 acres "Limited Seasonally". The western boundary is the Sub-Region B - Camelback Wilderness Study Area (WSA) boundary and the Uncompahgre National Forest. The northern boundary is Sub-Region A, the eastern boundary is private land on the southern end of California Mesa, and the southern boundary is Sub-Region D and Transfer Road. Major access into the Sub-Region is via Transfer and West Transfer Roads. The TransColorado gas pipeline and a 115 kV Western Power Administration electrical transmission line meander in and out of the Sub-Region on its eastern edge. The TransColorado gas pipeline is also adjacent to the southern boundary of the Sub-Region paralleling Transfer Road. TransColorado's Olathe Pumping Station, associated with the gas pipeline, is on the southern boundary of Sub-Region C. Other uses occurring within the Sub-Region are cattle and sheep ranching (grazing), utility right-of-ways, walking/running, hiking, mountain bike riding, horseback riding, hunting, fishing, picnicking, camping, viewing scenery, wildlife watching/birding, four-wheel driving, ATV riding, motorcycle riding. Approximately 169 miles of routes are located in the Sub-Region.

Desired Future Conditions:
Protect and improve livestock forage conditions and crucial big game winter range habitat in the Sub-Region while allowing suitable recreational opportunities/experiences, and maintain appropriate and adequate access for public and/or administrative uses.

SUB-REGION D

General Setting:

Sub-Region D is adjacent to and between Sub-Regions C, E, and F1, and contains a total of 29,660 acres of public lands and 1496.8 acres of private lands. Cushman Creek, Piney Creek, and Dry Creek, all steep drainages, are located in the Sub-Region. The Dry Creek Basin, which varies in topography, bisects the Sub-Region generally from north to south. Existing OHV designations in the Sub-Region are: 6,923 acres "Open" and 21,216 acres "Limited Seasonally". The western boundary is the Uncompahgre National Forest and private land. The northern boundary is Sub-Region C and Transfer Road. The eastern boundary is Sub-Regions E and F. Major access into the Sub-Region is via the Rim Road, Colorado Highway 90, and Transfer Road. The TransColorado gas pipeline is adjacent to the northern boundary of the Sub-Region paralleling Transfer Road. TransColorado's Olathe Pumping Station, associated with the gas pipeline, is on the northern boundary of Sub-Region D. Sub-Region D has become a popular destination area for technical four-wheel driving, two-wheel motorized and mechanized trials bikes, and motorcycle and mountain bike riding. The Tabeguache Trail, a nationally known 142 mile trail that connects Montrose to Grand Junction, runs through the Sub-Region onto the Uncompahgre National Forest. Other popular activities include walking/running, hiking, rock climbing, horseback riding, hunting, fishing, picnicking, camping, viewing scenery, wildlife watching/birding, four-wheel driving, and ATV riding. Approximately 178 miles of routes are located in the Sub-Region.

Desired Future Conditions:
Provide a range of shared-use quality recreational opportunities/experiences for all users, balanced with resource protection, while maintaining appropriate and adequate access for public and/or administrative uses.

SUB-REGION E

General Setting:

Sub-Region E is adjacent to Sub-Regions D and F1, and contains a total of 6,879 acres of public land, and 17.6 acres of private land. The Sub-Region is characterized by fairly gentle terrain with a few drainages. All the Public Lands in the Sub-Region are designated as "Limited Seasonally". The western boundary is Sub-Regions D and F. The eastern boundary is private land in the Shavano Valley. Major access into the Sub-Region is via the Rim Road and Transfer Road. The TransColorado gas pipeline is adjacent to the northern boundary of the Sub-Region paralleling Transfer Road. The Western Area Power Administration 115 kV electrical line diagonally bisects the Sub-Region. In addition to Sub-Region D, Sub-Region E has also become a popular destination area for technical four-wheel driving and two-wheel motorized and

mechanized trials bikes. The Tabeguache Trail, a nationally known 142 mile trail that connects Montrose to Grand Junction, starts and runs through the Sub-Region continuing on to Sub-Region D. At the beginning of the trail, which is Rim Road, BLM has provided a parking area for all users. Other popular activities include walking/running, hiking, mountain bike riding, rock climbing, horseback riding, hunting, fishing, picnicking, camping, viewing scenery, wildlife watching/birding, four-wheel driving, ATV riding, and motorcycle riding. Approximately 60 miles of routes are located in the Sub-Region.

Desired Future Conditions:
Protect sensitive plant communities and associated wildlife while providing a range of quality and suitable recreational opportunities/experiences and maintaining adequate access for public and/or administrative use as appropriate.

SUB-REGION F

Sub-Region F consists of three separate polygons or areas, F1-F3, with Sub-Region G in between. The reason for three separate areas is the common traditional uses that occur in these three polygons, the high amount of use occurring there, and the common urban interface that influences these three areas. In contrast, Sub-Region G contains no direct access from high use public roads, nor some of the other specialized recreation uses that occur in Sub-Region F. This Sub-Region contains 11,832 acres of public land and 308.5 acres of private land. Approximately 117 miles of routes are located in the three polygons of Sub-Region F. Existing OHV designations in this Sub-Region are portion are 11,535 acres "Limited Seasonally".

General Setting:
Portion North of Sub-Region G (F1): The portion of this Sub-Region north of Sub-Region G is adjacent to and between Sub-Regions D and G, and is dissected by several drainages and contains many long, narrow, and flat mesas. Colorado Highway 90 and a 115 kV electrical transmission line are located in this portion, and parallel each other. The western boundary is Sub-Region D. The northeastern boundary is private land in Shavano Valley. The southern boundary is Sub-Region G and Linscott Canyon. Major access into this portion is via Colorado Highway 90, a major access route to the Uncompahgre Plateau. A route approximately one mile long extends onto public land southwesterly from the lower switchback on Colorado Highway 90, and was used by technical, full-size four-wheel drive vehicles designed especially for travel on and over very steep and rough terrain and large rocks, and motorized and mechanized technical, two-wheel trials bikes. Other popular activities include walking/running, hiking, mountain bike riding, horseback riding, hunting, picnicking, camping, viewing scenery, wildlife watching/birding, four-wheel driving, ATV riding, and motorcycle riding.

Portions South of Sub-Region D (F2 & F3): These two polygons are located adjacent to and south of Sub-Region G and are located on a long, wide mesa with varying terrain, but no major drainages. The majority of the eastern boundary is private land and Dave Wood Road. The northwestern boundary is Sub-Region G and private land along the rim of Spring Creek. The southern boundary is the planning area, private land near the

Montrose-Ouray County lines, and the Uncompahgre National Forest. Major access is via Dave Wood Road, an important access route to the Uncompahgre Plateau. Numerous routes enter the Sub-Region from Dave Wood Road.

Desired Future Conditions (entire Sub-Region F):
Sustain multiple uses through traditional means of travel, while providing appropriate and suitable recreational opportunities/experiences and access for public and/or administrative uses, without compromising wildlife habitat values on mesa tops and private land boundaries. Traditional means of travel include hiking, horseback riding, mountain bike riding, motorcycle riding, ATV riding, and 4-wheel driving.

SUB-REGION G

General Setting:
Sub-Region G is adjacent to and between the two portions of Sub-Region F and contains a total of 8,616 acres of public land and 1 acre of private land. Sub-Region G is characterized by long unaltered canyons, narrow ridge and mesa tops with wide open views and various native vegetation, and steep drainages. Access routes leading into the Sub-Region are not very numerous. Major drainages in the Sub-Region are Lindsay Canyon, Devinney Canyon, and Spring Creek, a major tributary of the Uncompahgre River. Existing OHV designations are: 8,058 acres "Limited Seasonally" and 636 acres "Limited Year-long". The northwestern and southeastern boundary is Sub-Region F, the northern boundary is private land above Beaver Hill subdivision, and the southwestern boundary is private land along the Montrose-Ouray County lines. The southern boundary is the Uncompahgre National Forest. Sub-Region G contains no direct access from high use public roads. Approximately 68 miles of routes are located in the Sub-Region.

Desired Future Conditions:
Preserve the diversity of the natural character and scenic qualities within the Sub-Region, as expressed by open views, long unaltered canyon expanses, higher elevations, and varying vegetation communities, while providing quality and appropriate recreational opportunities/experiences and access for public and/or administrative uses.

Appendices

Appendix 4

Maps of the Alternatives

(Maps are located on CD as separate PDFs if reviewing the document electronically)

Appendices

Appendix 5

Issues and Concerns for the Dry Creek Travel Management Planning Area

Background
The Bureau of Land Management Uncompahgre Field Office began work on the Dry Creek Travel Management Plan (TMP) in March 2007. The public scoping process was initiated at that time, with the public notified through press releases, web site postings, and letters sent to approximately 650 individuals and groups who had expressed an interest in participating in the travel management planning effort. Public meetings were then held in late March and early April.

At the close of the public scoping period, the Uncompahgre Field Office had received comments from 74 individuals and organizations in response to the request for public input relating to the Dry Creek Travel Management Planning Area. These comments were placed into subject categories and summarized by members of the Dry Creek Travel Management Planning Team. This document contains a general summary of the comments.

How the Stakeholder Comments were used
The BLM Travel Management Planning Team first identified the issues and concerns of stakeholder groups. Then the team began working on defining the boundaries and goals for the travel management plan and for the individual planning area sub-regions.

For the Dry Creek Travel Management Plan, the goals were written in the form of "Desired Future Conditions" (DFCs), which are brief statements that describe the physical, biological, social and management conditions that are expected to be achieved when the travel management plan has been implemented.

The purpose of DFCs is to define the kinds and amounts of activities or uses (social component) that a given land area can sustain while maintaining the area's health (physical and biological components) and complying with any special management requirements (management component) that may apply in the area.

Stakeholder comments were an important part of the planning process, especially for identifying social component issues, which were considered by the team when drafting the DFCs for this plan. The DFCs then guided the analysis of the routes within the draft alternative travel network systems.

Summary of Comments—Issues and Concerns

Access and Transportation
- Increased use of roads and trails off of Dave Wood Road and Hwy 90.
- Route proliferation in the past ten years, with a road up every mesa and pull-offs to canyon rims.
- High cost of fuel requires people to stay closer to home, which means using public lands.

- Support the change from open to limited to existing trails for motorized use.
- Support most of BLM's emergency closures and, if after proper review, those areas are shown to have suffered resource impacts, we fully support those areas to remain closed.
- Opposed to the closing of additional trails to motorized traffic in the Dry Creek Areas.
- Some of the trails have not been used by some and could be closed as a result of the travel planning process, which is not okay.
- Eliminating dead-end trails, along with other through trails, could result in hundreds of users at a time on the few trails left.
- Closing trails would create more user conflict.
- Access closed due to private land owners complaining about trails being too close to their property.
- Outfitters who try to convince federal agencies to close trails for authorized uses only.
- Do not want to have access to nearby areas restricted for those of us who use the land gently, and who try to leave sites better than we found them.
- Off-road travel is promoted through firewood cutting and by individuals without permits seeking Christmas trees, firewood or to collect rocks.
- Major increase in off-road travel in just the past 2-3 years.
- Adjacent property owners would like access to public lands.

Cultural and Historic Resources

- Historical and cultural areas need to be protected from resource impacts.

Land Health and Threats

- Land is increasingly trashed—even with large household appliances—and eroded over the past several years, reflecting disrespect for themselves and abuse of what belongs to all of us.
- Huge amount of dumping and trash from vehicles being allowed to drive into the Linscott Canyon area.
- Mining trash is left behind.
- Beautiful areas with great ecosystems deserve to be passed on to future generations in good health.
- Concerns with rapid expansion of noxious and invasive weeds and the effects on fire and runoff patterns.

Lands, Rights-of-Way, and Withdrawals

- Many facilities were constructed as many as 50 years ago, and major repair and/or replacement would be necessary. Continuous and uninterrupted access to each of these facilities would be required.

Law Enforcement and Public Safety

- Implementing designated routes requires larger staffing and funding commitments.
- Any new plan would be ineffective without increased funding for enforcement and education.
- Regulations are not enforced now.

- Lack of enforcement for a travel plan doesn't seem to be much deterrence for people who respect decisions.
- Regulations and restrictions needed due to the increase in use and the projected future growth of the surrounding area.

Multiple Use
- Public lands should be managed to benefit all users.
- There is a delicate balance evident here between use and abuse, as a result of human activities and numbers of human visits/uses.

Noise
- Increased traffic is causing noise pollution.

Recreation
- Quiet use opportunities are nonexistent, especially on weekends, and the current uncontrolled access must be halted.
- Allowing dispersed motorized use for camping on both sides of routes would encourage further route proliferation (especially short spur routes) and related impacts, including weed expansion.
- Allowing dispersed ORV use for camping may violate Section 106 of the National Historic Preservation Act because ground-disturbing activity would occur without the federal agency's ability to first inventory those locations for the presence of potentially major cultural resources.
- Hikers and horseback riders have access to roads and trails that motorized vehicles cannot go to, even if wanted or allowed.
- Concerns over motorized events.
- Potential loss of existing motorized recreation opportunities might result from the travel management plan.
- Increased use and impact of user-created routes.
- New machines are capable of traveling in amazingly difficult places. This increased capability has led to increased resource impacts.
- Maintain primitive four-wheeling experiences.

Socioeconomics
- Continuing regional growth would put additional pressure on public lands to provide mixed uses expected by public.
- The proximity of the area to Montrose with its large population means that there is constant pressure, not just to use the existing travel routes but to expand them.
- The Uncompahgre Plateau has become an increasingly popular destination.
- Additional closings could have an economic impact on the local economy because of the huge OHV community that uses the area for recreation (buy supplies, gas, food, etc. from the Montrose-area merchants).
- Need more environmental education and stewardship programs in schools.

Soils

- Route proliferation is causing increased soil erosion.
- Vehicles traveling the Plateau in muddy conditions cause impacts to the soil and encourage erosion.

Vegetation
- Reclamation/restoration is much more difficult and costly than preservation.
- Weed control.
- Preservation of plant habitat.

Water Resources
- Increase in motorized use may impact water quality.

Wildlife
- Preserve wildlife habitat and corridors.
- Increased traffic, increased speeds, and roadway improvements are problematic for wildlife.

Appendices

Appendix 6
List of Travel Management Support Facilities within each Alternative and Sub-Region
(All facility locations are indicated on maps in Appendix 4)

ALTERNATIVE 2

Sub-Region A

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

3 Staging areas would be designed and constructed.

1 Hardened camping area would be delineated near the riparian zone of Roubideau creek.

1 Trailhead would be designed and constructed.

Sub-Region C

Kiosks\Informational signs would be installed at entry routes into this Sub-Region.

4 Trailheads would be designed and constructed.

2 Delineated camping areas to allow motorized and non-motorized travel 300 feet off-route from centerline of designated routes for camping.

2 Staging areas for all users would be designed and constructed, one of which would be located on the boundary of Sub-Regions C and D.

Sub-Region D

Kiosks\Informational signs would be installed at entry routes into this Sub-Region.

1 Delineated camping area to allow motorized and non-motorized travel 300 feet off-route from centerline of designated routes for camping.

Sub-Region E

Kiosks\Informational signs would be installed at entry routes into this Sub-Region.

Existing staging area, known at the Tabeguache Trailhead, located on Rim Road would be upgraded as appropriate.

2 Hardened camping areas would be designed and constructed.

Sub-Region F

Kiosks\Informational signs would be installed at entry routes into this Sub- Region

1 Staging area would be designed and constructed.

3 Trailheads would be designed and constructed.

2 Delineated camping areas to allow motorized and non-motorized travel 300 feet off-route from centerline of designated routes for camping.

Sub-Region G

Kiosks\Informational signs would be installed at entry routes into this Sub-Region.

2 Staging areas would be designed and constructed.

1 Trailhead would be designed and constructed.

ALTERNATIVE 3

Sub-Region A

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

1 Staging area would be designed and constructed.

Sub-Region C

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

2 Trailheads would be designed and constructed.

2 Staging areas would be designed and constructed.

Sub-Region E

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

The existing staging area, known at the Tabeguache Trailhead, located on Rim Road would be upgraded as appropriate.

Sub-Region F

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

2 Trailheads would be designed and constructed.

1 Staging area would be designed and constructed.

Sub-Region G

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

1 Staging area would be designed and constructed.

1 Trailhead would be designed and constructed.

ALTERNATIVE 4

Sub-Region A

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

3 Staging areas would be designed and constructed.

Sub-Region C

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

2 Delineated camping areas to allow motorized and non-motorized travel 300 feet off-route from centerline of designated routes for camping.

2 Trailheads would be designed and constructed.

2 Staging areas would be designed and constructed.

Sub-Region D

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

1 Delineated camping area to allow motorized and non-motorized travel 300 feet off-route from centerline of designated routes for camping.

Sub-Region E

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

2 Hardened camping areas would be designed and constructed.

The existing staging area, known at the Tabeguache Trailhead, located on Rim Road would be upgraded as appropriate.

1 Cultural interpretive site would be designed and installed.

Sub-Region F

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

2 Delineated camping areas to allow motorized and non-motorized travel 300 feet off-route from centerline of designated routes for camping.

1 Staging area would be designed and constructed.

1 Trailhead would be designed and constructed.

Appendices

Sub-Region G

Kiosks\Informational signs would be installed at entry routes into this Sub- Region.

2 Staging areas would be designed and constructed.

1 Trailhead would be designed and constructed.

Appendices

Appendix 7
Laws and Policies which guide BLM's Travel Management Planning Process

LAWS

General Authorizing Legislation - The following authorize the general activities of the Bureau of Land Management or govern the manner in which BLM's activities are conducted.

Federal Land Policy and Management Act of 1976, as amended (43 U.S.C.1701 et seq.)

- Outlines functions of the BLM Directorate, provides for administration of public lands through the BLM, provides for management of the public lands on a multiple-use basis, and requires land-use planning including public involvement and a continuing inventory of resources.

National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.)

- Section 102(2)(C) of the National Environmental Policy Act of 1969 requires federal agencies to prepare a "detailed statement" for proposed major actions which greatly affect the quality of the human environment. The statement must include the environmental impacts of the proposed action, alternatives to the proposed action, and any adverse environmental impacts which cannot be avoided should the proposal be implemented. In 1978 the CEQ issued binding regulations which implement the procedural provisions of NEPA.

The Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)

- Directs Federal agencies to ensure that their actions do not jeopardize threatened and endangered species and that through their authority they help bring about the recovery of these species.

Specific Authorizing Legislation - In addition to the above laws that provide general authorization and parameters, a number of laws authorize specific program activities, or activities in specific or designated areas.

Soil and Water Resources Conservation Act of 1977(16 U.S.C. 2001)

- Provides for conservation, protection and enhancement of soil, water, and related resources.

The Clean Air Act of 1990, as amended (42 U.S.C. 7401, 7642)

- Requires BLM to protect air quality, maintain Federal and State designated air quality standards, and abide by the requirements of the State implementation plans.

The Clean Water Act of 1987, as amended (33 U.S.C. 1251)

- Establishes objectives to restore and maintain the chemical, physical and biological integrity of the nation's water.

Appendices

Taylor Grazing Act of 1934 (43 U.S.C. 315), as amended by the Act of August 28, 1937 (43 U.S.C. 1181d)

- Authorizes the establishment of grazing districts, regulation and administration of grazing on the public lands, and improvement of the public rangelands. It also authorizes the Secretary to accept contributions for the administration, protection, and improvement of grazing lands, and establishment of a trust fund to be used for these purposes.

The Federal Noxious Weed Act of 1974, as amended (7 U.S.C. 2814)

- Provides for the designation of a lead office and a person trained in the management of undesirable plants; establishment and funding of an undesirable plant management program; completion and implementation of cooperative agreements with State agencies; and establishment of integrated management systems to control undesirable plant species.

Noxious Weed Control Act of 2004 (P.L. 108-412)

- Establishes a program to provide assistance through States to eligible weed management entities to control or eradicate harmful, nonnative weeds on public and private lands.

The National Historic Preservation Act of 1966, as amended (16 U.S.C. 470)

- Expands protection of historic and archaeological properties to include those of national, State and local significance. It also directs Federal agencies to consider the effects of proposed actions on properties eligible for or included in the National Register of Historic Places.

The Archaeological Resources Protection Act of 1979, as amended (16 U.S.C. 470a, 470cc and 470ee)

- Requires permits for the excavation or removal of Federally administered archaeological resources, encourages increased cooperation among Federal agencies and private individuals, provides stringent criminal and civil penalties for violations, and requires Federal agencies to identify important resources vulnerable to looting and to develop a tracking system for violations.

The Migratory Bird Conservation Act of 1929, as amended (16 U.S.C. 715) and treaties pertaining thereto

- Provides for habitat protection and enhancement of protected migratory birds.

The Sikes Act of 1974, as amended (16 U.S.C. 670 et seq.)

- Provides for the conservation, restoration, and management of species and their habitats in cooperation with State wildlife agencies.

Migratory Bird Treaty Act of 1918(16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755) as amended by: Chapter 634; June 20, 1936; 49 Stat. 1556; P.L. 86-732; September 8, 1960; 74 Stat. 866; P.L. 90-578; October 17, 1968; 82 Stat. 1118; P.L. 91-135; December 5, 1969; 83 Stat. 282; P.L. 93-300; June 1, 1974; 88 Stat. 190; P.L. 95-616; November 8, 1978; 92 Stat. 3111; P.L. 99-645; November 10, 1986; 100 Stat. 3590 and P.L. 105-312; October 30, 1998; 112 Stat. 2956)

- Establishment of a Federal prohibition, unless permitted by regulations, to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird." (16 U.S.C. 703)

Executive Order 13186 on Protecting Migratory Birds -- Responsibilities of Federal Agencies To Protect Migratory Birds

- These migratory bird conventions impose substantive obligations on the United States for the conservation of migratory birds and their habitats, and through the Migratory Bird Treaty Act (Act), the United States has implemented these migratory bird conventions with respect to the United States. This Executive Order directs executive departments and agencies to take certain actions to further implement the Act.

The Bald and Golden Eagle Protection Act of 1940 as amended (16 U.S.C. 668-668c)

- Prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

Policies

- Colorado Policy on Cultural Clearances for Travel Planning
- Instruction Memorandum No. CO-2007-020 Comprehensive Travel Management Planning and OHV Designations
- BLM Colorado - IB-2003-020 Travel Management Guidelines
- Instruction Memorandum No. 2008-014 - Clarification of Guidance and Integration of Comprehensive Travel and Transportation Management Planning into the Land Use Planning
- Presidential Executive Order 11644
- Colorado Public Land Health Standards
- Wilderness Study Area Interim Management Policy
- Colorado Recreation Management Guidelines to meet Public Land Health Standards
- National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands
- National Mountain Bicycling Strategic Action Plan
- BLM’s Priorities for Recreation and Visitor Services