

U.S. Department of the Interior
Bureau of Land Management
Royal Gorge Field Office
3170 E. Main Street
Canon City, CO 81212

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-200-2006-0086 EA

PROJECT NAME: Recreation – Arkansas River Travel Management Plan (TMP)

PLANNING UNIT: Arkansas River #1, Collegiate/Sangre #2, Badger Creek #3, Waugh Mountain/Tallahassee Creek #6, Grape Creek #7, Other Lands #10

APPLICANT: BLM

SUMMARY DESCRIPTION OF THE PROPOSED ACTION: The Bureau of Land Management (BLM) proposes amending the Royal Gorge Resource Management Plan (RMP) to revise current travel management regulations for portions of the six Eco-Subregions included in the Arkansas River TMP planning area. The TMP serves as the instrument for implementing previous travel and transportation decisions included in the Royal Gorge RMP that direct BLM to change Off-Highway Vehicle (OHV) designations used throughout most of the planning area from the current system of **Limited to Existing Roads and Trails** to a new system of **Limited to Designated Roads and Trails**. The primary TMP goals that would be achieved through the proposed amendment and changes in OHV designations include: maintaining and improving public land health; providing appropriate and reasonable access; and enhancing recreation opportunities.

Under the RMP, the six affected Eco-Subregions contain three categories of OHV designations; **Open**, **Limited**, and **Closed**. These designations are used by BLM to establish where and to what extent vehicular uses may occur on public lands (See [Map 8](#), Map Appendix). **OHV Open** areas are locations on public lands with no limitations or restrictions to full use and cross-country travel with OHVs. Three **OHV Open** areas currently exist within the Arkansas River TMP planning area at Grand Canyon Hills, Texas Creek, and Sand Gulch, which includes Turkey Rock. Under the Proposed Action (Alternative C) the **OHV Open** designations for the three areas would be changed to **OHV Limited to Designated Roads, Trails, and Types of Vehicles**. **OHV Closed** areas are locations on public lands where absolutely no use or travel with OHVs is allowed. Four **OHV Closed** areas currently exist in the Arkansas River TMP planning area in the Browns Canyon, McIntyre Hills, Upper Grape Creek, and Lower Grape Creek Wilderness Study Areas (WSA's). A fifth area with WSA status, High Mesa Grassland RNA/ISA, is currently designated **OHV Limited**. Under the Proposed Action all four WSAs that are currently **OHV Closed** would continue to be designated and managed as **OHV Closed** areas. The High Mesa Grassland RNA/ISA, currently designated OHV Limited, would be closed as well, thereby assuring all WSA designated portions of the planning area are closed to OHV use.

OHV Limited areas are locations on public lands with some form of limitation or restriction for full use and travel with OHVs (i.e., seasonally limited travel, restricting travel to existing roads and trails or restricting to types of vehicles, only). Most of the public lands in the Arkansas River TMP planning area occur within the designation, **OHV Limited to Existing Roads and Trails**. The Proposed Action would further refine this designation to that of **OHV Limited to Designated Roads, Trails and vehicular types**. The Proposed Action would establish designated travel routes for motorized, mechanized, and non-motorized uses and define the types of uses that are permitted on individual roads and trails. [Map 9](#) in the Map Appendix shows the route designations for the Proposed Action alternative (Alternative C).

The Proposed Action would also limit travel using bicycles and other muscle-powered mechanized equipment to designated roads and trails, and establish a maximum distance of 100 feet that motor vehicles may be driven off designated roads and trails for parking and camping. Driving motor vehicles off designated roads and trails for retrieving game would be prohibited.

Under the Proposed Action, the boundaries between BLM and private lands would be managed in compliance with the guidelines contained in Instruction Memorandum (IM) CO-200-07-01, *Royal Gorge Field Office – Guidelines for Managing Access between BLM and Private Lands*. The IM establishes policies that limit motorized and mechanized uses that originate from adjoining private lands. Other than for foot and horse uses, entry to public lands from private lands would have to comply with the designated transportation system and be limited to the same means of travel that the general public uses from public access points. A copy of the IM guidelines is included in [Appendix 3](#).

During the inventory phase of the TMP, a number of county roads were identified in Fremont and Chaffee County that provide important public access to BLM lands but that are not being maintained by the counties. Under the Proposed Action, BLM would coordinate with both counties to resolve this issue by either including the roads in county maintenance schedules, vacating the county right-of-ways so that BLM can maintain them, or entering into agreements under which BLM and the counties would exchange maintenance work so that the roads would be maintained.

Under the Proposed Action, target shooting would be prohibited at Turkey Rock and in several locations near the City of Salida to improve public safety and reduce conflicts with other uses (See [Map 7](#) in the Map Appendix). During public scoping for the TMP several organized groups came forward with requests for new trails in the Texas Creek and Salida subunits. In considering these requests, the BLM interdisciplinary team (ID team) identified a number of issues and concerns related to the construction and maintenance of trails. These included concerns with the conditions found on some existing trails due to poor trail design and the lack of adequate maintenance of trails for controlling soil erosion and correcting unsafe conditions.

Due to the poor conditions found on some of the existing trails in the Texas Creek and Salida areas, including some that were requested by user groups to be designated in the TMP, the ID team concluded that a need existed for establishing guidelines and conditions under which the construction of new or re-opening of old trails would be considered. As a result, the ID team

developed a set of guidelines and conditions that would need to be satisfied before the construction of new trails or re-opening of old trails would be approved. Background information pertaining to the requests and descriptions of the guidelines and conditions are found in [Appendix 6, Requests for New Trails –Texas Creek](#), and [Appendix 7, Requests for New Trails–Salida](#).

Under the Proposed Action, approximately 3 miles of additional ATV/motorcycle trails would be approved for construction and reconstruction in the Texas Creek subunit, and approximately 20 miles of foot/horse/bicycle trails would be approved for construction and reconstruction in the Salida subunit. Actual construction and reconstruction work would be subject to the conditions and guidelines outlined in [Appendix 6](#) and [Appendix 7](#).

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ACRONYMS USED IN THIS DOCUMENT:

ACEC	Area of Critical Environmental Concern
ATV	All Terrain Vehicle
BLM	Bureau of Land Management
CNHP	Colorado Natural Heritage Program
CR	County Road
DFC	Desired Future Condition
DOW	Colorado Division of Wildlife
EA	Environmental Assessment
4WD	Four-wheel drive vehicle
GIS	Geographic Information System
GPS	Global Positioning Satellite
ISA	Instant Study Area
MO	Management Objective
NNL	National Natural Landmark
OHV	Off-Highway Vehicle
RMP	Resource Management Plan
RNA	Research Natural Area
ROS	Recreation Opportunity Spectrum
RGFO	Royal Gorge Field Office
TMA	Travel Management Area
TMP	Travel Management Plan
T&E	Threatened & Endangered Species
WAPA	Western Area Power Administration
WSA	Wilderness Study Area

ISSUES AND CONCERNS: The Royal Gorge Field Office is responsible for identifying the issues and concerns addressed in the environmental assessment (EA). Issues and concerns were identified through a combination of public scoping, coordination with other government agencies, and internal scoping of BLM management issues.

During the scoping phase of this EA, public meetings were held and news releases and other scoping methods were employed that generated hundreds of letters and emails from interested users and stakeholders. These letters and emails were analyzed by BLM to identify the pertinent issues and concerns for the Arkansas River TMP planning area. A summary of all of the issues and concerns contained in the written responses is included in Appendix 1.

In addition to the written comments, BLM personnel met and communicated with individuals and representatives who chose to be more actively involved in this planning effort, including: representatives of environmental organizations such as: the Rocky Mountain Recreation Initiative, Colorado Mountain Club, Sierra Club, and Audubon Society; representatives of motorized recreation groups, including the Colorado Motorized Trails Association, Rocky Mountain Trials Association, the Colorado Off-Highway Vehicle Coalition, and local ATV and 4WD clubs; and representatives of non-motorized users, including the Backcountry Horsemen of America, and local hikers and bicycle users affiliated with the Salida Mountain Trails Park

Committee. Affected holders of grazing permits and rights-of-way (power transmission lines, irrigation ditches, radio towers, etc.) were also contacted to identify their access needs. The issues and concerns that have been carried forward for this environmental assessment (EA) are organized into four categories: A - Regional Issues and Concerns; B - Local Issues and Concerns; C - Special Requests and Proposals from User Groups, and; D - BLM Management Issues and Concerns.

A - Regional Issues and Concerns

As a result of public scoping and involvement, 4 key issues and concerns were identified that apply regionally across the Arkansas River TMP planning area.

A-1. Improving Access to Public Lands and Increasing Recreation Opportunities – A large number of responses included concerns about the need for improving access and increasing travel opportunities to better serve various types of recreation uses. Many called for increasing the number of trails available for specific types of motorized, mechanized, and non-motorized uses.

A-2. Reducing Damage to Natural Resources and the Environment – A large number of responses included concerns about the adverse impacts that various recreational travel uses are having on the natural resources; especially to wildlife, riparian habitat, and water quality. Many advocated limiting access and travel uses to better protect and benefit the health of the public lands.

A-3. Reducing Conflicts and Impacts on Other Uses - A large number of responses included concerns about the conflicts and impacts that OHVs have upon other uses, including conflicts with quiet recreational activities such as camping and hiking, livestock grazing, and illegal motorized travel in Wilderness Study Areas. Many voiced a need to implement travel management actions to reduce or eliminate these conflicts.

A-4. Managing Growing Amounts of Recreation Use - A large number of responses included concerns about the increased impacts that future growth of the regional population could have on the health of the public lands and the ability of BLM to adequately meet and manage ever-increasing demands for OHV uses. Some advocated that more roads and trails for OHVs should be provided as a means for reducing crowding and to better meet the growing demands of OHV users. Others argued that the use of OHVs should not be allowed to expand but should be limited as a means for better protecting public land health and preventing conflicts with other uses.

B – Local Issues and Concerns

An important initial step in the TMP process was to divide the Arkansas River planning area into smaller geographic divisions called subunits. Subunit divisions were used to identify local issues and concerns to ensure that the special qualities and travel use opportunities that exist in different portions of the planning area were considered in the analysis.

Subunits are smaller divisions of the planning area that possess distinctive or common physical characteristics or where special management issues exist that affect how OHV uses are managed. Numerous factors were considered for establishing the boundaries of the individual subunits. In some cases subunits were established to recognize access limitations that affect how OHVs are managed, such as areas that include large tracts of public lands that are blocked off by private lands that prevent or limit legal public access, or where topographic features form natural barriers and prevent or limit the use of OHVs on adjoining public lands. Subunit divisions were also based on other factors, including: recognizing the existence of classified special management areas where the use of OHVs is restricted or prohibited, such as Wilderness Study Areas (WSAs) and Areas of Critical Environmental Concern (ACECs); identifying areas containing important or sensitive resources that could limit OHV activities, including the existence of threatened and endangered species; recognizing areas where specific kinds of recreational uses are already well established.

A total of 14 subunits were defined for the Arkansas River TMP. See [Map 1](#) in the Map Appendix for the locations of the sub-units. The issues and concerns for all 14 subunits are too numerous to list here but descriptions of the subunits, including the identified issues and concerns for the respective subunits, are contained in [Appendix 2](#).

C - Special Requests and Proposals from User Groups

During the initial scoping phase of the TMP several user groups submitted requests for additional trails and other management considerations.

C-1. Request for Additional Areas for Holding Trials Events - Trials events are contests in which riders of specialized motorcycles test their skills on a series of narrow courses through boulders and other natural obstacles. The motorcycles used for this type of riding are fitted with special low pressure tires and are geared to allow contestants to “crawl” their machines through the course at very slow speeds. The object of the contest is to maneuver within the narrow course boundaries without falling over or having to place the feet on the ground to maintain balance. Trials events are authorized under BLM special recreation permits (SRP) that include stipulations for preventing or minimizing resource damage.

The Rocky Mountain Trials Association (RMTA) has been sponsoring and holding trials events on public lands within the Royal Gorge Field Office since 1982. RMTA has requested that the three existing areas where trials events have historically been permitted continue to be available and that additional sites be considered for future use. RMTA contends that any environmental damage resulting from the events is minimal because the contests are held mostly on rocky terrain and the motorbikes are operated at very slow speeds. Opponents have expressed concerns that the events cause considerable amounts of damage to vegetation and soils and encourage OHV users to ride off designated travel routes. Maps depicting the locations where trials events have been held in the past are included in the Map Appendix, [Map 2](#).

C-2. Request for Open Areas for Trials Bikes – In addition to their request to use current and additional areas for holding authorized trials events, RMTA has also asked that Turkey Rock and Reese Gulch be designated as open trials motorcycle bike riding areas. Under this request BLM CFR . . . such areas could be designated as **Open** for all types of OHV's or **Limited** by vehicle types, such as trials bikes. RMTA contends that open areas are needed to provide opportunities for trials bike riders to practice and improve their riding skills, and that the nature of the sport does not lend itself to being restricted to designated routes. Opponents have expressed that the designation of open riding areas would result in considerable amounts of damage to vegetation and soils and would be inconsistent with decisions included in the Royal Gorge Field Office RMP to limit the use of all OHVs to designated routes. Maps of the locations of the requested trials bike practice areas are included in the Map Appendix, [Map 3](#) and [Map 4](#).

C-3. Request for Additional ATV and Motorcycle Routes - The Colorado Motorcycle Trail Riders Association (CMTRA) has submitted a request for seven trails involving the Texas Creek, Red Gulch, and Big Hole subunits. Five of the proposed trails would be for ATVs and motorcycles and two would be just for motorcycles. Six of the trails, five ATV and one single-track, would involve re-opening trails that were closed under an environmental assessment that was done in 1999. The remaining proposed single-track motorcycle trail would require new construction in an area that currently has no existing trails.

CMTRA contends that the additional trails are needed to provide more opportunities and experiences for users of ATVs and motorcycles. Opponents argue that some of the trails would adversely affect soils and water quality and would expand OHV activities into areas containing valuable wildlife habitat. [Map 5](#) in the Map Appendix shows the locations of the trails included under CMTRA's request.

C-4. Request for Trail Improvements and New Trails for Mountain Biking and Hiking - The Salida Mountain Trails Park Committee (SMTPC), with the support of several other community-based organizations, submitted a proposal for expanding and improving the available network of community trails that extend from the city of Salida onto nearby BLM and Forest Service lands. SMTPC contends that improvements of existing trails and the construction of new trails are needed to better meet community demands for hiking and mountain biking, as well as for stimulating the local economy. Opponents argue that some of the trails would adversely affect soils and water quality and would expand human traffic into areas containing valuable wildlife habitat. [Map 6](#) in the Map Appendix shows the locations of trails included under SMTPC's proposal.

D - BLM Management Issues and Concerns

In addition to the issues and concerns that were identified by the public and that were involved in the requests from users, several other travel management issues were identified by BLM. These issues are summarized below.

D-1. Managing Access Between Private and Public Lands – Managing access between BLM public lands and adjoining private lands is a problematic issue that affects BLM, adjoining private landowners, and the public. Private landowners often experience increased incidences of trespass from users seeking access to adjacent BLM public lands or who cross onto private lands from adjacent public lands. This often arises because the public is unclear about the location of the public land boundaries. On the other hand, adjoining private landowners often want to access public lands but may be prevented by fences or locked gates.

As large tracts of ranch lands have been subdivided and developed for mountain home properties, BLM has observed a substantial increase in the number of roads and trails leading from private lands onto the adjoining public lands. Fences have been breached or gates installed in government-owned fences without authorization. This often results in the proliferation of unauthorized travel routes, increased impacts on natural resources, increased user conflicts, and compromises BLM's management activities such as livestock grazing. Equity issues among public land users also arise when access for motorized travel uses is occurring on BLM lands from private lands that are not available to the general public.

D-2. Managing Off-road Travel for Parking, Camping, and Game Retrieval – The distance that OHVs are currently permitted to drive off existing or designated roads for parking, camping and game retrieval is 300 feet. This regulation applies across most of the BLM public lands and National Forest lands in the state, 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.

With increased amounts of use, concerns have been raised that the long-standing 300-foot regulation is outdated and contributes to the establishment of unauthorized OHV routes. The US Forest Service is currently proposing restrictions for parking and camping in its Travel Management Rule which would apply to all National Forests. Colorado BLM is considering establishing restrictions consistent with the US Forest Service Rule.

D-3. Limiting the Use of Mountain Bikes to Designated Routes - Mountain bikes are currently allowed to be ridden off existing travel routes. Experience in other BLM areas has shown that off-road/trail impacts from mountain biking can be substantial, causing soil erosion, damage to riparian areas, fragmenting of wildlife habitat, and conflicting with other users.

D-4. Managing Target Shooting – Recreational target shooting is recognized as a legitimate use for most public lands; however, in areas where target shooting is concentrated excessive resource damage and serious conflicts with other uses often occur. Recreational target shooting within some portions of the Arkansas River TMP area has been identified as an issue related to travel management. The specific concerns related to target shooting include:

Resource Damage: Concentrated target shooting areas result in high levels of damage and impacts. Direct impacts associated with these areas are the shooting of trees and rocks and soil contamination from lead bullets. The indirect impacts include: litter, new route proliferation, vandalism, illegal dumping and other illegal activities. These areas require more clean-up efforts, monitoring and law enforcement presence, and user education efforts than areas where concentrated target shooting does not occur.

Safety: As visitation increases among all types of recreational users, so do the conflicts between user groups. In crowded areas, shooting increases conflicts among users and threatens user safety. Recreationists and nearby landowners have concerns for their personal safety, as well as damage to property.

Noise: Repetitive noise from concentrated target shooting areas creates an impact on all other recreational activities and to the quality of life for nearby residents.

Exclusive use: Exclusive use is created as target shooting becomes concentrated and displaces other recreation users from the area. Many other types of recreational users, such as hikers and mountain bikers, tend to avoid these areas because of the continuous noise of gunfire and concerns for their own personal safety.

Within the Arkansas River TMP planning area, several concentrated target shooting areas have been identified in the Badger Creek and Salida Subunits where conflicts with other uses are occurring.

D-5 Providing Adequate Maintenance of High-Use Trail Systems - In addressing the requests for new trails in the Texas Creek and Salida subunits the BLM interdisciplinary team (ID team) identified a number of issues and concerns related to the construction and maintenance of trails. These included concerns with the conditions found on some of the existing trails due to poor trail design and inadequate maintenance for controlling soil erosion and correcting unsafe conditions. Due to the poor conditions found on many of the existing trails in high-use areas such as Texas Creek and Salida, the ID team identified a need for increasing maintenance frequency and reconstruction efforts to relocate sections of trail that cannot be properly maintained.

D-6 Amending the Royal Gorge RMP to Change the OHV Designation of High Mesa Grassland RNA/ISA - Management of WSAs and ISAs is guided by BLM's *Interim Management Policy for Lands Under Wilderness Review* (IMP). The IMP provides direction to BLM to maintain the wilderness values of these areas until Congress either designates these lands as wilderness or releases them for other purposes. In the course of confirming the accuracy of land status and special classifications for the TMP it was discovered that the High Mesa Grassland Research Natural Area had been designated as an Instant Study Area (ISA); a special land classification that resulted from the Federal Land Policy and Management Act of 1976 directing accelerated wilderness review for natural areas and primitive areas that were formally identified prior to November 1, 1975. These areas are referred to as Instant Study Areas and qualify for management in accordance with BLM's IMP for Lands Under Wilderness Review. In complying with IMP direction, all of the WSAs in RGFO were designated as OHV Closed areas in the Royal Gorge RMP except High Mesa Grassland RNA/ISA, which was overlooked when the RMP was prepared. To ensure compliance with IMP direction and consistency with the OHV designations that apply to other WSAs throughout RGFO, amendment of the RMP would be needed to change the OHV designation of the High Mesa Grassland RNA/ISA from its current designation of OHV Limited to OHV Closed.

D-7 Maintenance of County Roads - During the inventory phase of the TMP, a number of county roads were identified in Fremont and Chaffee County that provide important public access to BLM lands but that are not being maintained by the counties. Because these roads provide important public access to high use areas on public lands, there is a need for the roads to be maintained. However, because BLM does not have legal authority to spend Federal dollars on maintaining county roads, it cannot maintain the roads in question. BLM proposes coordinating with both counties to resolve this issue by either including the roads in county maintenance schedules, vacating the county right-of-ways so that BLM can maintain them, or entering into agreements under which BLM and the counties would exchange maintenance work so that the roads would be maintained.

DESIRED FUTURE CONDITIONS: 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 following DFCs define the overall goals for the Arkansas River TMP and respond specifically to the Regional Issues and Concerns described on pages 2 and 3.

1. **MAINTAIN AND IMPROVE PUBLIC LAND HEALTH** – Environmental impacts resulting from access and travel uses on the public lands are improving or moving towards being in compliance with the Public Land Health Standards. (Responds to Issues A-2, A-4)
2. **ENHANCE RECREATION OPPORTUNITIES** - Access and travel uses on the public lands are improving or moving towards being in compliance with the Recreation Management Guidelines for Meeting Public Land Health Standards and other applicable recreation management planning documents. User conflicts and safety issues are

satisfactorily resolved. (Responds to Issues A-1, A-3, A-4)

3. **PROVIDE APPROPRIATE AND REASONABLE ACCESS** – The public lands are served by an effectively managed and maintained system of roads and trails that provides access and travel opportunities for legitimate recreational and non-recreational purposes for motorized, mechanized and non-motorized users. (Responds to Issues A-1, A-2, A-4)

In addition to the overall goals for the entire planning area, DFCs and Management Objectives (MO) were developed for each of the 14 subunits. Subunit DFCs and MOs are located in [Appendix 2](#).

INTRODUCTION

PURPOSE AND NEED FOR THE ACTION:

The purpose of the action is to establish a *designated route system** in the Arkansas Travel Management Planning Area. The proposed designated route system is required by the Royal Gorge Field Office Resource Management Plan (RGFO RMP). The RGFO RMP specifically states that “All BLM administered lands in all eco-subregions will be formally designated in the Federal Register.” The proposed travel management decisions will adhere to Instruction Memorandum No. CO-2007-0020 and 43 CFR 8340, respectively. BLM policy for managing public lands is based on the BLM Colorado Standards for Public Land Health and the Recreation Management Guidelines to Meet Public Land Health Standards on BLM Lands in Colorado. Under this policy, BLM manages the public lands in conformance to the standards and guidelines outlined in these documents, and must take appropriate actions when public land health standards are not being met.

During scoping and development of the Royal Gorge RMP, the proliferation of new roads and trails created by the use of OHVs and the resulting impacts on the various natural resources were identified as major threats to the health of the public lands. Thus, the need for the action to abate route proliferation and the environmental impacts on public lands resulting from increased amounts of travel and transportation uses was identified and the decision to move towards limiting OHVs to designated routes was included in the RMP (approved May 13, 1996). Through the implementation of the Royal Gorge RMP OHV recommendations the following desired future conditions will be accomplished: maintaining and improving public health, enhancing recreational opportunities and providing appropriate and reasonable access.

In responding to this need, BLM proposes implementing the decision to manage off-highway vehicle use as outlined in the Royal Gorge RMP and 43 CFR 8340, which would establish a *designated route system** on resource area lands. In addition, the action would limit mountain bikes to designated routes, as well as accomplishing other area-specific goals and objectives that were identified through public scoping.

**Designated route system refers to the method of managing the transportation network in which the individual roads and trails are limited to specific modes of travel, and that are identified on*

travel maps and posted on the ground with signs. Under the current travel management system, OHVs are permitted to operate on all existing roads and trails except for those routes that have been posted as closed to motorized use. Under a designated travel management system, OHVs would be limited to operating on roads and trails that are identified on travel maps and/or posted as routes that are available for specified types of motorized uses.

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

Name of Plan: Royal Gorge Resource Management Plan

Date Approved: 05/13/96

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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 TMP is an implementing action for the OHV route designation decisions made in the Royal Gorge RMP. In addition, coordination was completed with the US Forest Service for consistency with the Forest Plan for the Pike and San Isabel National Forests.

Other statutes, regulations or plans were also identified and reviewed for consistency with this TMP, including: Standards for Public Land Health in Colorado; Recreation Management Guidelines to Meet Public Land Health Standards on Bureau of Land Management Lands in Colorado; Executive Order 11644 – Use of off-road vehicles on public lands; Code of Federal Regulations (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; and Colorado BLM Travel Management Guidance.

PROPOSED ACTION AND ALTERNATIVES

BACKGROUND/INTRODUCTION:

LOCATION AND SETTING OF THE TMP PLANNING AREA: [Map 1](#) in the Map Appendix displays the boundaries of the Arkansas River TMP planning area. The planning area covers the public lands included within the 75 mile-long Arkansas River corridor located between Canon City and Buena Vista, Colorado. The planning area involves portions of Fremont, Chaffee, and Custer Counties and encompasses approximately 531,736 acres of mixed private, state, and federal ownerships, including 240,555 acres of BLM public lands. Decisions resulting from this TMP apply only to the BLM public lands.

The following communities are contained within or near the TMP planning area, which are also displayed on [Map 1](#): Buena Vista (not shown on map), Canon City, Coaldale, Cotopaxi, Howard, Poncha Springs, Salida, Silver Cliff, Wellsville, and Westcliffe. In addition to these cities and small towns, numerous residential and summer home subdivisions are scattered throughout or occur near the planning area. The locations of these subdivisions are shown on [Map 10](#) in the Map Appendix. According to US Census data for 2004, approximately 68,176 people reside in the three counties affected by the TMP: Fremont (47,413), Chaffee (16,922), Custer (3,841).

Other important features contained in or near the planning area include: Arkansas Headwaters Recreation Area, Royal Gorge Bridge and Park, DeWeese Reservoir, Arkansas Canyonlands ACEC, Browns Canyon ACEC, Grape Creek ACEC, High Mesa Grasslands Research Natural Area and Instant Study Area (RNA-ISA), Browns Canyon WSA, Upper Grape Creek WSA, Lower Grape Creek WSA, McIntyre Hills WSA, and adjoining National Forest lands.

The Arkansas River is a major tourist attraction for whitewater sports and trout fishing, and draws hundreds of thousands of visitors annually. In 2005 the Arkansas River was visited by 758,032 people that included 301,307 boaters, making it the most heavily used river in the world for whitewater rafting and kayaking.

Topography, vegetation, and climatic conditions vary throughout the planning area. Relatively mild winter conditions allow year round vehicular and non-motorized use of most of the BLM lands that occur within the planning area. The lack of heavy snowfall excludes snowmobiling and other winter sports activities as a significant use of the public lands in the TMP planning area. Summer months are typically very warm and dry and the winters are characteristically mild with little or no snowfall accumulation. Cooler and wetter climatic conditions occur at higher elevations. Elevations range from a maximum of 10,264 feet near Jack Hall Mountain to a minimum of 5,357 feet on the Arkansas River at Canon City. Average amounts of precipitation range from 8-14 inches per year for elevations below 9,000 feet, and 16-20 inches above 9,000 feet.

Additional information on the physical characteristics of the planning area is included in the individual subunit descriptions (See [Appendix 2](#)).

ANALYSIS METHODOLOGY AND OTHER CONSIDERATIONS: This section explains the procedures, methods, and other considerations that were utilized in the planning process to develop, analyze and compare alternatives.

1. TRENDS AND ASSUMPTIONS: The following trends and assumptions were considered in evaluating and comparing the environmental and social effects that would result from different levels of OHV use under the various travel management alternatives.

- Traffic levels on roads and trails will increase
- Residential development of lands adjacent to BLM lands will increase.
- Road densities within private lands will increase.
- As more and more private lands are developed for residential uses, wildlife will become increasingly more dependent on BLM lands for meeting habitat needs.
- Demands for all types of recreation uses will increase.
- Without adequate maintenance, soil erosion from roads and trails will continue to increase.
- Conflicts between competing recreation uses will increase.
- Advances in technology will produce mechanized and motorized vehicles that will enable people to go places where they could not go before.
- Technological advances in GPS, computerized mapping applications, and wireless communications will result in increased off-trail exploration of inaccessible areas.
- Areas providing solitude and low levels of use will decrease.
- Illegal activities will increase (dumping, off road travel, theft of forest products, fire violations, drug labs, vandalism, etc.)
- Costs for law enforcement and travel management compliance will increase.
- Costs of maintaining roads and trails will increase.
- Parking at trailheads will become more congested.
- Successful management of roads and trails will be dependent on BLM having adequate funding and staffing.
- Narrow trails do not disturb as much surface area as wide trails; displacing less vegetation and resulting in less soil loss.
- Existing trails that are closed to wide 4-wheeled vehicles are able to grow more vegetation and will naturally reclaim themselves over time.
- Traffic is gradually confined to a narrower travel way that results in decreased amounts of vegetation and soil loss.
- Motorized access provides more opportunities for dispersed camping, target shooting, and hunting than non-motorized access.
- Increased human activity increases the potential for man-caused wildfires.
- Damage to soils and vegetation is worse during wet periods when ground conditions are soft and muddy, or when snow makes it more difficult to stay on existing routes.

- The degree to which travel related activities adversely affects wildlife is directly related to the type and amount of traffic that occurs on the travel routes. High amounts of traffic disrupt wildlife more than low traffic levels; uses that produce high noise levels disrupt wildlife more than quiet uses.
- The degree to which travel related activities adversely affects soil stability, vegetation, and water quality is directly related to the type and amount of traffic.
- Routes with high levels of surface disturbing traffic cause more erosion, vegetation damage, and stream sedimentation than routes with low traffic levels and require more maintenance to control erosion.

2. **SCALES OF ANALYSES:** The travel management assessments for the Arkansas River TMP utilized an ecosystem management approach that considered a range of geographic scales of analysis, including Regional, Planning Area, Watershed, and Subunit geographic settings.

REGIONAL ANALYSIS - The regional analysis responded to the need to identify the origins of the affected users and the locations of existing recreational travel opportunities that surround the Arkansas River TMP planning area. The regional scale provided a "big picture" setting for the project. It was used to compare the unique qualities and recreational travel opportunities that are found in the Arkansas River planning area with those qualities and opportunities that occur in other parts of the region. The regional analysis produced the following information and conclusions that guided the development and analysis of the alternatives that were considered in the TMP. A map of the region (Map 11) showing the affected population centers and locations of existing recreational travel opportunities is located in the Map Appendix.

Origins of affected users - The populations most affected by the TMP decisions reside in Buena Vista, Canon City, Coaldale, Cotopaxi, Howard, Poncha Springs, Salida, Silver Cliff, Swissvale, Wellsville, Westcliffe, and other smaller communities, residential subdivisions, and ranches scattered throughout the immediate planning area. Many users also originate from large population centers located outside of the immediate planning area, including Pueblo, Colorado Springs, and the Denver metro area.

Existing recreational travel opportunities - Numerous federal, state, county, city, and community lands are scattered throughout the region that provide a wide variety of recreational travel and use experiences that are available to the public. Numerous motorized recreational routes are available in other parts of the region that are not available or only found in limited amounts within the Arkansas River planning area. Over 1,500 miles of 4WD, ATV, and motorcycle routes occur on BLM and National Forest lands in the vicinity of the planning area, including: Texas Creek Travel Management Area, Captain Jack Trail System, Temple Mountain, Four Mile Trail Travel Management Area, Penrose Trail System, Corral Creek, Rampart Range and Divide Trail Systems, and numerous trails on the San Carlos, Salida, and Leadville Ranger Districts, including Tanner Trail and the Rainbow Trail. An abundance of bicycle, horse, and hiking trails also occur throughout the region.

PLANNING AREA ANALYSIS - An analysis was conducted at the planning area scale to respond to the need to identify the important qualities and recreation travel opportunities that exist within the immediate Arkansas River planning area. When combined with the information and conclusions that resulted from the regional analysis, the planning area analysis was used to guide the development of a travel management alternative that would respond to both local and regional needs for maintaining ecosystem health and providing recreation travel opportunities. The combined regional and planning area assessments yielded the following information and conclusions.

General characteristics of the existing transportation system - An inventory of the existing transportation system was conducted as part of the planning area analysis. A total of 661 miles of existing roads and trails were inventoried on BLM public lands within the planning area that included 112 miles of federal, state, and county highways on public lands, and 549 miles of roads and trails that are managed by BLM.

Within the planning area, the majority of the existing BLM-managed routes are primitive roads that were created for mining, ranching, removing (chaining) dense stands of pinyon-juniper forests, and for constructing storm water retention dams. Few of these roads were developed with recreation uses in mind and many were not designed or engineered for sustained motorized travel. Many were intended for temporary access and have either become completely or partially overgrown with vegetation.

Very few constructed single-track trails occur in the area. Most single-track routes were created along drainage bottoms by livestock, which are also used by people for hiking, horseback riding, and accessing areas with OHVs. Many trails that were originally single-tracks have been widened by ATV use.

Land ownership patterns - The potential for increasing and enhancing recreational travel opportunities is limited by land ownership patterns in many parts of the planning area. The BLM lands in the area consist of scattered blocks of varying sizes that are separated by surrounding private lands. The scattered nature of the BLM lands severely limits the opportunities for developing new travel routes and loops that provide full-day or half-day recreation experiences.

Classified special management areas - The potential for increasing and enhancing recreational travel opportunities is also constrained by existing classified special management areas, including Arkansas Canyonlands ACEC, Browns Canyon ACEC, Grape Creek ACEC, Droney Gulch ACEC (adjacent to the planning area), High Mesa Grassland RNA/ISA, Browns Canyon WSA, Upper Grape Creek WSA, Lower Grape Creek WSA, and McIntyre Hills WSA. The existence of these special management areas places limits on where travel routes and motorized uses can be allowed. The locations of the various special management areas are shown on [Map 18](#) in the Map Appendix.

Major attractions - The planning area includes unique features that set the area apart from other parts of the regional setting (See [Map 15](#)). The Arkansas River stretches

through the center of planning area and attracts hundreds of thousands of visitors annually, including local and regional residents and out-of-state tourists. The Arkansas Headwaters Recreation Area provides developments along the river for camping, picnicking, boating access, fishing access, and wildlife viewing. The Browns Canyon, McIntyre Hills, and Upper and Lower Grape Creek WSAs are rugged and sparsely trailed blocks of public lands that contain important natural resources and provide high amounts of solitude and challenge. The Sangre De Cristo Wilderness on the San Isabel and Rio Grande National Forests is also a major attraction that draws thousands of visitors into the TMP planning area. The need to protect the unique resources and preserve the qualities of these attractions was an important consideration in the development and analysis of the travel management alternatives.

Other significant recreational uses – Whitewater boating and fishing are the major recreation attractions in the planning area. Most recreation activity in the area is confined to the narrow corridor along the Arkansas River and US 50. Of the hundreds of thousands of people who visit the area every year, only a small fraction of visitors ever stray more than a hundred feet from the Arkansas River or US 50.

Except for the areas described above as major attractions, classified special management areas, and isolated inaccessible blocks of BLM lands, recreational travel uses throughout most of the remaining portions of the planning area consist of a mixture of motorized, mechanized, and non-motorized uses. Motorized uses predominate in some areas, while non-motorized uses predominate in other areas. The locations of these areas are defined and discussed in the Subunit analysis.

Due to the lack of sufficient miles of suitable routes that provide full-day riding experiences, most of the planning area is not considered to be a destination attraction for users of OHVs. Several areas and features do occur in and near the planning area, however, that are significant attractions to OHV users, including Texas Creek Travel Management Area (TMA), Four Mile TMA, the Rainbow Trail and the St. Elmo area. The Texas Creek TMA is located within the planning area entirely on BLM lands. The Four Mile TMA is situated just outside of the planning area near the town of Buena Vista and involves both BLM and National Forest lands. Both are popular destination areas for OHV users that contain numerous roads and trails for 4WDs, ATVs, and motorcycles. The Colorado Motorcycle Trail Riders Association (CMTRA) has requested expanding ATV and motorcycle riding opportunities in the Texas Creek TMA that will be considered in this TMP.

The Rainbow Trail is located just outside of the western boundary of the planning area on National Forest lands and extends over 100 miles from North Muddy Creek in southern Custer County to Marshall Pass where it connects to the Colorado Trail. It is a very popular trail for motorcycle riding, and although it is located on Forest Service lands, other trails and roads that connect to it pass through BLM lands in several locations.

Mountain biking is a very popular activity around the town of Salida. Many of the existing roads and trails on BLM and Forest Service lands are used heavily for mountain

biking, as well as for hiking and motorized uses. Many new trails have also been developed by local mountain bike enthusiasts. The Salida Mountain Park Trail Committee (SMPTC) has submitted a proposal for maintaining and constructing mountain bike and foot trails in the area that will also be considered in this TMP.

Weather and climate - The climate in Arkansas River planning area is warmer and drier than most other parts of the state, particularly during the winter months. In the lower elevations (5,300 to 8,500 feet), periods when access is limited by snow are short and infrequent and opportunities for snowmobiling, snowshoeing, and cross-country skiing are typically not available. Except for areas above 9,000 feet, the lack of snow and the high number of sunny and mild days permit year-round access and use of most of the BLM lands in the planning area. Because of the mild winter conditions, some areas actually experience more use during the winter months, when temperatures are cooler, than during the hot summer months. The Texas Creek TMA experiences more use during the winter when OHV opportunities in the high mountains are limited by deep snow and cold temperatures. The characteristically mild winters do have a down side, however. Since most of the planning area is accessible year around, many of the roads become highly susceptible to rutting and erosion following periodic snowstorms when warmer temperatures melt the snow and road surfaces become muddy.

WATERSHED ANALYSIS - The watershed analysis was used to respond to the need to identify impacts from all lands (private, state, federal, etc.) within a defined landscape. A watershed scale analysis was done on the US Geological Survey (USGS) 6th level watersheds in the Arkansas River planning area. The analysis displays the impacts from all the roads within the watersheds, regardless of ownership. The watershed analysis helps to display the cumulative impacts of roads and other forms of development. This is important because as more private land in the planning area becomes developed, the public lands become more valuable as wildlife habitat, intact watersheds, and open space. As private lands become more developed, the impacts resulting from the greater numbers of roads and the numbers of people traveling on them increase substantially. When looked at from the watershed scale, this increase in impacts from roads and other forms of development can have a dramatic effect on wildlife, water quality, vegetation and other resources. The 6th level watershed provides an appropriate scale within the planning area to measure the differences in impacts on all the lands involved. Therefore, as the area further develops the protection of public lands, which equates to better watershed protection, becomes more tantamount.

- **SUBUNIT ANALYSIS** - An analysis was done at the subunit level to respond to the need to consider the special qualities and travel use opportunities that exist in different portions of the planning area. Due to its large size and the different issues and characteristics of the lands that occur over the entire TMP planning area, the subunit divisions allowed planners to focus on much smaller areas that share the same or similar issues and land characteristics. Dividing the planning area into subunits allowed planners to account for these differences, and in turn, resulted in the establishment of goals that were tailored to respond to the specific issues and land characteristics occurring in each subunit. Since the subunits defined areas having different issues and

characteristics that resulted in different management goals, the management actions that are proposed for the subunits are tailored to be responsive to their respective goals and objectives

A total of fourteen subunits were identified, based primarily on breaks along adjoining private and state-owned land boundaries, classified special management area boundaries, access status (lack of permanent legal public access) and by natural topographical features that limit travel management options. [Map 1](#) shows the locations of the subunits and can be found in the Map Appendix. Descriptions of the subunits, including identified issues and concerns, desired future conditions (goals), and management objectives are included in [Appendix 2](#).

DESCRIPTIONS OF THE ALTERNATIVES

Four alternatives were developed for analyzing and comparing the benefits and environmental consequences that would result under different levels of access and use. Each alternative represents a defined level of access and travel uses. The alternatives are named the No Action Alternative, Alternative A, Alternative B, and Alternative C (Proposed Action).

Prior to reviewing the alternatives the reader should become familiar with the Travel Use Categories (see Table 1) that are used in the written descriptions, tables, and maps that are found throughout this document. The Travel Use Categories define the individual roads and trails in terms of the types of uses that are permitted under each alternative. The individual travel use categories are also symbolized and color-coded on maps for each of the alternatives. See [Appendix 4](#) for detailed definitions of the categories.

The reader should also familiarize themselves with Table 2-1, Miles of Routes by Alternatives and Travel Use Categories, to gain an understanding of trail miles in each travel use category.. Be mindful when reviewing this table that each individual travel use category also allows secondary uses by those categories that are listed above it. For example, the ATV category also allows secondary uses by the Bicycle, Equestrian, and Foot categories. Although secondary uses are permitted, the secondary uses are not necessarily suitable for all of the routes included in the individual categories.

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 suitable for those uses. For example, routes included in the General category are primarily intended for use with full-size motor 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 roads with motor vehicles does not offer the type of recreational experience that they would normally seek.

Table 1 - Travel Use Categories

Type Of Route	Symbol & Map Color	Primary and Secondary Permitted Uses
Foot	F (dark green)	Foot
Equestrian	E (hot pink)	Foot, horse
Bicycle	B (apple-green)	<i>Foot, horse, bicycle</i>
Motorcycle	M (olive-green)	<i>Foot, horse, bicycle, motorcycle</i>
ATV	A (brown)	<i>Foot, horse, bicycle, motorcycle, ATV</i>
General	O (blue)	Open to all motorized, mechanized, and non-motorized uses (includes maintained dirt and gravel roads suitable for sedan travel, as well as un-maintained primitive 4WD roads)
User Created	UC (red)	None (includes unauthorized travel routes that were created after the Royal Gorge RMP was approved on 5/13/96)
Non-BLM	Non-BLM (light pink)	Open to street legal motor vehicles and other mechanized and non-motorized uses (includes county, state and federal roads and highways that access BLM lands but do not fall under BLM management jurisdiction)
Administrative* Access	AA (gold)	Foot and horse, in cases only where <i>permanent legal public access</i> exists **
Closed	CL (black dashed line)	Routes which are not available for public or administrative uses. Includes many routes that lack permanent legal public access. Also includes routes in classified special management areas and those that were closed under previous activity plans.

* Routes included in the Administrative Access category are not available to the general public for motorized or mechanized uses. AA routes are needed to provide administrative access for BLM personnel and authorized holders of permits and right-of-ways, and will continue to be used for administrative purposes. The routes included in the AA 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 horse travel.

** Permanent legal public access exists if the road can be legally accessed without trespassing over private lands; i.e., access is provided from county, state, or federal highways or via roads where the BLM has obtained public easements.

MANAGEMENT COMMON TO ALL ALTERNATIVES

The four **OHV Closed** areas that currently exist in the Arkansas River TMP planning area; Browns Canyon, McIntyre Hills, Upper Grape Creek, and Lower Grape Creek WSAs will remain closed. Keeping in line with the closure of all other WSA areas, a fifth area with WSA status, High Mesa Grassland RNA/ISA, that is currently designated limited, would be designated closed as well.

The boundaries between BLM and private lands would be managed in accordance with the access guidelines contained in Instruction Memorandum CO-200-07-01, *Royal Gorge Field Office – Guidelines for Managing Access between BLM and Private Lands* that limits motorized and mechanized uses that originate from adjoining private lands. Other than for foot and horse uses, entry to public lands from private lands must comply with the designated transportation system and be limited to the same means of travel that the general public uses from public access points (See [Appendix 3](#)).

NO ACTION ALTERNATIVE (CURRENT SITUATION)

Description: [Map 12](#) displays the No Action Alternative and is located in the map envelope that is separate from this document. Under the No Action Alternative most of the public lands in the planning area would retain their current OHV designation of **Limited to Existing Roads and Trails**. The current **OHV Open** designations for the Grand Canyon Hills, Texas Creek, and Sand Gulch, which contains Turkey Rock, areas would be unchanged.

Within **OHV Limited** areas all existing roads and trails with permanent legal public access would be available to OHV use except for those areas and individual routes that had been closed to motorized uses prior to this planning effort, including routes closed under previous activity plans in the Texas Creek, Falls Gulch, Crampton Mountain, and Kerr Gulch areas. In addition, the routes identified in the road and trail inventory as “User Created”, that were created by recreational travel uses after the Royal Gorge RMP was approved (5/13/96), would also be closed. Future closures or restrictions of existing OHV routes to prevent resource damage or user conflicts would be evaluated and implemented as needed through separate individual activity plans or per emergency closure authorities provided under the Code of Federal Regulations (CFR). Likewise, new routes proposed by CMTRA and SMTPC would not be considered under the No Action Alternative. Future development of new roads or trails would be evaluated and implemented through individual activity plan analysis. Existing policies pertaining to bicycle travel and the distance vehicles are permitted to travel off existing roads for parking, camping, and retrieving game would remain unchanged. Currently, the permitted distance is 300 feet from existing roads.

Under the No Action Alternative, actions affecting management of target shooting would not be addressed as a part of the travel management plan. Target shooting in the Turkey Rock and Salida areas would continue under existing restrictions.

Implementation of the No Action Alternative would include the miles of routes by the respective travel use categories, highlighted in Table 2-1. When reviewing the data in this table the reader is reminded that each individual travel use category also allows secondary uses by those categories that are listed above it. For example, the ATV category also allows secondary uses by the Bicycle, Equestrian, and Foot categories. Although secondary uses are permitted, the secondary uses are not necessarily suitable for all of the routes included in the individual categories.

Table 2-1 Miles of Routes by Alternatives and Travel Use Categories

Travel Use Category	No Action Alternative	Alternative A	Alternative B	Alternative C (Proposed Action)
Foot	5.4	1.4	7.9	1.4
Equestrian	27.2	58.2	18.6	48.5
Bicycle	2.5	47.3	16.8	26.9
Motorcycle	2.8	14.5	2.2	3.4
ATV	26.4	40.8	19.5	24.4
General	203.1	164.6	113.4	153.4
Non-BLM	111.8	107.5	106.8	107.5
Administrative Access*	125.7	95.6	116.3	103.2
Closed**	87.6	172.3	237.7	202.1
User created	68.1	0	0	0

* *The Administrative Access category includes routes that are closed to the public for motorized uses but that may be used by authorized persons for administrative purposes. Under the No Action Alternative, this category includes 125.7 miles of routes, of which 65.5 miles do not have permanent legal public access and 60.2 miles have permanent legal public access. Under the No Action Alternative, the Administrative Access routes that have permanent legal public access can be used by the public for hiking, horseback and bicycle riding, but are not available for use with motor vehicles.*

** *The Closed category includes routes that are not available for public or needed for administrative uses. The category includes many routes that lack permanent legal public access and also includes routes in classified special management areas and those that were closed under previous activity plans. Under the No Action Alternative 87.6 miles of routes would remain closed, including 20.0 miles with no permanent legal public access, 67.0 miles with legal public access, and 0.6 miles where the access status is unknown.*

The No Action Alternative would continue motorized uses on 232.3 miles of existing routes in the General, ATV, and Motorcycle travel use categories. In addition, 111.8 miles of Non-BLM routes would also be available, that are not affected by decisions made in this plan. The No Action Alternative would also provide a total of 95.3 miles of restricted non-motorized access routes, consisting of 35.1 miles in the Bicycle, Equestrian, and Foot travel use categories and 60.2 miles of Administrative Access routes with permanent legal public access that would also be available for hiking, horseback riding, and bicycles.

ALTERNATIVE A

Description: [Map 13](#) displays Alternative A and can be found in the map envelope that is separate from this document. Alternative A analyzes the effects of refining the OHV designation of the planning area from that of Limited to Existing Roads and Trails to one of **Limited to Designated Roads and Trails**.

Under Alternative A the current **OHV Open** designations in the Grand Canyon Hills, Texas Creek, and Sand Gulch areas would be changed to **OHV Limited to Designated Roads, Trails and Vehicular Type**. The High Mesa Grassland RNA/ISA would be changed from OHV Limited to OHV Closed, thereby assuring all WSA's in the planning areas are Closed to OHV use. New **OHV Limited area** designations would be established at Sand Gulch and Reese Gulch where motorized travel off designated routes would be limited to users of trials bikes, only.

Under Alternative A mechanized vehicles, including bicycles, would also be limited to designated roads and trails, and driving off roads to park and camp would be limited to a maximum distance of 100 feet. Driving motor vehicles off designated routes for retrieving game would be prohibited.

During the inventory phase of the TMP, a number of county roads were identified in Fremont and Chaffee County that provide important public access to BLM lands but that are not being maintained by the counties. Under Alternative A, BLM would coordinate with both counties to resolve this issue by either including the roads in county maintenance schedules, vacating the county right-of-ways so that BLM can maintain them, or entering into agreements under which BLM and the counties would exchange maintenance work so that the roads would be maintained.

Under Alternative A, target shooting would be prohibited at Turkey Rock and in several locations near the City of Salida to improve public safety and reduce conflicts with other uses (See [Map 7](#) in the Map Appendix)

During public scoping for the TMP several organized groups came forward with requests for new trails within the Texas Creek and Salida subunits. In considering these requests, the BLM interdisciplinary team (ID team) identified a number of issues and concerns related to the construction and maintenance of trails. These included concerns with the conditions found on some existing trails due to poor trail design and the lack of adequate maintenance for controlling soil erosion and correcting unsafe conditions. Due to the conditions found on some of the existing trails in the Texas Creek and Salida areas, including some that have been requested by user groups to be designated in the TMP, the ID team identified the need for establishing guidelines and conditions under which the construction of new or re-opening of old trails would be considered. As a result, the ID team developed a set of guidelines and conditions that would need to be satisfied before the construction of new or re-opening old trails would be approved. Background information pertaining to the requests and descriptions of the guidelines and conditions are found in [Appendix 6, Requests for New Trails –Texas Creek](#), and [Appendix 7, Requests for New Trails–Salida](#).

Under Alternative A, 7.3 miles of additional ATV/motorcycle trails and 11.8 miles of single-track motorcycle trails would be conditionally approved for construction and reconstruction in the Texas Creek subunit, and 42.6 miles of foot/horse/bicycle trails would be conditionally approved for construction and reconstruction in the Salida subunit. Actual construction and reconstruction work would be subject to the conditions and guidelines outlined in [Appendix 6](#) and [Appendix 7](#). Future proposals for new roads or trails not conditionally approved in this TMP would be considered and evaluated through individual activity plan analysis, and would also be subject to the guidelines and conditions outlined in [Appendices 6](#) and [7](#).

This alternative provides for a comparatively high level of motorized access and recreational uses. Under Alternative A, access and travel use designations for motorized, mechanized, and non-motorized uses would be established with emphasis placed on providing increased and enhanced recreational uses. Most legally accessible roads and trails and some “User Created” routes would be left open to OHVs and mountain bikes, and some new OHV and mountain bike trails would be constructed to facilitate access and enhance recreation opportunities.

Implementation of Alternative A would include the miles of routes by the respective travel use categories, highlighted in Table 2-2. When reviewing the data in this table the reader is reminded that each individual travel use category also allows secondary uses by those categories that are listed above it. For example, the ATV category also allows secondary uses by the Bicycle, Equestrian, and Foot categories. Although secondary uses are permitted, the secondary uses are not necessarily suitable for all of the routes included in the individual categories.

Table 2-2 Miles of Routes by Alternatives and Travel Use Categories

Travel Use Category	No Action Alternative	Alternative A	Alternative B	Alternative C (Proposed Action)
Foot	5.4	1.4	7.9	1.4
Equestrian	27.2	58.2	18.6	48.5
Bicycle	2.5	47.3	16.8	26.9
Motorcycle	2.8	14.5	2.2	3.4
ATV	26.4	40.8	19.5	24.4
General	203.1	164.6	113.4	153.4
Non-BLM	111.8	107.5	106.8	107.5
Administrative Access*	125.7	95.6	116.3	103.2
Closed**	87.6	172.3	237.7	202.1
User created	68.1	0	0	0

* *The Administrative Access category includes routes that are closed to the public for motorized uses but that may be used by authorized persons for administrative purposes. Under Alternative A, this category includes 95.6 miles of routes, of which 50.3 miles do not have permanent legal public access and 45.3 miles have permanent legal public access. Under Alternative A, the Administrative Access routes that have permanent legal public access can be used by the public for hiking and horseback riding, but are not available for use with bicycles or motor vehicles.*

** *The Closed category includes routes that are not available for public or administrative uses. The category Includes many routes that lack permanent legal public access and also includes routes in classified special management areas and those that were closed under previous activity plans. Under Alternative A, 172.3 miles of routes would be closed, including 45.3 miles with no permanent legal public access, 126.4 miles with legal public access, and 0.6 miles where the access status is unknown.*

Alternative A would designate motorized uses on 219.9 miles of routes in the General, ATV, and Motorcycle travel use categories. In addition, 107.5 miles of Non-BLM routes would also be available that are not affected by decisions made in this plan. Alternative A also provides a total of 152.2 miles of restricted non-motorized access routes, consisting of 106.9 miles in the Bicycle, Equestrian, and Foot travel use categories, and 45.3 miles of Administrative Access routes with permanent legal public access that are also available for hiking and horseback riding.

ALTERNATIVE B

Description: [Map 14](#) displays Alternative B and can be found in the map envelope that is separate from this document. Alternative B analyzes the effects of refining the OHV designation for most of the planning area from that of Limited to Existing Roads and Trails to one of **Limited to Designated Roads and Trails**. The current **OHV Open** designations in the Grand Canyon Hills, Texas Creek, and Sand Gulch areas would be changed to **OHV Limited to Designated Roads and Trails** and the High Mesa Grassland RNA/ISA would be changed from OHV Limited to OHV closed, thereby assuring all WSA's in the planning area are Closed to OHV use.

Under Alternative B mechanized vehicles, including bicycles, would also be limited to designated roads and trails; and driving off roads to park and camp would be limited to a maximum distance of 100 feet. Driving motor vehicles off designated routes to retrieve game would be prohibited.

During the inventory phase of the TMP, a number of county roads were identified in Fremont and Chaffee County that provide important public access to BLM lands but that are not being maintained by the counties. Under Alternative B, BLM would coordinate with both counties to resolve this issue by either including the roads in county maintenance schedules, vacating the county right-of-ways so that BLM can maintain them, or entering into agreements under which BLM and the counties would exchange maintenance work so that the roads would be maintained.

Under this alternative action affecting the management of target shooting would not be addressed as a part of the travel management plan. Target shooting in the Turkey Rock area would continue under existing restrictions. New routes proposed by CMTRA and SMTPC would not be considered under this alternative. Future development of new roads or trails would be evaluated and implemented through individual activity plan analysis, and would be subject to the guidelines and conditions outlined in [Appendix 6](#) and [Appendix 7](#).

This alternative provides for a comparatively low level of motorized access and recreational uses. Under Alternative B, access and travel use designations for motorized, mechanized, and non-motorized uses would be established with emphasis placed on protection of the natural resources. Many of the existing roads and trails and "User Created" routes would be closed to OHVs and mountain bikes, and no new OHV or mountain bike trails would be constructed.

Implementation of Alternative B would include the miles of routes by the respective travel use categories, highlighted in Table 2-3. When reviewing the data in this table the reader is reminded that each individual travel use category also allows secondary uses by those categories that are listed above it. For example, the ATV category also allows secondary uses by the Bicycle, Equestrian, and Foot categories. Although secondary uses are permitted, the secondary uses are not necessarily suitable for all of the routes included in the individual categories.

Table 2-3 Miles of Routes by Alternatives and Travel Use Categories

Travel Use Category	No Action Alternative	Alternative A	Alternative B	Alternative C (Proposed Action)
Foot	5.4	1.4	7.9	1.4
Equestrian	27.2	58.2	18.6	48.5
Bicycle	2.5	47.3	16.8	26.9
Motorcycle	2.8	14.5	2.2	3.4
ATV	26.4	40.8	19.5	24.4
General	203.1	164.6	113.4	153.4
Non-BLM	111.8	107.5	106.8	107.5
Administrative Access*	125.7	95.6	116.3	103.2
Closed**	87.6	172.3	237.7	202.1
User created	68.1	0	0	0

* The Administrative Access category includes routes that are closed to the public for motorized uses but that may be used by authorized persons for administrative purposes. Under Alternative B, this category includes 116.3 miles of routes, of which 55.0 miles do not have permanent legal public access and 61.3 miles have permanent legal public access. Under Alternative B, the Administrative Access routes that have permanent legal public access can be used by the public for hiking and horseback riding, but are not available for use with bicycles or motor vehicles.

** The Closed category includes routes that are not available for public or administrative uses. The category Includes many routes that lack permanent legal public access and also includes routes in classified special management areas and those that were closed under previous activity plans. Under Alternative B, 237.7 miles of routes would be closed, including 50.9 miles with no permanent legal public access, 186.2 miles with legal public access, and 0.6 miles where the access status is unknown.

Alternative B would designate 135.1 miles of motorized access routes in the General, ATV, and motorcycle travel use categories. In addition, 106.8 miles of Non-BLM routes are also available that are not affected by decisions made in this plan. Alternative B also provides a total of 104.6 miles of restricted non-motorized access routes, consisting of 43.3 miles in the Bicycle, Equestrian, and Foot travel use categories, and 61.3 miles of Administrative Access routes with permanent legal public access that are also available for hiking and horseback riding.

ALTERNATIVE C (PROPOSED ACTION)

Description: [Map 9](#) displays Alternative C and can be found in the map envelope that is separate from this document. Alternative C is the Proposed Action, which is also discussed on pages 7 and 8 under the heading, SUMMARY DESCRIPTION OF THE PROPOSED ACTION.

Alternative C analyzes the effects of refining the OHV designation for most of the planning area from that of Limited to Existing Roads and Trails to one of **Limited to Designated Roads and Trails**. The current **OHV Open** designations in the Grand Canyon Hills, Texas Creek, and Sand Gulch areas would be changed to **OHV Limited to Designated Roads and Trails** and the High Mesa Grassland RNA/ISA would be changed from OHV Limited to OHV Closed, thereby assuring all WSA's in the planning area are Closed to OHV use. In addition, the Proposed Action would designate the 52 acre Turkey Rock portion of Sand Gulch,, as an **OHV Limited** area where motorized travel off designated routes would be limited to users of trials bikes, only.

Under Alternative C, mechanized vehicles, including bicycles, would also be limited to designated roads and trails; and driving off roads to park and camp would be limited to a maximum distance of 100 feet. Driving motor vehicles off designated routes for retrieving game would be prohibited.

During the inventory phase of the TMP, a number of county roads were identified in Fremont and Chaffee County that provide important public access to BLM lands but that are not being maintained by the counties. Under the Proposed Action, BLM would coordinate with both counties to resolve this issue by either including the roads in county maintenance schedules, vacating the county right-of-ways so that BLM can maintain them, or entering into agreements under which BLM and the counties would exchange maintenance work so that the roads would be maintained.

Under the Alternative C, target shooting would be prohibited at Turkey Rock and in several locations near the City of Salida to improve public safety and reduce conflicts with other uses (See [Map 7](#) in the Map Appendix)

During public scoping for the TMP several organized groups came forward with requests for new trails within the Texas Creek and Salida subunits. In considering these requests, the BLM interdisciplinary team (ID team) identified a number of issues and concerns related to the construction and maintenance of trails. These included concerns with the conditions found on some existing trails due to poor trail design and the lack of adequate maintenance for controlling soil erosion and correcting unsafe conditions. Due to the conditions found on some of the existing trails in the Texas Creek and Salida areas, including some that have been requested by user groups to be designated in the TMP, the ID team identified a need for establishing guidelines and conditions under which the construction of new or re-opening of old trails would be considered. As a result, the ID team developed a set of guidelines and conditions that would need to be satisfied before the construction of new trails or re-opening of old trails would be approved. Background information pertaining to the requests and descriptions of the guidelines and conditions are found in [Appendix 6, Requests for New Trails –Texas Creek](#), and [Appendix 7, Requests for New Trails–Salida](#).

Under the Proposed Action, approximately 3 miles of additional ATV/motorcycle trails would be conditionally approved for construction and reconstruction in the Texas Creek subunit, and 20 miles of foot/horse/bicycle trails would be conditionally approved for construction and reconstruction in the Salida subunit. Actual construction and reconstruction work would be subject to the conditions and guidelines outlined in Appendices 6 and 7. Future proposals for new roads or trails not conditionally approved in this TMP would also be considered and evaluated through individual activity plan analysis, and would be subject to the guidelines and conditions outlined in Appendices 6 and 7.

Under Alternative C, the establishment of designated travel uses would be guided by the need to maintain or improve the health of the Public Lands as defined by the Colorado Public Land Health Standards (See [Appendix 5](#)). Some “User Created” and existing roads and trails would be closed to public use. Other “User Created” routes, however, would be left open for use, and some new roads and trails would be constructed to facilitate access and provide for a variety of recreation uses.

Implementation of Alternative C would include the miles of routes by the respective travel use categories, highlighted in Table 2-4. When reviewing the data in this table the reader is reminded that each individual travel use category also allows secondary uses by those categories that are listed above it. For example, the ATV category also allows secondary uses by the Bicycle, Equestrian, and Foot categories. Although secondary uses are permitted, the secondary uses are not necessarily suitable for all of the routes included in the individual categories.

Table 2-4 Miles of Routes by Alternatives and Travel Use Categories

Travel Use Category	No Action Alternative	Alternative A	Alternative B	Alternative C (Proposed Action)
Foot	5.4	1.4	7.9	1.4
Equestrian	27.2	58.2	18.6	48.5
Bicycle	2.5	47.3	16.8	26.9
Motorcycle	2.8	14.5	2.2	3.4
ATV	26.4	40.8	19.5	24.4
General	203.1	164.6	113.4	153.4
Non-BLM	111.8	107.5	106.8	107.5
Administrative Access*	125.7	95.6	116.3	103.2
Closed**	87.6	172.3	237.7	202.1
User created	68.1	0	0	0

* *The Administrative Access category includes routes that are closed to the public for motorized uses but that may be used by authorized persons for administrative purposes. Under Alternative C, this category includes 103.2 miles of routes, of which 50.5 miles do not have permanent legal public access and 52.8 miles have permanent legal public access. Under Alternative C, the Administrative Access routes that have permanent legal public access can be used by the public for hiking and horseback riding, but are not available for use with bicycles or motor vehicles.*

** *The Closed category includes routes that are not available for public or administrative uses. The category Includes many routes that lack permanent legal public access and also includes routes in classified special management areas and those that were closed under previous activity plans. Under Alternative C, 202.1 miles of routes would be closed, including 50.1 miles with no permanent legal public access, 151.4 miles with legal public access, and 0.6 miles where the access status is unknown.*

Alternative C would designate 181.2 miles of motorized access routes in the General, ATV, and motorcycle travel use categories. In addition, 107.5 miles of Non-BLM routes are also available that are not affected by decisions made in this plan. Alternative C also provides a total of 129.6 miles of restricted non-motorized access routes, consisting of 76.8 miles in the Bicycle, Equestrian, and Foot travel use categories, and 52.8 miles of Administrative Access routes with permanent legal public access that are also available for hiking and horseback riding.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: Due to the many combinations of possible travel use designations that could be created from the large number of roads and trails in the planning area, many other alternatives could have been developed for this TMP. The three action alternatives, however, adequately address a range of alternatives, as required by NEPA. In addition, the alternatives brought forward in this EA cover a wide variety of options for many of the roads and trails, giving the decision maker the opportunity to select different motorized and non-motorized options for individual routes. No other specific alternatives were suggested by the public during the review periods. A summary of comparisons between the four alternatives carried forward is as follows:

SUMMARY COMPARISON OF ALTERNATIVES

Actions	No Action Alternative	Alternative A	Alternative B	Alternative C (Proposed Action)
Max. Distance for Driving Off Roads to Park and Camp	300 feet from <u>existing</u> routes	100 feet from <u>designated</u> routes	100 feet from <u>designated</u> routes	100 feet from <u>designated</u> routes
Target Shooting Closures	No closures considered	Closures at Turkey Rock and Salida	No closures considered	Closures at Turkey Rock and Salida
Access from Private Lands	Managed per IM CO-200-07-01	Managed per IM CO-200-07-01	Managed per IM CO-200-07-01	Managed per IM CO-200-07-01
Non-maintained County Road	No Action	Resolve by coordinating with counties	Resolve by coordinating with counties	Resolve by coordinating with counties
Proposals for Additional Routes	No additional routes considered	+7 miles A +12 miles M +43 miles B (included below)	No additional routes considered	+3 miles A +20 miles B (included below)
OHV Open Areas	No change	All OHV Open areas change to OHV Limited; new OHV Open area at Turkey Rock and Reese Gulch for trials bikes	All OHV Open areas change to OHV Limited	All OHV Open areas change to OHV Limited; new OHV Open area at Turkey Rock for trials bikes
OHV Closed Areas	All OHV Closed areas remain closed	All OHV Closed areas remain closed and High Mesa Grassland changes from Limited to Closed	All OHV Closed areas remain closed and High Mesa Grassland changes from Limited to Closed	All OHV Closed areas remain closed and High Mesa Grassland changes from Limited to Closed
OHV Limited Areas	OHVs limited to <u>existing</u> routes; mechanized uses not affected	OHVs and mechanized uses limited to <u>designated</u> routes	OHVs and mechanized uses limited to <u>designated</u> routes	OHVs and mechanized uses limited to <u>designated</u> routes
Miles of Routes by Travel Use Category				
Foot	5.4	1.4	7.9	1.4
Equestrian	27.2	58.2	18.6	48.5
Bicycle	2.5	47.3	16.8	26.9
Motorcycle	2.8	14.5	2.2	3.4
ATV	26.4	40.8	19.5	24.4
General	203.1	164.6	113.4	153.4
Non-BLM	111.8	107.5	106.8	107.5
Administrative Access	125.7	95.6	116.3	103.2
Closed	87.6	172.3	237.7	202.1
User created	68.1	0	0	0

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES /MITIGATION MEASURES

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: Under the Clean Air Act Amendments of 1990, the U.S. Environmental Protection Agency (EPA) established National Ambient Air Quality Standards for six pollutants: lead, ozone, sulfur dioxide, oxides of nitrogen, carbon monoxide, and particulate matter smaller than 10 microns in diameter (PM₁₀). In 2002, the U.S. Environmental Protection Agency (EPA) re-designated the entire state of Colorado as in attainment/maintenance of federal air quality standards. Canon City, Colorado, due east and downwind of the Arkansas River travel planning area was re-designated an attainment area for PM₁₀ (particulate matter with an aerodynamic diameter of 10 microns or less) in 2000. The closest federally designated Class 1 airshed (areas requiring the most stringent air pollution controls) to the Arkansas River Travel Planning Area is the Great Sand Dunes National Park, 16 miles south of the planning area and topographically separated by the Sangre de Cristo mountain range.

The primary sources of air pollution generated within the Arkansas River Travel Planning Area are tailpipe emissions and fugitive dust from US Highway 50 vehicular traffic, rural traffic on unpaved surfaces on both private and public land in Fremont, Chaffee and Custer Counties, wood burning stoves, agriculture, wildfire, and mining activities at Parkdale, west of Canon City. Spring seasonal haze in the Arkansas Travel Planning area originates largely from fallow agricultural fields in the San Luis Valley. Summer haze in the study area is frequently attributed to wildfire in Colorado and other western states.

Dispersion of fugitive dust (PM₁₀) from unsurfaced roads in the Arkansas River Travel Planning Area is commonly restricted to localized areas due to rocky soils and steep terrain in the Arkansas Canyon uplands. Under any given set of environmental conditions, however, the amount of fugitive dust and tailpipe emissions is directly related to the size, weight, power, speed, and amounts of traffic that occur on the region's roads and trails. As a general rule, motorized uses that involve traveling at higher speeds tend to create more dust and pollution than slower mechanized (muscle powered) and non-motorized uses (horse and foot travel).

Some planning area subunits, such as West McCoy Gulch do contain roads in flatter terrain that allow vehicles to travel at high speeds and where large quantities of dust can be produced by recreational and non-recreational traffic. Other sub-units, such as Texas Creek and Salida, reach peak traffic loads on summer weekends that generate substantial fugitive dust in a localized area. The nearest Colorado Department of Public Health and the Environment Air Quality Index monitoring site is at Cripple Creek. Systematic measurement of recreational traffic on BLM public lands, using traffic counters, has only recently been launched in the planning area. Correlating BLM traffic levels to localized dust and establishing PM₁₀ thresholds above which dust mitigation measures are required has not been completed.

Environmental Consequences/Mitigation:

Direct impacts common to all alternatives include the growth of tailpipe emissions and generation of fugitive dust area-wide in the upland environment from recreational OHV motorized travel, and to a lesser extent from mountain bike use, of un-surfaced BLM roads and trails. Growth in mechanized mountain bike traffic in the Salida subunit could result in some increases in localized dust in that area in all alternatives, but that impact would be localized. While traffic count data in the planning area is limited, upward trends in OHV registration in Colorado, increasing out-of-state OHV visitation, and average monthly traffic measured over the last 20 years in the neighboring Gold Belt Travel Planning area indicate increasing visitation and vehicle traffic to public lands in the Arkansas Travel Planning Area over the next 10 years.

Compared to all other alternatives, the No Action alternative would account for the greatest acreage and mileage of un-surfaced motorized roads and trails, as well as the highest geographic reach of OHV traffic. Growth in unconfined off road traffic on dry soils in OHV open areas within the Badger Creek and Grand Canyon Hills subunits could result in generation of PM₁₀ on public lands in the No Action alternative that could potentially impact visibility at the Royal Gorge State Park over time. Given the unconfined and incrementally increasing extent of user created OHV roads and trails and assuming growth in OHV recreational use over a 10-yr period, the No Action alternative would have the highest potential for generating fugitive dust and adversely impacting air quality over the largest geographic area in the planning area. Under the No Action Alternative, fugitive dust and pollution would be expected to increase in all planning area subunits and potentially reach intensities that adversely impact air quality in communities and subdivisions neighboring BLM lands.

Alternatives A, B, and C would all be expected to result in some level of vegetation recovery and reduce generation of fugitive dust to localized areas as motorized travel is restricted to designated routes. When comparing impacts to air quality between Alternatives A, B, and C, total acreage of surface disturbance from motorized use, geographic reach of traffic, and planning area distribution of fugitive dust would be expected to be most extensive in Alternative A, least extensive in Alternative B, and intermediate in Alternative C. Of the three action alternatives, Alternative B includes the least number of motorized routes and would result in the greatest reductions to dust and pollution, geographically. When compared to Alternative A, which includes a relatively high number of motorized routes that are only slightly fewer than the current number, the benefits to air quality under Alternative B would also be considerably higher. Alternative B would also result in substantially higher air quality benefits than Alternative C, which includes 46.1 more miles of routes than Alternative B.

Mitigation

No specific mitigation measures for reducing dust and pollution are recommended at this time, nor is it anticipated that the amount of dust from uses on BLM public lands is likely to reach levels requiring wide-scale dust abatement measures in the next 10 years. As traffic levels increase, however, the need to implement abatement measures may be required to address dust generated in localized areas and from specific uses. Mitigation measures for reducing dust could include the following actions: applying paving or other surfacing materials; watering or treating roads with magnesium chloride or other dust abatement chemicals; installing speed bumps or obstacles to reduce vehicle speeds.

Cumulative Effects

In addition to growth in recreational travel, reasonably foreseeable actions that may effect air quality over the next 10 years on private and public lands in the Arkansas River basin include continued residential growth, fuels reduction projects, utility corridor maintenance and upgrades, and new road rights-of-way. Future activities on public lands between Browns Canyon and Parkdale Bridge 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, the proposed *Over the River* art project on the Arkansas River, commercial forest products harvesting, and mining operations that involve increased traffic and hauling of materials over dusty roads. Over the next 10 years, dust and pollution from these and other sources, including local industries and from traffic on county and state roads and highways, cumulative to recreational travel on BLM roads and trails, are expected to have long-term, low intensity impact air quality, although.

CULTURAL RESOURCES

Affected Environment: The planning area contains cultural resources ranging from very early (Paleo-Indian) aboriginal sites to 50-year-old historic sites. Aboriginal site types include, but are not limited to, open camps, chipped stone manufacture and processing sites, open and sheltered architectural locales, and isolated artifacts and features. Sites in the planning area that date to the historic period comprise mines, vernacular and commercial architectural sites, railroad grades, homesteads, town sites, and ranches, as well as many other locations of past human activity. Roads and trails themselves are often of historic age and are occasionally eligible for the National Register of Historic Places.

Because of the magnitude and ongoing nature of the undertaking, BLM did not conduct intensive cultural resource inventories on all of the roads and trails involved in this planning effort. In order to relieve BLM from having to conduct intensive inventories on all of the roads and trails throughout the entire Arkansas River TMP planning area, a programmatic agreement (PA) between the BLM, the Colorado State Historic Preservation Officer, the Advisory Council on Historic Preservation, and the Comanche Tribe as a concurring party, was executed on June 3, 2003. The agreement relieves BLM of the requirement to perform 100% inventory in the areas of potential effect. Instead, BLM archaeologists will make the decision where intensive inventories are necessary based on information collected during literature reviews focused on the vicinity of the roads or trails 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 determines that 100 percent intensive inventory is not necessary, reconnaissance inventories (less than 100 percent) will be conducted and documented.

As a general rule, cultural sites that can be accessed with OHVs are more exposed to potential damage than those that cannot be accessed with motor vehicles. This is due to the fact that the weight and power of motor vehicles cause more ground disturbance than non-motorized modes of travel and also facilitate vandalism and the removal of artifacts. When determining the inventory order, BLM will place the greatest emphasis on the roads and trails for which the type of use is most likely to adversely affect historic properties.

Environmental Consequences & Mitigation:

Current Use (No Action): Historic properties, both historic and prehistoric in age, are impacted in many different ways depending on their proximity to existing travel routes. Unless site specific surveys were completed, the extent of the impacts would remain unknown. Under this alternative, the OHV OPEN areas at Sand Gulch, Grand Canyon Hills, and Texas Creek would not be changed to OHV LIMITED, and the use of OHVs within OHV LIMITED areas would be limited to existing travel routes that have been recognized as existing prior to 1996. Of all of the alternatives, the No Action Alternative would allow the greatest number of routes to remain open to OHVs with the OHV LIMITED designation (232 miles), and would present the highest potential for impacting historic properties. The closure of "User Created" routes that were developed after 1996 would reduce potential impacts to some historic properties.

Alternative A: Under Alternative A, the three OHV OPEN areas would be changed to OHV LIMITED and 220 miles of routes would be designated open to OHVs within the OHV LIMITED areas. The potential impacts to historic properties would be higher than what would occur under Alternatives B or C due to the greater number of designated routes, "user-created" trails left open, and new trails constructed.

Alternative B: Under Alternative B, the three OHV OPEN areas would be changed to OHV LIMITED and 135 miles of routes would be designated open to OHVs within the OHV LIMITED areas. The potential impacts to historic properties would be fewer than what would occur under Alternatives A or C due to the smaller number of designated routes, the closure of "user-created" routes and the absence of new trails.

Alternative C (Proposed Action): Under Alternative C, the three OHV OPEN areas would be changed to OHV LIMITED and 181 miles of routes would be designated open to OHVs within the OHV LIMITED areas. The potential impacts to historic properties would be fewer than what would occur under Alternative A but greater than what would occur under Alternative B. Under the Proposed Action the potential impacts to recorded and undocumented historic properties would be decreased from what would occur under the No Action Alternative due to the lower number of routes and the closure of routes into sensitive areas.

Mitigation

Because no cultural resources inventories have been completed and historic properties have not yet been found, it is not possible to identify specific mitigation measures. The range of treatment (mitigation) activities possible is quite large, but a non-exhaustive list includes avoidance (always the first choice), testing, excavation (salvage, partial, or total) and data recovery in the form of archival recording (for standing structures and other historic-era phenomena). A treatment plan is individually tailored to the historic property that will be adversely affected, and review by, and consultation with, the Colorado SHPO is required.

Cumulative Effects

As with mitigation, 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.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: A traditional cultural property is 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).

In Colorado, three types of culturally significant phenomena are present. McBride (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 (including the entire Front Range), 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 (McBride 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 [CR-RG-05-82 (NA)], including the following: Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes of Oklahoma, Cheyenne River Lakota Tribe, Comanche Tribe of Oklahoma, Crow Creek Lakota Tribe, Kiowa Tribe of Oklahoma, Northern Arapaho Tribe, Northern Cheyenne Tribe, Northern Ute Tribe, Oglala Lakota Tribe, Pawnee Nation of Oklahoma, Rosebud Sioux Tribe, Shoshone Tribe, Southern Ute Tribe, Standing Rock Lakota Tribe, Ute Mountain Ute Tribe.

Environmental Consequences & Mitigation:

Current Use (No Action): Sites of Native American Religious Concern are impacted in many different ways depending on their proximity to existing travel routes. Until site specific surveys are completed, the extent of these impacts would remain unknown. Under this alternative, the OHV OPEN areas at Sand Gulch, Grand Canyon Hills, and Texas Creek would not be changed to OHV LIMITED, and the use of OHVs within OHV LIMITED areas would be limited to existing travel routes that have been recognized as existing prior to 1996. Of all of the alternatives, the No Action Alternative would allow the greatest number of routes to remain open to OHVs with the OHV LIMITED designation (232 miles), and would present the highest potential for impacting sites of Native American religious concern. The closure of "User Created" routes that were developed after 1996 would reduce potential impacts to some sites of Native American religious concern.

Alternative A: Under Alternative A, the three OHV OPEN areas would be changed to OHV LIMITED and 220 miles of routes would be designated open to OHVs within the OHV LIMITED areas. The potential impacts to sites of Native American religious concern would be higher than what would occur under Alternatives B or C due to the greater number of designated routes, "user-created" trails left open, and new trails constructed.

Alternative B: Under Alternative B, the three OHV OPEN areas would be changed to OHV LIMITED and 135 miles of routes would be designated open to OHVs within the OHV LIMITED areas. The potential impacts to sites of Native American religious concern would be fewer than what would occur under Alternatives A or C due to the smaller number of designated routes, the closure of "user-created" routes and the absence of new trails.

Alternative C (Proposed Action): Under Alternative C, the three OHV OPEN areas would be changed to OHV LIMITED and 181 miles of routes would be designated open to OHVs within the OHV LIMITED areas. The potential impacts to sites of Native American religious concern would be fewer than what would occur under Alternative A but greater than what would occur under Alternative B. Under the Proposed Action the potential impacts to recorded and undocumented historic properties would be decreased from what would occur under the No Action Alternative due to the lower number of routes and the closure of routes into sensitive areas.

Mitigation

Because no cultural resources inventories have been completed and sites of Native American religious concern have not yet been identified, it is not possible to identify specific mitigation measures. The range of treatment (mitigation) activities possible is quite large, but might include avoidance (always the first choice) or providing access to tribes. Treatment is individually tailored to the site of Native American religious concern that will be impacted, and consultation with interested tribes is standard operating procedure.

Cumulative Effects

As with mitigation, 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 roads into an area might also increase the potential for vandalism and looting.

ENVIRONMENTAL JUSTICE

Affected Environment: There are no minorities or low-income populations in or near the project area.

Environmental Consequences & Mitigation: The Proposed Action and alternatives will not have a disproportionately high and adverse human health or environmental effect on minorities or low-income populations.

FARMLANDS, PRIME AND UNIQUE

Affected Environment: There are no prime or unique farmlands involved on BLM lands in the planning area.

Environmental Consequences & Mitigation: There are no impacts to prime or unique farmlands and no mitigation is necessary in any of the alternatives.

INVASIVE, NON-NATIVE SPECIES:

Affected Environment: In the seven county region of Colorado that includes Lake, Chaffee, Fremont, Park, Teller, Custer and Huerfano counties, 2556 incidents of invasive noxious weeds have been inventoried by BLM and partners in the Upper Arkansas Weed Cooperative during the period 1998-2005. Among inventoried noxious weed infestations, 363 occur within the Arkansas River Travel Management Planning Area. Infestations occur primarily along county, state, and federal roads and highways and include diffuse knapweed, Russian knapweed, spotted knapweed, leafy spurge, Canada thistle, musk thistle, scotch thistle, bull thistle, hounds tongue, salt cedar, Dalmatian toadflax, yellow toadflax, and a recent invasion of elongated mustard. The species that are common in areas that have been disturbed by roads and trails and that are most at risk to spread due to travel management decisions are leafy spurge, knapweed species, toadflax species and hounds tongue.

Key factors driving the spread of invasive weeds are seed source, seed dispersal, and soil disturbance. The risk of noxious weed invasion increases where expanding road and trail networks, and associated soil disturbance, occur near established infestations. Confounding forces in weed spread, in addition to seed dispersal by wind and water, is seed attachment and dispersal by people, animals, motor vehicles, and construction equipment. Of particular concern is seed imbedded in mud carried on vehicles and equipment, and weed seed contained in hay for feeding horses. The recent establishment of invasive Elongated Mustard in the Wellsville area, likely resulting from commercial traffic between seed sources in Nevada and the Arkansas River Travel Planning area, indicates threat of noxious weed spread by vehicle treads. Anticipated increases in recreational use of the public lands in the future will require mitigation for the

spread of weeds under all of the alternatives. However, the risk of weed spread and the degree to which mitigations may be needed to prevent and control it correspond directly to the number miles of designated travel routes, their location, and the amounts and kinds of use that occur on them.

Weed treatment alongside county, state and federal highways is the responsibility of the respective transportation agency. Since this plan does not have any effect on non BLM roads, weed issues on those roads will not be assessed in this document.

Environmental Consequences:

Current Use Alternative (No Action): No weeds are being treated on public lands within the project area presently. Over the next 10 years, however, increasing travel along BLM roads and trails, particularly in the Crampton Mountain, Road Gulch, Kerr Gulch, Texas Creek, and Badger Creek subunits, is likely to result in weed spread and higher weed control costs. Of particular concern under this alternative is the potential for weed spread from adjacent subdivisions into the High Mesa Grasslands Research Natural Area. Weed issues could arise under this alternative if “user created roads” are not controlled or if the number of users on the existing roads and trails increases. Because of the relatively high mileage of routes available to the public under the Current Use (No Action) Alternative (327.5 miles), as well as the extent and reach of user created routes, the potential for the spread of weed seeds by motor vehicles is very high, compared to Alternatives B and C.

Alternative A: This alternative designates 372.1 miles of travel routes for public use, the highest geographic extent and acreage of soil disturbance among the action alternatives. When compared to the Current Use (No Action) alternative, Alternative A reduces the reach of potential weed seed dispersal and spread due to restrictions on recreational travel in the Big Hole subunit and High Mesa Grassland Research Natural Area. However, Alternative A poses a higher risk to weed spread and establishment when compared to Alternatives B and C, due both to the linear reach of routes within all subunits as well as their location, particularly up dry drainage basins. In terms of potential adverse impact to vegetation and natural communities from invasive weeds, Alternative A poses a higher risk than Alternatives B and C as measured by total area of soil disturbance and proximity to inventoried weed infestations.

Alternative B: This alternative designates 239.7 miles of motorized routes for public use and has the least extent and lowest acreage of soil disturbance among the action alternatives. The geographic reach of motorized use and corresponding risk of seed dispersal by recreational travel posed by Alternative B is the least among action alternatives analyzed. When compared to Alternatives A and C, Alternative B is least likely to result in new weed infestations. This alternative is the most favorable alternative among those analyzed from the standpoint of reducing adverse impact from noxious weed spread as soil disturbance, proximity to established noxious weed seed sources, and seed dispersal by recreational travel are limited by acreage and extent of designated motorized routes.

Alternative C (Proposed Action): The Proposed Action would decrease the total mileage of designated routes that are available to the public under the Current Use (No Action) Alternative from 327.5 miles to 310.8 miles, and reduces the reach of potential weed spread in Road Gulch, West McCoy Gulch, and Kerr Gulch subunits. The potential for weed spread is somewhat reduced under this option, particularly in subunits where recreational travel will be removed from dry drainages and where potential growth in motorized travel in the High Mesa Grassland Research Natural Area poses long-term risk of noxious weed spread to globally significant natural communities. However, the new construction of ATV, motorcycle, and horse trails in this alternative in the Texas Creek and Grape Creek subunits, respectively, increases the risk and probability of new infestations along those routes.

Mitigation: Applicable to All Action Alternatives

1. Periodic monitoring of travel routes for new weed infestations
2. Treatment of new weed infestations
3. Use of weed free construction and maintenance equipment (removal of mud from tires, tracks, etc.)
4. Use of weed free seed and mulch for reclamation work
5. Public education to promote cleaning recreational vehicles before riding on public lands; use of weed free horse feed

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 in the Arkansas River basin 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, the proposed *Over the River* art project on the Arkansas River, commercial forest products harvesting, and mining operations. 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.

WILDERNESS, AREAS OF CRITICAL ENVIRONMENTAL CONCERN, WILD AND SCENIC RIVERS

Affected Environment: The Arkansas River Travel Management Plan (TMP) area includes public lands within four Wilderness Study Areas (Upper and Lower Grape Creek, McIntyre Hills, and Browns Canyon) and High Mesa Grassland Instant Study Area (ISA). The planning area includes a portion of Browns Canyon Area of Critical Environmental Concern (ACEC) and all of Arkansas Canyonlands ACEC and Grape Creek ACEC. There are no designated Wilderness or Wild and Scenic Rivers within the planning area.

Wilderness Study Areas and Instant Study Areas:

The Wilderness Study Areas (WSA) and one Instant Study Area (ISA) were studied under Section 603 of the Federal Land Policy and Management Act. Descriptions and analysis of these areas are found in the *BLM Colorado State Office Intensive Wilderness Inventory* (November 1980), *Cañon City District Wilderness Final Environmental Impact Statement* (December, 1987), and *BLM Colorado State Office Wilderness Study Report* (October 1991).

Management of WSAs and ISAs is guided by BLM's *Interim Management Policy for Lands Under Wilderness Review* (IMP). The IMP provides direction to BLM to maintain the wilderness values of these areas until Congress either designates these lands as wilderness or releases them for other purposes.

Below are descriptions of each WSA and the current uses and management concerns. The locations of the WSAs are shown on [Map 18](#) of the Map Appendix.

Browns Canyon WSA (CO-050-002) – Located approximately 6 miles south of Buena Vista in Chaffee County, this unit contains 6,614 acres of public land just east of the Arkansas River. The southern half of the WSA (approximately 3,400 acres) is within the Arkansas River TMP planning area; the northern half was included in the Fourmile TMP area. Rugged topography of hills, gulches, and canyons characterizes the area. Elevation varies from 7,500 feet near the Arkansas River to 8,400 feet near the eastern boundary that is contiguous with the San Isabel National Forest. Human imprints identified during the Intensive Inventory were considered minor (a few old mines and cabins) and substantially unnoticeable; thereby meeting the criteria for naturalness set forth in Section 2 (c) of the Wilderness Act of 1964. Browns Canyon also provides opportunities for solitude and for primitive and unconfined recreation (hiking, horse riding, backpacking, hunting, wildlife viewing). Supplemental values identified during the Intensive Inventory include important cultural resources and wildlife habitat. The entire area was recommended by BLM as suitable for wilderness designation.

The primary trail access to Browns Canyon WSA is located along its north boundary near Ruby Mountain (outside of the Arkansas River TMP area). Some visitors access the WSA from the Arkansas River; however, this requires crossing the railroad right-of-way and is not legal access. Hiking and horse riding in the area is slightly increasing as a result of population growth in the local area and region. Also, the Browns Canyon Wilderness Bill (sponsored by Rep. Joel Hefley) has increased interest in the area. Unauthorized motorized use originating from the San Isabel National Forest (from the Turret Road) is an on-going management concern.

McIntyre Hills WSA (CO-050-013) – Located twelve miles southwest of Cañon City in Fremont County, this unit contains 15,910 acres of public land and inholdings that include 520 acres of State Trust Land, and 40 acres of private land. Rolling hills and steep rugged canyon and mountain topography incised by small valleys and gullies characterize the area. Elevation varies from 6,000 feet to 8,100 feet. The Intensive Inventory found that the area meets the basic requirements for naturalness, opportunities for solitude and opportunities for primitive and unconfined recreation (hiking, horse riding, camping, hunting). Supplemental values identified during the Intensive Inventory include proximity to Front Range population centers and the

presence of numerous natural springs. The BLM did not recommend the area as suitable for wilderness designation citing the limited extent of outstanding wilderness qualities within the WSA.

McIntyre Hills WSA receives very limited use by the public due to limited access and lack of trails. Legal public access is available from the south near Poverty Mountain and Sheep Basin and from Five Point Gulch along US 50. Because of the rugged terrain and lack of trails, most of the recreation use occurs along drainages. Increasing development of private land along the east and south boundaries of the WSA has led to an increase of unauthorized motorized use within the WSA. Since 2005, BLM has closed four unauthorized routes within the WSA.

Lower Grape Creek WSA (CO-050-014) – Located approximately 7 miles west of Cañon City in Fremont County, this unit contains 11,220 acres of public land and 75 acres of private inholdings. Rugged, steep canyons formed by Grape Creek and its tributaries characterize the area. Elevation varies from 6,400 feet to 8,300 feet. The Intensive Inventory found that the area meets the basic requirements for naturalness, opportunities for solitude and opportunities for primitive and unconfined recreation (hiking, horse riding, camping, hunting). Supplemental values identified during the Intensive Inventory include an historic railroad grade that is the remnants of a narrow gauge spur of the Denver and Rio Grande Railroad between Cañon City and Silver Cliff. The BLM did not recommend the area as suitable for wilderness designation stating in the *BLM Colorado State Office Wilderness Study Report* (October 1991) that “mineral development related manageability problems and resource conflicts which could result if the area was designated as wilderness.”

Lower Grape Creek WSA receives relatively light recreation use although interest and use in the area is slightly increasing. Hiking, horse riding, dispersed camping, hunting, and fishing are the primary recreation activities. While designated trails do not exist at this time, visitors hike and ride horses along cow paths, the abandoned railroad grade, and old mining roads. Primary access into the area is from Sunset City Gulch, Bear Gulch, and Temple Canyon Park. Current management concerns include controlling unauthorized motorized use and resolving access into the unit from Temple Canyon Park where the public is trespassing on private land to access the WSA.

Upper Grape Creek WSA (CO-050-017) – Located 10 miles southwest of Cañon City in Fremont and Custer counties, this unit contains 10,200 acres of public land and 30 acres of private inholdings. Rugged canyons formed by Grape Creek and its tributaries and rocky, rolling hills characterize the area. Elevation varies from 7,000 feet to 8,300 feet. The unit is separated along its northern boundary from Lower Grape Creek WSA by a road that is closed on the west side of Grape Creek along East Pierce Gulch but open on the east side (Bear Gulch). The Intensive Inventory found that the area meets the basic requirements for naturalness, opportunities for solitude and opportunities for primitive and unconfined recreation (hiking, horse riding, dispersed camping, hunting). Supplemental values identified during the Intensive Inventory include an historic railroad grade that is the remnants of a narrow gauge spur of the Denver and Rio Grande Railroad between Cañon City and Silver Cliff. The BLM did not recommend the area as suitable for wilderness designation citing the limited extent of outstanding wilderness qualities within the WSA.

Upper Grape Creek WSA receives relatively light recreation use although interest and use in the area is slightly increasing. Hiking, horse riding, dispersed camping, hunting, and fishing are the primary recreation activities. While designated trails do not exist at this time, visitors hike and ride horses along cow paths, the abandoned railroad grade, and old mining roads. Primary access into the area is from Bear Gulch. Private land along the west and east sides of the WSA makes access difficult. Current management concerns include controlling unauthorized motorized use that is occurring primarily from surrounding private land.

High Mesa Grassland ISA (CO-050-009) – On January 29, 1965, 680 acres known as the High Mesa Grassland was withdrawn as a Research Natural Area by Public Land Order 3530. Section 603 of the Federal Land Policy and Management Act of 1976 directed accelerated wilderness review for natural areas and primitive areas that were formally identified prior to November 1, 1975. These areas are referred to as “Instant Study Areas.”

Located 13 miles northwest of Cañon City in Fremont County, High Mesa Grassland ISA contains 680 acres of public land. The area includes the rolling mesa and steep slopes of Table Mountain, locally known as Sommerville Table. Elevation varies from 8,500 to 9,100 feet. The unit includes a relict plant community with 17 species of native grass. The report submitted by the BLM Canon City District in 1979 to the Colorado State Director states “the area does not meet the size requirement, is not natural within the context of wilderness requirements, and does not offer outstanding opportunities for solitude or a primitive and unconfined type of recreation.”

Access to High Mesa Grasslands is extremely limited due to a lack of legal public access. For this reason, recreation use of the area is very limited. Visitors access the area by fording the Arkansas River near Echo Canyon and following old roads; however, this requires crossing the railroad right-of-way north of the river which is closed to public access. The easiest access to the area is from private land; this use is generally limited to family and friends of private landowners. Current management concerns include controlling unauthorized motorized use from adjacent private land and acquiring reasonable administrative access for BLM and legal access for the public.

Areas of Critical Environmental Concern:

Areas of Critical Environmental Concern were designated in the Royal Gorge RMP (1996). ACECs are to be managed to protect and enhance the special values identified in the RMP. Site specific plans for ACECs have not been developed.

Below are descriptions of each ACEC and the current uses and management concerns. The locations of the ACECs are shown on [Map 18](#) of the Map Appendix.

Arkansas Canyonlands ACEC (23, 921 acres) – This ACEC is managed to protect, enhance, and interpret significant scenic, historic, and archaeological values, habitat for sensitive wildlife (peregrine falcon and other raptors, bighorn sheep) and important fisheries. ACEC management would also consider enhancing public access for recreation along the Arkansas River. The High Mesa Grassland Research Natural Area (1,510 acres), a unique relict plant community and key

raptor habitat, is also part of this ACEC. High Mesa Grassland is also a Colorado Natural Area. The northern portion of the McIntyre Hills WSA is within this ACEC.

Most of the public use within the ACEC occurs along the U.S. 50 and Arkansas River corridor. There are eight recreation sites along the U.S. 50/Arkansas River corridor. According to BLM's Recreation Management Information System, there were 193,000 visits to these sites in fiscal year 2006. Common recreation activities are whitewater boating, fishing, driving for pleasure, camping, picnicking, and wildlife observation. In areas of the ACEC outside of the highway/river corridor, motorized access is very limited because of the rugged terrain. A few user created motorized routes are present; however, they are limited by access and terrain.

Browns Canyon ACEC (11,697 acres/6,757 acres in the TMP area) – This ACEC is managed to protect and enhance scenic values and peregrine falcon and bighorn sheep habitat. The ACEC also encompasses the entire Wilderness Study Area. Current uses and management concerns of the WSA portion of the ACEC are discussed above. The ACEC (outside of the WSA) includes all of the public lands along the Arkansas River through Browns Canyon just south of Ruby Mountain Recreation site to just east of Stone Bridge Recreation Site. This is the busiest stretch of the Arkansas River for whitewater boating. Visitor use at Hecla Junction Recreation Site was estimated at 45,000 for fiscal year 2006. Three other recreation sites are located in the ACEC (Ruby Mountain Recreation Site, Ruby Mountain Trailhead, and Bald Mountain Trailhead); however, they are outside of the TMP boundary. Motorized access in the ACEC is limited to two county roads. A hiking trail follows an abandoned road that starts at Hecla Junction and runs south for approximately one mile along the west side of the river. Common recreation activities are whitewater boating, fishing, camping, picnicking, and wildlife observation.

Grape Creek ACEC (15,978 acres) – This ACEC is managed to protect and enhance scenic values, wildlife habitat, significant fisheries and riparian values. Portions of the Upper and Lower Grape Creek WSAs are within the ACEC. BLM has two trailheads that provide access to the ACEC – Bear Gulch and Dakota Water Gap. The public also accesses the ACEC from Temple Canyon Park (City of Cañon City). In fiscal year 2006, visitor use at these two trailheads was estimated at just over 8,000. Common recreation activities are hiking, horseback riding, fishing, dispersed camping, and hunting.

Current management concerns include controlling unauthorized motorized use that is occurring primarily from surrounding private land (near Titusville Gulch) and resolving access into the unit from Temple Canyon Park where the public is trespassing on private land to access the ACEC/WSA.

Central Colorado Wilderness Coalition “Wild Ten”

The planning area includes five areas identified by the Central Colorado Wilderness Coalition (CCWC) in its “Wild Ten” wilderness proposal. Three of these five areas (Browns Canyon, McIntyre Hills, and Grape Creek) are public lands that lie largely within BLM Wilderness Study Areas. The lands within the CCWC Table Mountain (Big Hole subunit) and Badger Creek proposed wilderness areas were not identified as having wilderness characteristics during BLM's

wilderness review process conducted in 1979 and 1980, and these areas are not managed to maintain wilderness.

None of the alternatives propose new routes or the re-opening of existing closed routes in CCWC proposed wilderness areas for Browns Canyon, Badger Creek, McIntyre Hills, and Grape Creek. In addition, the Bear Gulch Road in the Grape Creek proposed wilderness would be closed to motorized and mechanized use under Alternative B. In the CCWC Table Mountain proposed wilderness, there would be no new routes under the Current Use Alternative and Alternatives B and C. A new route open to motorcycle, mountain bike, equestrian, and hiking use would be allowed on the west side of the Table Mountain area under Alternative A.

Environmental Consequences/Mitigation:

Current Use (No Action):

Browns Canyon WSA and ACEC – Under this alternative, only non-motorized and non-mechanized recreation are allowed within the WSA. There are no routes identified in the inventory in the portion of Browns Canyon WSA within the Arkansas River TMP area. In the ACEC outside of the WSA, motorized recreation would be restricted to the county road that accesses Hecla Junction, Hecla Junction Recreation Site, and a short (.12 mile) spur route off of the county road. An abandoned road near Hecla Junction that runs south for approximately one mile along the west side of the river would continue to be used for foot travel. This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and the Browns Canyon subunit DFCs and management objectives found in [Appendix 2](#). There would be no short term, long term or cumulative impacts to wilderness or ACEC values.

McIntyre Hills WSA – Under this alternative, only non-motorized and non-mechanized recreation are allowed within the WSA. All user created routes would be closed. The motorized route that cuts across the far southwest corner of the WSA would be closed. This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and the McIntyre Hills subunit DFCs and management objectives found in [Appendix 2](#). There would be no short term, long term or cumulative impacts to wilderness values.

Arkansas Canyonlands ACEC— Under this alternative, motorized, mechanized, and non-motorized and non-mechanized recreation would be allowed on existing routes. In the ACEC outside of the High Mesa Grassland ISA and McIntyre Hills WSA, motorized use on approximately 2 miles of routes would continue. All user created routes (approximately 1.6 miles) would be closed. This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and the DFCs and management objectives for McIntyre Hills, Grand Canyon Hills, West McCoy Gulch, and Big Hole subunits found in [Appendix 2](#). Existing motorized public access may impact some of the ACEC values (scenic, historic, and archaeological values, habitat for sensitive wildlife, fisheries) over the long term; however, because motorized public access is very limited, the impact would also be limited and be offset by the benefits of closing user-created routes. The continued availability of the network of administrative access for authorized motorized use in the northern portion of the ACEC would impact

ACEC values; however, this impact would be limited as long as these routes are used infrequently and maintained to prevent impacts to soils and vegetation and reduce visual impacts.

High Mesa Grassland ISA– Under this alternative, the two user created ATV routes will be closed. Motorized use would be restricted to authorized administrative use only on the existing primitive road. This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and Big Hole subunit DFCs and management objectives found in [Appendix 2](#). The continued use of the primitive road for motorized administrative access would impact wilderness values; however, the route existed at the time of the inventory and its use for administrative access is permitted under the IMP. The impact would be very limited in scope as long this route is used infrequently and maintained to prevent impacts to soils and vegetation.

Lower Grape Creek WSA, Upper Grape Creek WSA, and Grape Creek ACEC – Under this alternative, only non-motorized and non-mechanized recreation are allowed within the WSA. All user created routes would be closed. In the ACEC outside of the WSA, motorized recreation would be allowed on short spur routes (totaling about one mile) near Temple Canyon Park. This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and the Grape Creek subunit DFCs and management objectives found in [Appendix 2](#). There would be no short term, long term or cumulative impacts to wilderness or ACEC values.

Alternative A:

Browns Canyon WSA and ACEC – Under Alternative A, only non-motorized and non-mechanized recreation are allowed within the WSA. In the ACEC outside of the WSA, motorized use would be restricted to the county road that accesses Hecla Junction and the Hecla Junction Recreation Site. A short (.12 mile) spur route off of the county road would be closed. An abandoned road near Hecla Junction that runs south for approximately one mile along the west side of the river would be designated for bicycle, horse, and foot travel. This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and the Browns Canyon subunit DFCs and management objectives found in [Appendix 2](#). There would be no short term, long term or cumulative impacts to wilderness or ACEC values.

McIntyre Hills WSA – The impacts would be the same as the Current Use Alternative except that the user created route (3.5 miles) in Five Point Gulch would be designated for horse and foot travel and extended 2.5 miles to provide for legal public access from US 50. The trail that enters the WSA just south of Five Points Campground would be designated for horse and foot travel instead of just foot travel. In the area of Poverty Mountain, a closed primitive road would be designated for horse and foot travel. This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and the McIntyre Hills subunit DFCs and management objectives found in [Appendix 2](#). There would be no short term, long term or cumulative impacts to wilderness values.

Arkansas Canyonlands ACEC—The impacts would be the same as the Current Use Alternative except that a trail would be designated for horse and foot travel in Five Point Gulch (see the description under McIntyre Hills WSA above), 2.5 miles of administrative access would be closed in the Big Hole area, and the foot trail from Five Points Campground would be designated for foot and horse travel. The closure of administrative access would enhance scenic values within the ACEC over time as these roads become less noticeable. This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and the DFCs and management objectives for McIntyre Hills, Grand Canyon Hills, West McCoy Gulch, and Big Hole subunits found in [Appendix 2](#). There would be no short term, long term or cumulative impacts to ACEC values.

High Mesa Grassland ISA– The impacts would be the same as the Current Use Alternative.

Lower Grape Creek WSA, Upper Grape Creek WSA, and Grape Creek ACEC – The impacts would be the same as the Current Use Alternative except that approximately 4 miles of administrative access would be closed and a one-mile long route just south of Temple Canyon Park would be closed to motorized and mechanized travel. These closures would reduce motorized use and enhance wilderness and ACEC values. An additional mile of trail would be designated for horse and foot travel along the southwest side of the ACEC (outside of the WSA). This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and the Grape Creek subunit DFCs and management objectives found in [Appendix 2](#). There would be no short term, long term or cumulative impacts to wilderness or ACEC values.

Alternative B:

Browns Canyon WSA and ACEC – The impacts would be the same as Alternative A.

McIntyre Hills WSA – The impacts would be the same as the Current Use Alternative except that 0.7 miles of administrative access would be closed and the user created route (3.5 miles) in Five Point Gulch would be designated for horse and foot travel and extended 2.5 miles to provide for legal public access from Five Point Gulch at US 50. This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and the McIntyre Hills subunit DFCs and management objectives found in [Appendix 2](#). There would be no short term, long term or cumulative impacts to wilderness values.

Arkansas Canyonlands ACEC— The impacts would be the same as the Current Use Alternative except that a trail would be designated for horse and foot travel in Five Point Gulch (see the description under McIntyre Hills WSA above) and 2.5 miles of administrative access would be closed in the Big Hole area. The closure of administrative access would enhance scenic values within the ACEC over time as these roads become less noticeable. This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and the DFCs and management objectives for McIntyre Hills, Grand Canyon Hills, West McCoy Gulch, and Big Hole

subunits found in [Appendix 2](#). There would be no short term, long term or cumulative impacts to ACEC values.

High Mesa Grassland ISA– The impacts would be the same as the Current Use Alternative.

Lower Grape Creek WSA, Upper Grape Creek WSA, and Grape Creek ACEC – Approximately 4 miles of administrative access would be closed and an approximately one mile route just south of Temple Canyon Park would be closed to motorized and mechanized travel. The Bear Gulch Road would be closed to motorized and mechanized travel at the BLM/Forest boundary and designated open to horse and foot travel into Grape Creek. This would likely reduce the recreation use within this area of the WSA/ACEC. These road closures would reduce motorized use and enhance wilderness and ACEC values. No other routes would be designated for horse or foot travel; however, these uses would continue to occur. This alternative is consistent with BLM’s *Interim Management Policy for Lands Under Wilderness Review* and the Grape Creek subunit DFCs and management objectives found in [Appendix 2](#). There would be no short term, long term or cumulative impacts to wilderness or ACEC values.

Alternative C (Proposed Action):

Browns Canyon WSA and ACEC – The impacts would be the same as Alternative A.

McIntyre Hills WSA – The impacts would be the same as Alternative A.

Arkansas Canyonlands ACEC— The impacts would be the same as Alternative A.

High Mesa Grassland ISA– The impacts would be the same as the Current Use Alternative.

Lower Grape Creek WSA, Upper Grape Creek WSA, and Grape Creek ACEC – The impacts would be the same as Alternative A.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The planning area includes a variety of vegetation communities ranging in elevation from 5,000 feet to 10,500 feet. Annual precipitation varies from 10-20 inches, depending largely upon elevation. July and August are usually the wettest months. Precipitation during these months, combined with the warmest temperatures during the year, combine to produce the best growing conditions for most plant species.

A majority of the planning area has been assessed for Public Land Health Standards on a fifth level watershed basis between the years of 2002 and 2005. The watersheds within the planning area that were assessed include the Royal Gorge, Tallahassee Creek, Lower Grape Creek, Texas Creek, Coaldale / Howard, South Arkansas, and Browns / Salida Watersheds. Public lands were assessed to determine compliance with Standards for Public Land Health. Standards for Public Land Health describe the conditions needed to sustain public land health and relate to all uses on public lands. These standards are further described in [Appendix 5](#). Public Land Health Standard

No. 3 relates specifically to vegetation conditions and states, “Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations and ecological processes”. The results of the health assessments are described at the end of this section in the Finding on the Public Land Health Standard for Plant and Animal Communities section.

The analysis of vegetation within the planning area is based on Range Site Descriptions. A Range Site is used to describe plant communities using the interaction of soil properties, elevation, precipitation, topography, etc., based on the Soil Survey of Fremont, Chaffee and Custer Counties. These site descriptions provide detailed information about the specific plant species that can be expected to be present in the potential natural community for each specific range site. The range sites within the planning area include both grassland and woodland communities.

The grassland range sites are dominated by a grass and/or forbs component and tend to have much deeper soils with a greater water-holding capacity than many of the other vegetation communities in the planning area. The deep soils and relatively shallow root systems of grass and forbs species tend to make these sites somewhat more susceptible to damage from vehicle use than many of the other sites within the planning area. When soils are wet, these areas are highly susceptible to rutting from vehicle tires. Furthermore, under wet conditions, vehicle operators often tend to drive to the sides of existing ruts causing additional damage and “braiding” of trails that result in further loss of vegetation. Grassland communities, however, also tend to re-vegetate relatively rapidly when undisturbed. The grassland range sites within the planning area consist of 33% of total vegetation and include Brushy Mountain Loam, Boulder Flats, Dry Shallow Loam, Dry Shallow Pine, Dry Mountain Outwash, Gravel Breaks, Gravelly Foothill, Loamy Foothill, Loamy Glacial Outwash, Loamy Park, Loamy Plains, Mountain Loam, Mountain Meadow, Mountain Outwash, Salt Meadow, Sandy Foothill, Shallow Loam, Shallow Pine, Skeletal Loam, and Sandy Bench.

The Piñon-Juniper range site makes up a majority of the planning area on public land (182,395 acres). Sites containing a significant amount of Piñon and juniper vegetation are found at lower elevations within the planning area. Piñon-Juniper range sites generally are characterized by shallow soils and substantially less herbaceous ground cover than most of the other communities. Erosion potentials for these vegetation communities tend to be somewhat higher due to these two influences. These communities also often occupy very steep, rocky terrain. Areas with steeper slopes have even higher erosion potentials. Also, due to the reduced amount of herbaceous vegetation and shallow soils, natural re-vegetation of disturbed areas, such as roads or trails, is much slower in areas dominated by piñon/juniper vegetation than in other communities.

The upper elevation woodland communities are dominated by coniferous woodland species such as Ponderosa Pine, Douglas-fir, and Engelmann spruce. If undisturbed, they tend to have either:

- 1) Sufficient herbaceous understory species to provide soil protection and to control erosion. This is the case with ponderosa pine sites that often include an

understory of shrubs such as Gambel oak or mountain mahogany or grass species such as Arizona fescue or mountain muhley; or

2) Sufficient forest litter (needlecast, etc.) to provide soil protection and to control erosion. This is the case with some of the spruce, fir or spruce/fir mix vegetation classes.

These communities occupy higher elevations than the Piñon/juniper woodland communities and, therefore, receive greater amounts of precipitation.

Vegetation accomplishes several key functions as part of the various landscapes within the planning unit. These functions include: providing forage and other habitat elements for wildlife; providing forage for domestic livestock use; stream bank stabilization; and protection and stabilization of upland soil surfaces. Several of these functions are addressed in other portions of this analysis. Certain plant communities, however, also have specific characteristics that will be impacted differently by the amount and location of motorized roads and trails.

Environmental Consequences/Mitigation: Generally, the establishment of a road or trail precludes vegetation from occupying the same location. The presence of roads and trails provide no benefit to vegetation. The exception to this may apply where roads or trails are utilized to facilitate some type of land treatment, such as prescribed burning or weed treatments, etc., designed to improve overall vegetation conditions.

From a practical standpoint, the number of motorized roads or trails included in any of the alternatives is insufficient to significantly impact the total amount of vegetation resources in the planning area. For example, the Piñon/juniper range site occupies 182,395 acres of public land within the planning area. Even under the current management situation (No Action Alternative), which includes the highest number of roads and trails, only about 1,633 acres of direct vegetation loss occurs in Piñon/juniper vegetation, or less than 1% of the overall acreage occupied by this vegetation community.

While the direct impact of motorized roads and trails on the overall amount of vegetation resources may be slight, the environmental consequences of vegetation loss due to roads and trails can have a substantial impact on other resource values (soil erosion, wildlife forage and habitat, etc.). In order to achieve the desired future conditions of the planning area and the individual subunits, and to conform to BLM's mission to manage for sustainable landscapes that are meeting the Standards for Public Land Health (Appendix), the interdisciplinary team attempted to limit motorized uses to the most appropriate areas. This portion of the analysis examines how vegetation characteristics of the planning area would be affected by each of the alternatives. Table 3 displays the acres of impacts to individual range sites by alternative.

Table 3 – Acres of Vegetation Impacted by Roads and Trails

Range Sites	Alternative A	Alternative B	Alternative C (Proposed)	No Action (Current)
Brushy Mountain Loam	17	18	17	20
Boulder Flats	4	4	4	4
Dry Shallow Loam	1	1	1	1
Dry Shallow Pine	8	7	6	12
Dry Mountain Outwash	30	30	30	41
Gravel Breaks	0	0	0	0.5
Gravelly Foothill	104	88	94	152
Loamy Foothill	248	243	247	297
Loamy Glacial Outwash	13	13	13	13
Loamy Park	33	32	32	39
Loamy Plains	1	1	1	1
Mountain Loam	55	56	57	66
Mountain Meadow	4	4	4	4
Mountain Outwash	0	0	0	0.5
Salt Meadow	0	0	0	1
Sandy Foothill	142	133	138	170
Shallow Loam	19	17	17	23
Shallow Pine	20	22	20	29
Skeletal Loam	20	17	19	25
Sandy Bench	3	3	3	11
Douglas-Fir	71	68	69	80
Piñon-Juniper	1,341	1,260	1,309	1,633
Ponderosa Pine	82	78	80	104
Spruce-Fir	7	6	6	9
TOTAL	2,233	2,101	2,167	2,736

No Action Alternative: Under the No Action Alternative, vegetation would continue to be absent on approximately 2,736 acres of lands occupied by roads and trails. Extensive motorized uses would still occur to a large extent in many of the areas such as Grand Canyon Hills, Texas Creek, and Sand Gulch.

Under the No Action Alternative, the Standard for Public Land Health for vegetation would be met for most of the TMP area. In some portions of the above listed areas, however, the impacts to vegetation caused by routes would increase over time and

gradually move away from achieving the Standards for Public Land Health. There are no short term cumulative impacts anticipated under this alternative, however, if more unauthorized routes are created and unchecked, there may be long term cumulative impacts.

Alternative A: Under Alternative A, vegetation on approximately 2,233 acres would be absent on lands occupied by travel routes. The routes that would be closed to motorized use, combined with the new routes to be constructed, would still result in a net improvement to vegetation on approximately 503 acres or 18% decrease in direct impact to vegetation communities currently impacted by motorized routes.

Under this alternative, most of the TMP area would be meeting or moving towards meeting the Standard for Public Land Health for vegetation. However, some areas that are more affected by travel uses may not be moving towards meeting the standard. These areas would include Turkey Rock and Reese Gulch. Except for the No Action Alternative, this alternative provides for the greatest number of routes and thereby would have the greatest impact on the vegetation standard. Even though there are less routes overall than the Current Use Alternative, areas such as Turkey Rock and Reese Gulch would have more routes designated in a small area and possibly resulting in long term direct impacts to vegetation in those areas.

Under Alternative A, driving off roads to park, camp, and retrieve game would be limited to a maximum distance of 100 feet. These activities would be short term and temporary resulting in limited disturbance to vegetation.

Mitigation is same as Alternative C.

Alternative B: Alternative B provides the most benefit to vegetation resources within the planning area. Under this alternative, vegetation would be absent on approximately 2,101 acres of lands occupied by existing roads and trails. No new travel routes are constructed in this alternative, and the routes that would be closed to motorized uses would result in a substantial improvement to vegetation on approximately 635 acres or 23 % of the amount of vegetation currently impacted by motorized routes. Motorized uses would be reduced or precluded in many of the vegetation communities that are most susceptible to damage from vehicles driving off roads.

Under Alternative B, most of the TMP area would be meeting or moving towards meeting the Standard for Public Land Health for vegetation. Of the action alternatives, however, this alternative provides for the fewest number of roads and thereby would have the least impact on the vegetation standard. There would be no short term or long term cumulative impacts to vegetation.

Under Alternative B, driving off roads to park, camp, and retrieve game would be limited to a maximum distance of 100 feet. These activities would be short term and temporary resulting in limited disturbance to vegetation.

Mitigation is same as Alternative C.

Alternative C (Proposed Action): Under the Proposed Action, approximately 2,167 acres of vegetation would continue to be absent on lands occupied by travel routes. The routes that would be closed to motorized use, combined with the new routes to be constructed, would still result in a net improvement to vegetation on approximately 569 acres or 21% of the amount of vegetation currently impacted by motorized routes.

Under the Proposed Action non-motorized uses are emphasized throughout the TMP area, resulting in substantially reduced impacts to vegetation than under the No Action Alternative. Some routes would be closed or restricted to uses that would reduce travel-way widths, resulting in increased vegetation cover along these routes.

Under this alternative, motorized uses are emphasized in the Grand Canyon Hills, Texas Creek, and Sand Gulch areas designated as OHV Limited to Designated Roads and Trails. A new OHV Open designation would be established at Turkey Rock where motorized travel off designated routes would be limited to users of trials bikes only. In addition, new route construction is proposed in both the Texas Creek and Salida sub-units. Both of these sub-units are dominated by Piñon/ Juniper woodland range sites interspersed with grassland sites. These communities contain only a small amount of herbaceous ground cover that could be impacted by vehicles. Consequently, some increased impacts to vegetation would occur in both sub-units, resulting from the construction of new routes. Because of the high level of motorized uses already occurring in these sub-units, the additional impacts would be only slightly greater than under the No Action Alternative.

The Proposed Action also includes the stipulation that driving off roads to park and camp would be limited to a maximum distance of 100 feet. These activities would be short term and temporary resulting in limited disturbance to vegetation.

After implementation of travel management in the planning area, there could be continuing problems with illegal motorized vehicle use occurring off designated routes. Areas that contain large amounts of open grassland communities and some of the relatively open ponderosa pine woodland communities are particularly susceptible to damage from this type of use. By emphasizing motorized use in the Texas Creek, Grand Canyon Hills, Sand Gulch, and Turkey Rock areas, the impacts to vegetation in other areas should be reduced, resulting in a net benefit to vegetation throughout the planning area.

Under the Proposed Action, most of the TMP area would be meeting or moving towards meeting the Standard for Public Land Health for vegetation. In the Texas Creek, Grand Canyon Hills, Sand Gulch, and Turkey Rock areas, however, some movement away from meeting the Standards would occur as a result of the greater number of roads and increased motorized use in these areas. Overall, both short and long term cumulative impacts would be minimal under this alternative.

Mitigation: Reroute those sections of roads in grassland areas that show unnecessary impacts to vegetation, such as braided or parallel routes. Any artificial re-vegetation done on closed routes should be seeded with native plant species adapted to the particular site.

In areas where motorized use continues to occur off designated roads, implement measures to prevent this activity with signs, fencing, barriers, and other appropriate means.

Cumulative Effects: Historically, logging, mining, livestock grazing, fire suppression, and to some degree recreation have impacted the composition and structure of vegetation present in the planning area today. Currently, the primary forces driving vegetation condition and extent in the planning area include drought, insect outbreak in pinon and mixed conifer forests, aspen die-off, housing development, livestock grazing, recreation, and to some degree logging. Reasonably foreseeable natural processes and human driven actions that may impact vegetation composition, structure, and extent include expanding insect outbreak, wildfire, climate change, livestock grazing, recreation and development. The incremental impact of travel designation and OHV travel cumulative to these other forces influencing vegetation is expected to be long-term but minimal.

Finding on the Public Land Health Standard for Plant and Animal Communities

(partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): As stated above, a majority of the planning area has been assessed for Public Land Health Standards on a fifth level watershed basis between the years of 2002 and 2005. The total area assessed within the travel management area included 221,220 acres. Approximately 190,070 acres were determined to be meeting this standard. Of the approximately 31,000 acres that were not meeting this standard, over 30,000 acres were primarily due to increases in the amount and density of Piñon/juniper woodland vegetation over time. With the suppression and lack of naturally occurring fire in the area, Piñon and juniper canopies have steadily grown increasingly dense. These woodlands have begun to encroach into many open parks, meadows, grasslands and shrublands. As this continues over time, many areas are characterized by decreasing amounts of herbaceous plant cover and higher amounts of bare ground. Productivity, vigor and diversity of these areas begin to decrease. These areas begin to retain less moisture during precipitation events and allow higher levels of surface runoff and soil movement. A small amount of vegetation problems (approximately 1,000 ac.) were related to livestock grazing within the watershed. Livestock use in those specific areas has been addressed over the last several years through changes in livestock management and the implementation of several fencing projects.

SOILS (includes a finding on Standard 1)

Affected Environment: The Arkansas River travel planning area covers a large area and contains many different soil types. BLM uses soil surveys from the Natural Resources Conservation Service for purposes of analysis. Surveys are complete for the entire area and are available in a digital format that allows users to analyze data using GIS technologies. Travel routes in the Arkansas River travel planning area within Fremont County alone cross 86 different soil types, with 77 being classified as having a high erosion hazard. In general, most of the Arkansas River travel planning area has shallow soils with a granitic parent material. In the Arkansas River valley between Coaldale and Salida there are areas of shallow soils derived from sedimentary rock parent material. Most of these soils are low in nutrients, have a low water holding capacity, and are slow to revegetate after disturbance.

The Colorado BLM is directed to address the Standards for Public Land Health. Standard number one is directed at upland soils and states that “Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.” The Standards for Public Land Health are discussed in greater detail in [Appendix 5](#).

At this time, most of the soils in the Arkansas River travel planning area are meeting standards. In some areas soils are not meeting standards due to the encroachment of Piñon/juniper forests out competing and eliminating herbaceous vegetation, resulting in less ground cover. The presence of traveled routes contributes to not meeting land health standards for soils.

Environmental Consequences

Effects Common to All Alternatives: Roads and trails have many negative impacts and no benefits to soils in an area. All alternatives in this plan would have negative impacts to the soil resource in varying degrees depending on the miles of roads and trails left open. Factors such as slope, precipitation, vegetative cover, presence of cryptogamic cover (organic crust), soil type, and water runoff all affect the amount of erosion. Erosion is accelerated with manmade disturbances such as roads and trails. Most of the effects of routes on soils can be attributed to soil compaction resulting in impacts to water quality and hydrologic functions. As soil is subjected to pressure, the soil particles are pressed together into a denser mass, as air and gasses are pushed out of the soil. This compaction creates a soil that is less permeable to water and air infiltration and ultimately affects the soils ability to nourish plant roots and soil microbes. Soil compaction is exacerbated when soils are wet. Soil compaction also increases the amount of runoff that flows off the route into surrounding drainages, causing gullies and increased erosion.

In addition to compaction, over time the shallow soils in the Upper Arkansas River region tend to erode down to larger materials. This results in routes spreading over larger areas as users seek smoother surfaces. This leads to increased impacts, as new soil is disturbed and larger materials get broken down by the mechanical action of feet, hooves, or wheels. The reader is also directed to the Water Quality and Hydrology section for further discussion of impacts related to soils impacts.

Comparison of Alternatives: In order to analyze the soils impacts of the alternatives, soil loss from the entire network of routes was modeled using the best data available (Table 4). Using this data, soil erosion was estimated using the Revised Universal Soil Loss Equation (RUSLE). RUSLE predicts the average annual soil loss over a long period of time. Most of the soil loss in the Arkansas River travel planning area is from infrequent, large events where there could be several years of little or no soil loss and then one storm that produces four times the annual average.

These estimates demonstrate the amount of soil in tons per year that is being lost from routes on BLM lands under the current management in this area, and show the amount of soil erosion that can be expected under each of the alternatives. Table 4 shows the results of this analysis.

Table 4: Average Annual Soil Loss from the Arkansas River travel planning area

	Alternative			
	No Action	Alternative C	Alternative B	Alternative A
Soil Loss (tons/year)	2260	1850	1735	1930

No Action Alternative: Under the No Action alternative a total 267 miles of roads and trails on public lands would be available for public travel uses, not including Non-BLM routes (county and state highways). Of this total, 232 miles would be available for motorized uses and 35 miles for non-motorized and mechanized uses. Estimated annual soil loss from travel routes resulting from the No Action Alternative would be 30% higher than in Alternative B and 22% higher than in Alternative C. The No Action Alternative would require the most extensive and costly mitigation efforts over the long-term to control erosion and meet the Soil Standard for Public Land Health. (See mitigation under Water Quality/Hydrology)

Alternative A: Under Alternative A, a total of 327 miles of roads and trails would be designated for public travel uses, not including Non-BLM routes (county and state highways). Of this total, 220 miles would be designated for motorized uses and 107 miles for non-motorized and mechanized uses. The estimated annual soil loss from designated travel routes in Alternative A would reduce soil loss over the long-term by 17% when compared to the No Action Alternative but would still be very high and require extensive mitigation measures to control erosion. (See mitigation under Water Quality/Hydrology). Under this alternative there would be the greatest possibility of the action alternatives that the Soil Standard for Public Land Health would not be met in localized areas. It would also be very costly to meet Desired Future Conditions for soils without extensive mitigation.

Alternative B: Under Alternative B a total of 178 miles of roads and trails would be designated for public travel uses, not including Non-BLM routes (county and state highways). Of this total, 135 miles would be designated for motorized uses and 43 miles for non-motorized and mechanized uses. Compared to the other alternatives, the

estimated annual soil loss from travel route designations in Alternative B would be relatively low and would require the least mitigation to control erosion. (See mitigation under Water Quality/Hydrology) Under this alternative, there would be the smallest possibility that the Soil Standard for Public Land Health would not be met in localized areas. Desired Future Conditions for soils would best be achieved under this alternative.

Alternative C - Proposed Action: Under Alternative C a total of 258 miles of roads and trails would be designated for public travel uses, not including Non-BLM routes (county and state highways). Of this total, 181 miles would be designated for motorized uses and 77 miles for non-motorized and mechanized uses. The estimated annual soil loss from travel route designations in Alternative C would be moderate and would require mitigation to control erosion. (See mitigation under Water Quality/Hydrology). Under this alternative there would be a moderate possibility that the Soil Standard for Public Land Health would not be met in some localized areas. With mitigation, Desired Future Conditions for soils within the planning area could be met.

Mitigations: See mitigation under Water Quality/Hydrology

Cumulative Effects: The Arkansas River travel planning area has a very diverse land ownership pattern that is rapidly changing. In looking at the entire area, there are many factors affecting the soils. Much of the private land in this area is being subdivided and becoming increasingly developed with new routes and home sites, adding to the impacts in the watersheds. Thirty-five and forty acre parcels that were formerly parts of large ranches and used primarily for livestock grazing are now being occupied for home sites with different management. Often this management includes poorer soil conditions due to overgrazing and soil compaction resulting from more animals on a piece of ground than its carrying capacity.

Along with the impacts caused by the development of new routes and home sites, there are impacts associated with grazing and historical logging that continue to influence the soils of the Arkansas River travel planning area. The Arkansas River 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 Arkansas River TMP will play an important role in determining the overall health of these watersheds.

Finding on Public Land Health Standards for Soils (Standard 1): Under the No Action Alternative soil loss would continue at current levels and would likely increase overtime due to continued and increasing amounts of off-road travel and route proliferation. Since soil impacts are directly related to the footprint of the roads on the landscape, the amount of soils meeting standards is directly related to the amount of land surface covered by roads. Therefore, all the action alternatives would result in improvements over the No Action Alternative. Of the three action alternatives, the land

health standards for soils would be best met under Alternative B because it provides the lowest miles of routes. Alternative A would provide the least benefit to soils due to the high number of routes, while the benefits from the Proposed Action would lie in between.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: The Arkansas River travel planning area involves 11 5th level watersheds and forty-five 6th level watersheds of which 32 of the 6th level are affected by travel planning decisions. The names and Hydrologic Unit Codes (HUC) of these watersheds are listed in (Tables 5-1 & 5-2) . These watersheds are all tributary to the Arkansas River and supply water for many downstream users. Among the users of water from the Arkansas River are the Cities of Salida and Cañon City, along with several agricultural interests.

Table 5-1 5th Level Watersheds in the Arkansas River travel planning area

5th Level Watershed Name	Hydrologic Unit Code
Browns/Salida Composite	1102000105
Tallahassee/Current Creek	1102000112
Badger Creek	1102000109
South Arkansas River	1102000107
Royal Gorge Composite	1102000110
Cañon City Composite	1102000204
Coaldale/Howard Composite	1102000108
Lower Grape Creek	1102000114
Texas Creek	1102000111
Hardscrabble Creek	1102000206
Upper Grape Creek	1102000113

Table 5-2 6th Level Watersheds in the Arkansas River travel planning area

6th Level Sub-Watershed Name	Hydrologic Unit Code
Brown Canyon Composite	110200010515
Lowest Currant Creek	110200011206
Lower Badger Composite	110200010910
Salida Composite	110200010516
East Salida Creeks	110200010518
Lower Cottonwood Composite	110200011209
Fernleaf Gulch	110200011004
Tallahassee Creek	110200011210
East Gulch	110200011010
Howard Composite	110200010801
Mouth of Badger Composite	110200010912
Royal Gorge Composite	110200011014
Poncha Springs Composite	110200010716
Sand Creek	110200020404
Canon City Composite	110200020405
Echo Composite	110200011008
Bear Creek	110200010802
Coaldale Composite	110200010806
Copper Gulch	110200011012
Falls Gulch	110200011001
Lowest Grape Composite	110200011408
Texas Creek Composite	110200011105
Sand Gulch	110200011006
Pine Gulch	110200011406
Hayden Creek	110200010810
Oak Creek	110200011002
Middle Grape Creek Composite	110200011402
Big Cottonwood Creek	110200010814
Upper Oak Creek	110200020401
Deweese Reservoir Composite	110200011315
Querida Gulch Composite	110200011404
Westcliffe Composite	110200011314

Historical Overview: Since European settlement, the Upper Arkansas River area has experienced many changes in land use. Beginning in the mid-to-late 1800s, mining and related logging in the Leadville area disturbed much of the headwaters of the Arkansas River. The removal of trees in the area led to an increase in runoff and frequently tailings piles were placed in streams. These impacts can be seen today in tailings piles scattered throughout the area.

After the mining boom, overgrazing by cattle and sheep in the early 1900s damaged many of the watersheds in the planning area. These grazing practices resulted in stream channels losing their stability due to a combination of two factors. The first factor was that grazing increased the magnitude and timing of runoff, resulting in excess water delivery to the stream channels. The second factor was the removal of streamside vegetation that historically stabilized the channel and allowed flood flows to pass without channel damage.

Travel corridors for timber cutting and settlement were put in near or immediately adjacent to watercourses during the early to mid 1900s. These routes further increased sediment yields and the magnitude of water flow throughout the area. Routes also went through riparian vegetation, further damaging stability by reducing valley width. Once a channel destabilizes it will try to reach a balance between the new flows and sediment load. Many of the channels in the planning area did this by down cutting and adding more sediment to the system.

During the mid 1900s, aggressive rehabilitation was undertaken that included check dams, route maintenance, and better grazing practices. This improved the situation in many of the channels throughout the area but many are still stabilizing.

Existing Conditions: The Colorado BLM is directed to address the Standards for Public Land Health. Standard number five is directed at water quality and states that, “The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the water quality standards established by the State of Colorado. Water quality standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and anti-degradation requirements set forth under state law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.” The Standards for Public Land Health are discussed in greater detail in [Appendix 5](#).

The Colorado Water Quality Control Act gives authority to the Colorado Water Quality Control Commission to classify and assign numeric standards to state waters. State waters are classified for the present beneficial uses of water, or the beneficial uses that may be reasonably expected in the future. The classifications for beneficial uses include: aquatic life, recreation, agriculture, and water supplies for various purposes. The numeric standards are assigned to define the allowable concentrations of various parameters under the following categories: physical and biological, inorganic and metals.

The Colorado Water Quality Control Commission has included a narrative statement in the Basic Standards for all surface waters that states, in part: "All waters (except in wetlands and/or except where authorized by approved permits, certifications or plans of operation) shall be free from substances attributable to human caused point or non-point source discharges in amounts, concentrations or combinations that:

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

Both sediment and nutrient loading in surface waters could result in violations of the above standard.

Waters within the state that are not meeting state water quality standards are placed on the 303(d) list until the water quality is improved. Waters that are thought to be impaired but not enough data exists to make a determination, are placed on the monitoring and evaluation list. Currently, no waters within the planning area are on the 303(d) or the Monitoring and Evaluation lists (Colorado Department of Public Health and Environment, 1998). While not on the state lists,

Badger Creek has historically been a major source of sediment to the main stem of the Arkansas River and many projects have been implemented over the years to help control sediment loads in Badger Creek.

Many water sources (springs, seeps, water developments, and wells) on public lands within the planning area have adjudicated water rights for beneficial uses, including livestock, wildlife, human consumption, recreation, and fire suppression. Sediment entering these sources shortens their life span and increases the amount of maintenance that is required. Many of the structures (dams, infiltration galleries, etc.) associated with these water sources were also designed to accommodate a specific amount of runoff. Increased runoff could threaten the structural integrity of these facilities. Other than the waters that are not meeting state water quality standards, all waters within the TMP area are meeting the water quality Standard for Public Land Health.

The increase and the total number of travel routes seen today have a definite negative influence on water quality and hydrology, much like was seen in the earlier part of the 20th century. As routes and use increase, soil stabilizing vegetation is removed and soils are compacted, leading to increased runoff, sedimentation and downstream channel destabilization.

Environmental Consequences:

Effects Common to All Alternatives: There are few, if any, environmental benefits to the watershed and water quality from roads and trails. All alternatives in this plan would have negative impacts to water quality and hydrologic functions in varying degrees depending on the miles of roads and trails that are designated for use. The largest impact is sediment. Sediment loads carried by drainages are a natural part of watersheds and maintains relative stability among bed and banks, including erosion and deposition. Erosion in a watershed resulting from routes and other disturbances can overload a channel, aggrading the bed, changing channel pattern, and causing sedimentation of lakes, reservoirs, and ditches, along with changing stream response to flood waters. The sedimentation of lakes, reservoirs and ditches could have an effect on the beneficial uses of the waters as water users would be required to maintain water developments more frequently. The amount of additional sediment and runoff from roads and trails varies by type and levels of use. Given the same soil types and slopes, foot trails with low use will have much less impact to the watershed than a wide road that is heavily used by vehicles. In general, impacts increase as width and weight increase. The Soils Section of this document quantifies the amount of erosion and/or sedimentation in the planning area and represents the difference between all the alternatives across the entire planning area.

Along with increased runoff, time-to-peak, erosion and sediment, roads and trails located in channel bottoms have the most impact. This is because they remove stabilizing vegetation and makes substrate available for mobilization and increase sediment loads over longer distances than do routes in upland areas.

Route location is the biggest factor in the actual amount of impact to a waterway. A route that is closer to a waterway will generally have a greater impact than one with a ridge top location. In addition to route location, route density provides a comparative

measure of total impermeable surface in a watershed. Route density provides a relative estimate of mileage of surface disturbance and aggregates impacts that route networks have on adjacent or nearby drainages within a watershed. Route density is a function of length of routes by acreage. In this analysis route density is measured on a miles of routes per square mile basis. High route densities generally equal greater impacts to the watershed. Table 3-3 and [Appendix 8](#) display route densities that would be provided under each alternative for sub-drainages within the sixth level watersheds in the planning area. Route densities of 15 miles/square mile are typical densities of urban areas.

The amount and time of use also has a large bearing on the level of impact that routes have on a watershed. Use during wet periods results in increased soil movement and delivery. The ruts caused by use during wet periods also cause routes to widen because, during dry periods, users will try to stay on the smoother surfaces on either side of the ruts.

In general, route impacts can be mitigated in one of two ways. The first is proper construction and maintenance of routes following Best Management Practices. The second is closure of routes during wet periods. Proper construction includes locating the route away from drainages. Routes that are located in drainage bottoms are, at best, very difficult to mitigate.

No Action Alternative: Under this alternative a total of 267 miles of roads and trails would be designated for public travel uses, not including Non-BLM routes (county and state highways). Of this total, 232 miles would be designated for motorized uses and 35 miles for non-motorized and mechanized uses. Compared to the Proposed Action and Low Use Alternative, the total amount of sediment and pollutants entering the stream system from the available roads and trails would be high and require mitigation (see below). Table 5-3 shows the number of routes and acreages of sub-watersheds within the planning area with low, moderate, high and very high route densities. A map comparing route density of the No Action Alternative to the other alternatives is included in the map appendix ([Map 36](#)). Many areas would continue to have high route densities and would retain many short spurs and duplicate routes, adding to the impacts to the watershed. Under this alternative there would be the greatest possibility that the water quality Standard for Public Land Health would not be met in localized areas.

Alternative A: Under Alternative A, 327 miles of roads and trails would be designated for public travel uses, not including Non-BLM routes (county and state highways). Of this total, 220 miles would be designated for motorized uses and 107 miles for non-motorized and mechanized uses. The amount of sediment entering the stream system from designated roads and trails would be very high and require extensive mitigation (see below). Table 5-3 shows the number of routes and acreages of sub-watersheds within the planning area with low, moderate, high and very high route densities. A map comparing route density of Alternative A to the other alternatives is included in the map appendix ([Map 36](#)). Many areas would have high route densities under this alternative. The Texas Creek sub-unit in particular would include more routes than there are currently

and the McCoy Gulch sub-unit would be heavily impacted by routes in poor locations and in dry washes that would be very difficult to mitigate. Under this alternative there would be the greatest possibility of the action alternatives that the water quality Standard for Public Land Health would not be met in localized areas. It would also be very hard to meet Desired Future Conditions for water quality without extensive mitigation.

Alternative B: Under this alternative a total of 178 miles of roads and trails would be designated for public travel uses, not including Non-BLM routes (county and state highways). Of this total, 135 miles would be designated for motorized uses and 43 miles for non-motorized and mechanized uses. This alternative would generate the least amount of sediment and pollutants from the designated transportation system and require the lowest amount of mitigation. Table 5-3 shows the number of routes and acreages of sub-watersheds within the planning area with low, moderate, high and very high route densities. A map comparing route density of Alternative B to the other alternatives is included in the map appendix ([Map 36](#)). This would leave many areas with much lower route densities and impacts than any of the other alternatives. Most notably, the Texas Creek, and Salida sub-units would have lower routes densities than the other alternatives, resulting in much lower sediment originating from these areas. Under this alternative there would be the smallest possibility that the water quality Standard for Public Land Health would not be met in localized areas. Desired Future Conditions for soils would best be achieved under this alternative.

Alternative C – Proposed Action: Under this alternative a total of 258 miles of roads and trails would be designated for public travel uses, not including Non-BLM routes (county and state highways). Of this total, 181 miles would be designated for motorized uses and 77 miles for non-motorized and mechanized uses. The amount of sediment entering the stream system from designated roads and trails would be moderate and require mitigation (see below). Table 5-3 shows the number of routes and acreages of sub-watersheds within the planning area with low, moderate, high and very high route densities. A map comparing route density of the Proposed Action to the other alternatives is included in the map appendix ([Map 36](#)). Drainages with high route density would be slightly greater than Alternative A under this alternative by shifting more areas out of the very high density category; however, many of the routes under this alternative would be open to motorized uses only for administrative access. By limiting the uses to administrative access and non-motorized use, overall impacts to water resources are much less since the amount and time of use is very limited. Some areas would have lower route densities than under the High Use Alternative, while some areas would have higher route densities than under the Low Use Alternative. In particular, the Texas Creek and Salida sub-units would be similar to the High Use Alternative, resulting in higher impacts. The McCoy Gulch sub-unit would be similar to the Low Use alternative and have much less impact on water quality and hydrologic function than the High Use Alternative. Under this alternative there would be a moderate possibility that the water quality Standard for Public Land Health would not be met in some localized areas. With mitigation, Desired Future Conditions for water quality within the planning area could be met.

Table 5-3: Drainages with Low, Moderate, High and Very High Route Densities

	No Action Alternative	Alternative A	Alternative B	Proposed Action
Number drainages with low route density (route density = 0 mi/sqmi)	40	47	47	47
Number moderate route density drainages (route density = 0.1 - 1 mi/sqmi)	136	137	187	142
Number high route density drainages (route density = 1.1 - 2 mi/sqmi)	258	281	256	286
Number very high route density drainages (route density > 2 mi/sqmi)	286	255	230	245
Drainage acreage with low route density (route density = 0 mi/sqmi)	34311	42680	47275	42680
Drainage acreage with moderate route density (route density = 0.1 - 1 mi/sqmi)	170110	193118	372485	202803
Drainage acreage with high route density (route density = 1.1 - 2 mi/sqmi)	405983	481852	389227	489001
Drainage acreage with very high route density (route density > 2 mi/sqmi)	406921	299674	208338	282841

Mitigation:

1. All new route construction would integrate Best Management Practices and be constructed so that runoff and sediment production are limited and controlled. All new route construction resulting in more than 1 acre of disturbance would require either a Phase I or II Storm Water Permit. Most likely, any routes being constructed would require a Phase II permit that is needed with any surface disturbing activity between 1 and 5 acres. A Phase II permit would require that a storm water plan be developed and implemented that reduces water pollution to the “maximum extent possible” in order to protect water quality and aquatic habitat, and ultimately meeting the requirements of the Clean Water Act.
2. Route maintenance, proper construction, and wet weather closures are the best way to mitigate the effects of routes on water quality and hydrologic function. It is assumed that under all alternatives, routes will be adequately maintained and constructed over time as problems are found. Wet weather closures are designed into the alternatives to mitigate some of the effects that would result from the plan. If a severe problem occurs that cannot be mitigated by other means, construct sediment detention structures and clean them on a regular basis.

3. If during monitoring, a route is discovered that is causing unacceptable impacts, it should be closed or re-routed as soon as possible if it cannot be mitigated any other way.

Cumulative Effects: The Arkansas River travel planning area has a very diverse land ownership pattern that is rapidly changing. In looking at the entire area, there are many factors affecting the water quality and hydrology. Much of the private land in this area is being subdivided and becoming increasingly developed with new routes and home sites, adding to the impacts in the watersheds. Thirty-five and forty acre parcels that were formerly parts of large ranches and used primarily for livestock grazing are now being occupied for home sites with individual water wells, septic systems and routes.

Along with the impacts caused by the development of new routes and home sites, there are impacts associated with grazing and historical mining that continue to influence the water quality in the waters of the Arkansas River travel planning area and downstream users. The Arkansas River 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 Arkansas River TMP will play an important role in determining the overall health of these watersheds.

Finding on the Public Land Health Standard for Water Quality (Standard 5): Under the No Action Alternative the impacts on water quality would continue at current levels and would likely increase overtime due to continued and increased amounts of off-road travel and route proliferation. Since the level of soil impact and subsequent sediment production are directly related to the footprint of the roads on the landscape, the effect to water quality standards is directly related to the amount of land surface covered by roads. Therefore, all the action alternatives would result in improvements over the No Action Alternative. Of the three action alternatives, the land health standards for water quality would be best met under Alternative B because it provides the lowest miles of routes. Alternative A would provide the least benefit to water quality due to the high number of routes, while the benefits from the Proposed Action would lie in between.

FLOODPLAINS, WETLANDS & RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: Floodplain, riparian and wetland areas affected by decisions of this TMP are generally within small first and second order tributaries to the Arkansas River between Nathrop and Canon City. Larger tributaries such as Badger Creek, Grape Creek, Texas Creek, Tallahassee Creek, Road Gulch, and Copper Gulch are also within the plan area, as is much of the Arkansas River itself.

Most route mileage analyzed under this planning effort is across upland areas removed from perennial streams or wetland systems. However, these upland areas are bisected by numerous ephemeral, intermittent, and perennial tributaries. Additionally, the steep natural topography in

many subunits can confine travel to the low point in many valleys and certainly was the case with many of the longstanding larger access routes; e.g., US 50, Road Gulch Road and Copper Gulch Road. Disturbance in non-riparian ephemeral tributaries can also be impacting to the Arkansas River or other downstream tributaries because these channels lack consistent moisture for producing vegetation that is necessary to resist erosion. OHV activity in these channels further reduces the establishment of vegetation and results in added erosion from the many dry channels that occur throughout the planning area. Although a considerable amount of sediment originates from these dry channels that affect the Arkansas River and its tributaries, the analysis of these impacts is not addressed in this section of the EA but is covered instead in the Hydrology, Soils, and Water Quality sections.

The Arkansas River flows through the planning area in a generally east-west direction. Consequently, tributary watersheds are either southern aspect with many dry washes, or northern aspect where drainages tend to be wetter and often yield small perennial streams. The southern aspect watersheds almost universally have sparse arid vegetation with a high blow-out potential from storms that produce large flood flows. Northern aspect watersheds generally have more vegetation to buffer overland flow. As a result, routes located in northern aspect watersheds usually hold up better and are less impacting to resources than routes located in southern aspect watersheds. Other factors, however, also influence the degree to which routes impact the environment, including such variables as local soils, slope, and the proximity of routes to the drainages.

Riparian areas are often separated from each other by considerable distances. Many streams\channels in the planning area have interrupted surface flows with segments of dry channel between reaches of wetlands. Typical riparian communities tend to be riparian/herbaceous/grass-sedge species mixed with narrow leaf cottonwood and coyote willow; though there is high variation in the wetland plant species present (Colorado Natural Heritage Program; June 2006; Survey of Critical Wetlands and Riparian Areas in Fremont County). Many basins do not yield sufficient amounts of spring snow-melt/run-off to support wetlands, but stay wet via seep flow and by the effects of freezing winter temperatures that lower evaporation and transpiration rates. The lower winter evaporation/transpiration rates allow a rise in the water table and the formation of ice packs. These ice packs subsequently melt and can sustain a low intermittent discharge that can support small pockets of riparian or wetlands. Seeps are variable throughout the area and also support many small wetlands. Summer storms further enhance wetland conditions in some of the semi-wet drainages if channel slope and vegetation conditions are such that the precipitation does not just rapidly flow through.

Most streams that are found in the planning area were subject to land use and development pressures that began with homesteading many years ago. Thus, most of the high production valley bottoms were long ago placed into private holdings. BLM, however, manages many important wetland and riparian areas on public lands with wide variations in elevation, precipitation, watershed drainage area, soils, solar aspect, etc., that create a diversity of wetland and riparian communities. In spite of this diversity, it is important to note that the climate of the planning area is quite arid and that more acres of watershed are needed to create wetlands than in higher and wetter regions, such as occurs in the nearby Sangre de Cristo and Collegiate

Mountains. The scarcity of wetlands on the public lands makes them a unique and very valuable resource.

There are numerous, sometimes subtle, impacts from the many routes in the planning area that would not change under any alternative due to private land status or easements through public lands. However on public lands, where possible, direction contained in agency policies ([Appendix 9](#)) provides considerable guidance to the BLM for managing watersheds, floodplains and specific wetlands. Locally, and to the extent that it has controlling authority to do so, the Royal Gorge Field Office adheres to this guidance. However, where BLM lands intersect with larger county or state roads that are not under the BLM's control, riparian areas are often greatly affected. Because they are not under the management jurisdiction of BLM, these larger state and county roads cannot be considered under this TMP for any changes in how they are managed.

An example of a non-BLM road that is adversely affecting the function of stream channels in the planning area is Fremont County Road 28, which crosses BLM for much of its passage through the Copper Gulch and Road Gulch watersheds. FCR 28 is well known for disrupting stream functions and for being costly to maintain due to frequent flooding. This road, as well as many miles of similar non-BLM roads in the planning area, would not be affected by any of the alternatives being considered in this TMP and will continue to disrupt stream functions in the future.

Other examples of non-BLM roads affecting stream functions are not individually outlined in this section of the document. The reader can gain a better understanding of the problems and issues related to road-water interactions by referring to common literature (United States Forest Service; Water/Road Interaction Technology Series; San Dimas Technology and Development Center). Nearer to the planning area, regionalized impacts from major travel routes are described in related travel management documents, including the Four Mile, Gold Belt and San Luis Valley TMPs. These documents discuss the historic origins of routes relative to human settlement, land use, and recreation changes through time. In addition, previous site specific Environmental Assessments also detail the rationale behind local TMP implementation decisions; e.g., Texas Creek EA 1998 CO-O57-98-127.

To the extent possible, strategies to avoid routes into riparian areas were employed in developing all of the alternatives for the Arkansas River TMP. The wetlands and riparian impact analysis relied heavily on the utilization of GIS technology, which provides a relatively easy way of measuring and comparing route impacts at various landscape or geographic scales of reference. The analysis was focused initially at the planning area scale to identify and measure the impacts that would affect wetlands and riparian areas under each of the four alternatives. After the impacts were identified and measured for each alternative, the three action alternatives (A, B, and C) were compared against the No Action Alternative to distinguish the differences between them.

For locating and quantifying wetland/riparian resources BLM uses an interagency riparian-wetland data layer analyzed with ESRI™ ArcMap GIS software (Colorado Division of Wildlife; Riparian Mapping Data; Colorado Division of Wildlife Riparian Homepage).

The riparian-wetland data layer was generated in the early 1990's using 1988 color infra-red aerial photography. This photography reflects red where plant community polygons are water saturated, whereas adjacent dryer upland vegetation does not show up red. The polygons and lines of riparian areas, seeps and wetlands that were derived from this technique of photo-interpretation were delineated at a 1:24,000 scale and converted to a digital medium. Subsequently, standardized plant community classification is applied to the polygons through further interpretation and field work. Additional riparian information comes from staff knowledge of the resource, conducting resource condition assessments and restoration project work. This information is then combined with supplemental plant community information collected by CNHP and BLM. This information compliments the riparian-data layer so that wetland/riparian areas are fairly easily recognized and quantified. Overlays with mapped transportation routes clearly shows where there is interaction between travel ways and wetland resources needing protection or management emphasis.

There are about 531,700 acres in this TMP plan area. Approximately 45% or 240,375 acres are BLM public lands. The acreage and ratio of non-BLM to BLM land is given in each subunit description (See [Appendix 2](#)). Within these acreage totals are housed approximately 25,984 acres of saturated vegetation (see methods/data sources discussed above; i.e., infra-red reflectance). Irrigated agriculture lands can reflect a similar infra-red reflectance and there are large amounts within the Salida, Custer County, and Sangre Foothills subunits. Since the irrigated agriculture lands generally do not represent typical area-wide riparian or wetland systems and are usually supported by ditch water, these acres were omitted from the tabulation. Removal of the irrigated agriculture wetland areas (14,486 acres) leaves 11,498 acres that represents a more realistic amount of wetland or riparian acres on both BLM and non-BLM lands within all of the subunits in the planning area. This is just slightly over 2% of the landscape. The 11,489 acres contained in this total consists of seeps and springs, true wetlands, and many miles of streamside riparian. Most this acreage lies adjacent to approximately 2,759 miles of stream channel in the planning area on both BLM and non-BLM lands; with only 1,266 miles on BLM (extreme dry ephemeral channels are not counted; see also hydrology section). There are comparatively fewer acres of riparian per mile of stream on BLM due to the productive valley being homesteaded.

Within the total planning area acreage of over 531,000 acres, only 2,065 acres are mapped as wetland or riparian on public lands (approximately 0.4% of the landscape). Non-BLM (mostly private land) makes up the balance with approximately 9,433 riparian acres (1.8% of the landscape).

An additional 930 acres are mapped as a *Riparian Evergreen* community, which are common in headwater or first order tributaries. This plant community is basically faster growing evergreen trees adjacent to and within dry channels. The acreage of this community is not counted because an under-story of wetland species is generally lacking. Riparian evergreen communities that grow along drainage bottoms reflect a wetter *Infra-red* reflectance signature than upland trees near by. Although riparian evergreen communities are not tallied, they are productive due to the ground water connection and because they support large trees that produce debris that helps reduce the effects of flooding. There are some additional routes along channels of this type that are not tabulated. Selecting out riparian evergreen and the non-vegetated reaches between wet

areas yields a smaller but more realistic 1,200 miles of streams in the planning area; 710 miles non-BLM and 490 miles on BLM.

Some areas show a canopy of cottonwoods trees, but hydric soil conditions are not always prevalent beneath them. These areas, however, are counted in the analysis because they tend to occur at the tail end of streams that begin to lose surface flow to alluvial deposits.

Impacts to floodplains, riparian and wetland systems from transportation can be caused directly from travel within active channels and disturbances of associated wetland vegetation; or indirectly due to a route-water interaction whereby water interception and accelerated runoff delivery to stream channels alters hydrology. Hydrological change resulting from route-water interaction is a well understood principal that has been described in detail in BLM and other public agency technical literature and academia. In addition to physical modifications, stream and wetland habitat values can be diminished for dependent wildlife when excessive disturbance occurs within valley bottoms (see also Terrestrial Wildlife section).

Identifying routes that impact riparian areas that occur on both BLM and non-BLM lands is necessary to understand the cumulative impacts of regional travel as route designations (permitted travel uses) change between alternatives. The following, Table R1, displays the travel use impacts on riparian areas that is currently occurring for each subunit. The table includes two classes of routes; those **directly within** riparian vegetation (i.e., wetland plants on both sides of a moving traveler on a given route), and those routes **within 100 feet** of riparian vegetation (i.e. traveling along side a stream course).

For interpreting the data in Table R1 the reader should refer to Table 2-1, Miles of Routes by Alternatives and Travel Use Categories, and [Appendix 2, Subunit Issues and Concerns, DFCs, and MOs](#). Route use categories are not presented, but relative comparisons can be extracted from Table 2-1 for the No Action Alternative. Obviously some subunits are managed under Wilderness Study Area designation and are only open for foot and horse travel while others, such as Salida, are bisected by numerous county or state highways that parallel streams.

Table 6-1 Miles of Routes Affecting Riparian Habitat

Sub Unit	Miles of Riparian habitat, non-BLM lands within Subunits	Miles of Routes directly within riparian on non-BLM	Miles of routes within 100 feet of riparian on non-BLM	Miles of Riparian habitat, BLM land within the Subunits	Miles of Routes directly within riparian on BLM	Miles of routes within 100 feet of riparian on BLM
Brown's Canyon	0	0	0.4	17	0.6	0.6
Salida	95	26.1	30.6	6	2.0	2.5
Badger Creek	38	2.4	6.7	58	4.4	8.5
Red Gulch	29	0.8	7.1	22	0.1	3.8
Texas Creek	14	0.2	2.5	40	1.2	7.4
Big Hole	12	0.1	2.6	91	1.9	11.0
Crampton Mountain	45	0.5	5.6	53	1.7	5.2
Grand Canyon Hills	35	0.6	4.6	15	0.9	3.3
Custer County	261	20.8	31.7	2	0.1	0.6
Sangre Foothills	100	9.9	20.4	39	4.0	10.9
West McCoy Gulch	16	0.7	3.2	15	0.2	5.3
McIntyre Hills	12	0.1	1.4	67	2.5	10.3
Grape Creek	13	0.5	2.3	49	8.7	7.8
Road Gulch	40	5.4	10.7	16	1.1	4.4
Totals	710	68.1	129.8	490	29.4	81.6

The table shows stark differences between much wetter subunits, such as Sangre foothills, and more arid subunits like West McCoy Gulch.

Combining from Table 6-1, both the miles directly within, and miles within 100 feet of riparian areas provides a means for gauging the relative amounts of disturbance that are currently resulting from travel routes. These values are presented in Table 6-2, and are expressed as percentages of total miles of riparian for each subunit.

Table 6-2 Combined Riparian Analysis

Subunit	Miles of Riparian habitat within subunits, All lands	Miles of routes within, AND within 100 feet of riparian habitat, All lands	Percent of riparian habitat mileage with a route within, AND within 100 feet of riparian habitat, All lands	Percent of riparian habitat mileage with a route within, AND within 100 feet of riparian habitat, non-BLM land	Percent of riparian habitat mileage with a route within, AND within 100 feet of riparian habitat, BLM land
Brown's Canyon	17	1.6	9.4 %	NA	7.0 %
Salida	101	61.2	60.6 %	59.7 %	75.0 %
Badger Creek	96	22	22.9 %	23.9 %	22.2 %
Red Gulch	51	11.8	23.1 %	27.2 %	17.7 %
Texas Creek	54	11.3	20.9 %	19.3 %	21.5 %
Big Hole	103	15.6	15.1 %	22.5 %	14.2 %
Crampton Mountain	98	13	13.3 %	13.5 %	13.0 %
Grand Canyon Hills	50	9.4	18.8 %	14.9 %	28.0 %
Custer County	263	53.2	20.2 %	20.1 %	3.5 %
Sangre Foothills	139	45.2	15.1 %	30.3 %	38.2 %
West McCoy Gulch	31	9.4	13.3 %	24.4 %	36.7 %
McIntyre Hills	79	14.3	18.8 %	12.5 %	19.1 %
Grape Creek	62	19.3	31.1 %	21.5 %	33.7 %
Road Gulch	56	21.6	38.6 %	40.3 %	34.3 %
Totals	1200	308.9	25.7 % (area wide)	27.8 % (area wide)	22.7 % (area wide)

Not surprisingly, subunits in Table 6-2 that display the highest percentages of routes impacting riparian are usually those that contain the larger streams and drainages within their boundaries. This relationship is due to the fact that the valleys along rivers and streams offer the least paths of resistance, and humans have always utilized them as natural travel ways. During periods of 19th century settlement and development, trails along rivers and streams that were used by nomadic tribes of Native Americans were utilized and developed to meet the needs of European/American settlers. This development continued with advances in technology, and today, many of these historically used travel routes serve as the thoroughfares for major federal, state, and county highways.

A secondary analysis was also done to measure the extent of relative road densities in major drainages in the planning area. This analysis involved identifying the number of named tributaries in the planning area as shown on common USGS 1:24,000 quadrangle maps. This analysis revealed a total of 231 named drainages on quadrangle maps within the TMP boundaries; with 160 of these draining BLM lands. Of the 160, 105 have motorized routes either within the riparian areas or within a distance of 100 feet. Only 55 named drainages have no intersection on BLM between motorized routes and riparian habitats. These maps generally name all drainages except for those located at the top ends of the headwater tributaries. The two analyses clearly demonstrate a lot of watershed disturbance.

Environmental Consequences/Mitigation: Analysis was performed by measuring and comparing the impacts on wetland resources that would result under the different alternatives. One of the most significant findings from the analysis revealed that only moderate differences exist between the three action alternatives for benefiting riparian and wetland resources. In other words, no one alternative offers changes in travel use designations that would substantially reduce riparian and wetland impacts more than any of the other action alternatives. The major reason for this is due to the fact that most of the routes having flexibility as to use designation were not located within or near riparian areas, and therefore, changes made between the alternatives for these routes would have limited effect on riparian and wetland resources. In addition, as previously discussed, many of the roads that have the greatest impact on riparian and wetland conditions are county, state, or federal highways which are not subject to actions resulting from this TMP. On the other hand, the planning area currently includes numerous short segments of routes, duplicate routes, connector routes, and public travel on Administrative Access routes that would be affected differently under each action alternative. Although most of these routes are roads and trails in non-riparian/wetland areas, the reduction of unnecessary roads and removing public uses from Administrative Access roads would benefit the overall health of the watersheds.

Table 6-3 provides a comparison of the miles and acres of riparian impacted by routes for the entire planning area that shows the differences that would occur between the alternatives.

Table 6-3: Comparison of Alternatives - Miles and Acres of Riparian Impacted by Travel Routes for the Entire Arkansas River TMP Area

	No Action	Alternative A	Alternative B	Alternative C
Miles of Routes in Riparian	29.3	30.1	22.3	30.0
Miles of Routes within 100 feet of Riparian	81.9	83.3	75.0	82.5
Total Miles of Routes Directly Impacting Riparian Habitat	111.2	113.4	97.3	112.5
Total Acres of Riparian Habitat Directly Impacted by Routes	412	364	345	359

In comparing the data in Table 6-3 between the No Action Alternative and the three action alternatives, it will be noticed that the total miles of routes that directly impact riparian habitat actually increases under alternatives A and C but that the total acres of impacted habitat decreases. The reason for this apparent discrepancy is due to the differences in the types of routes that make up the respective mileages of each alternative. For example, a road with an average width of 10 feet impacts a surface area of 1.2 acres per mile, whereas a horse trail with an average width of 2 feet only impacts 0.24 acres per mile. Under the action alternatives, some of the routes that are currently roads would either be closed or would be designated as trails with narrower travel widths. This explains why the total acres of impacted riparian habitat would decrease even as the mileages increase.

Because of the correlation that exists between route type and the corresponding travel widths, the total acres included in Table 6-3 is actually a better measurement of the direct impacts on riparian habitat than the mileages. In comparing the acreage data, all of the action alternatives would result in reducing impacts to riparian habitat from current levels; including reductions of 48 acres for Alternative A, 67 acres for Alternative B, and 53 acres for Alternative C. In just comparing the action alternatives, however, only a difference of 19 acres reduction occurs between Alternatives A and B, which produce the highest and lowest acres of impacted riparian habitat, respectively. A substantial proportion of acreage difference between the alternatives can be attributed to the Grape Creek Subunit where the Bear Gulch road is reduced to a trail in Alternative B. In addition, no trail is designated along Grape Creek within that Alternative. Another primary difference in acreage values among alternatives can be attributed to proposed routes in the Texas Creek/Red Gulch area under Alternative A. Those routes are further discussed in the following summaries.

No Action Alternative (Current Use): Under the No Action Alternative, OHV uses would continue to be limited to the existing network of roads and trails in the OHV Limited areas throughout the planning area. Only “User Created” routes would be

closed. No additional motorized and non-motorized trails proposed in the Texas Creek, Red Gulch, and Salida subunits would be approved for construction. The current OHV Open areas at Texas Creek, Grand Canyon Hills, and Sand Gulch would continue to be available for off-road OHV use. Off-road travel would also continue to be allowed for parking, camping, and game retrieval within 300 feet of existing open roads.

Under the No Action Alternative, current management and enforcement problems that result from the removal of closure signs would continue to occur and would likely increase in the future as more people use the public lands for motorized forms of recreation. The current travel management policy of limiting OHVs to existing routes would continue to be confusing for the public; contributing to the proliferation of new routes and conflicts with non-motorized users. Continuing under the current policy of allowing vehicles to be drive up to 300 feet off existing roads for parking, camping, and game retrieval would also contribute to additional route proliferation.

Under the No Action Alternative, approximately 111.2 miles of routes would directly impact 412 acres of riparian habitat through the interaction of traffic on vegetation. Of the four alternatives, the No Action Alternative would do the least towards addressing the needs for protecting and improving riparian and wetland conditions. Achieving public land health standards and Desired Future Conditions throughout the planning area would be most difficult under this alternative.

Alternative A: Under Alternative A, OHV uses would be limited to designated routes in the OHV Limited areas throughout the planning area. The current OHV Open areas in Texas Creek, Grand Canyon Hills, and Sand Gulch would be changed to OHV Limited, and two small OHV Open areas would be designated at Turkey Rock and Reese Gulch for riding trials bikes. All additional motorized trails proposed in the Texas Creek and Red Gulch subunits, and all additional non-motorized trails proposed in the Salida subunit would be conditionally approved for construction. The current allowance of 300 feet for driving off roads for parking, camping, and game retrieval would be changed to 100 feet from designated routes.

Under this alternative, current management and enforcement problems that result from the removal of closure signs would be improved. Implementing a travel management policy that limits OHVs to designated routes that are identified on maps and on the ground with signs would be easier for the public to understand and for BLM to enforce; helping to reduce the proliferation of new routes and potential damage to riparian and wetland resources. Reducing the distance vehicles can be driven off roads for parking and camping to 100 feet from designated routes would also help to control route proliferation.

Over most of the TMP planning area, Alternative A differs only slightly from Alternatives B and C for the miles of motorized routes that would encroach within riparian areas. The most significant difference occurs in the Texas Creek and Red Gulch subunits. Currently, and as would also be the case under Alternatives B and C, Red Gulch is already largely accessible to OHVs but is not connected to the Texas Creek

OHV Area. Alternative A, however, would link Red Gulch to the Texas Creek OHV Area and place additional new trails in the East Gulch, Fernleaf Gulch, and Maverick Gulch drainages. Under Alternative A, additional ATV and dirt bike trails would directly impact valuable riparian habitat in these watersheds. Linking the highly used Texas Creek OHV Area with the Red Gulch subunit to the west would also very likely increase the overall amount of motorized use of the area. Texas Creek is already a popular destination for OHV recreation and expanding trails into adjoining subunits would likely result in substantially increasing the amount of use.

Many of the additional routes proposed in Alternative A within the Texas Creek and Red Gulch subunits were previously analyzed in the Texas Creek EA (CO-057-98-127 EA), which contains a detailed description and analysis of impacts that the routes would have on riparian resources.

Under the Alternative A, approximately 113.4 miles of routes would directly impact 364 acres of riparian habitat through the interaction of traffic on vegetation. Of the three action alternatives, Alternative A would do the least towards addressing the needs for protecting and improving riparian and wetland conditions due to the relatively high number of motorized routes. Alternative A would also increase pressure on riparian and watershed resources in the Texas Creek and Red Gulch subunits where well-known erosion and user compliance issues currently exist.

Alternative B: Under Alternative B, OHV uses would be limited to designated routes in the OHV Limited areas throughout the planning area. The current OHV Open areas in Texas Creek, Grand Canyon Hills, and Sand Gulch would be changed to OHV Limited. The two small OHV Open areas proposed at Turkey Rock and Reese Gulch for riding trials bikes would not be considered. No additional motorized trails proposed in the Texas Creek and Red Gulch subunits, and only a few of the non-motorized trails proposed in the Salida subunit would be conditionally approved for construction. The current allowance of 300 feet for driving off roads for parking, camping, and game retrieval would be changed to 100 feet from designated routes.

Under this alternative, current management and enforcement problems that result from the removal of closure signs would be improved. Implementing a travel management policy that limits OHVs to designated routes that are identified on maps and on the ground with signs would be easier for the public to understand and for BLM to enforce; helping to reduce the proliferation of new routes and potential damage to riparian and wetland resources. Reducing the distance vehicles can be driven off roads for parking and camping to 100 feet from designated routes would also help to control route proliferation.

As discussed in the narrative for Alternative A, only slight differences were found for how the three action alternatives would affect riparian and wetland resources throughout most of the planning area. Substantial differences were seen, however, in the Texas Creek and Red Gulch subunits where Alternative A would expand motorized uses into riparian areas located in East Gulch, Fernleaf Gulch, and Maverick Gulch; whereas,

Alternative B would not. Additionally, the Bear Gulch road is reduced to a trail and no designated trail is established along Grape Creek with in the Grape Creek Subunit.

Under the Alternative B, approximately 97.3 miles of routes would directly impact 345 acres of riparian habitat through the interaction of traffic on vegetation. Of the three action alternatives, Alternative B would do the most towards addressing the needs for protecting and improving riparian and wetland conditions due to the relatively low number of motorized routes. Alternative B would also avoid expanding motorized uses into sensitive riparian areas in the Texas Creek and Red Gulch subunits.

Alternative C (Proposed Action): Under Alternative C, OHV uses would be limited to designated routes in the OHV Limited areas throughout the planning area. The current OHV Open areas in Texas Creek, Grand Canyon Hills, and Sand Gulch would be changed to OHV Limited, and a small OHV Open area would be designated at Turkey Rock for riding trials motorcycles. Only a few additional motorized trails proposed in the Texas Creek subunit, and many additional non-motorized trails proposed in the Salida subunit would be conditionally approved for construction. The current allowance of 300 feet for driving off roads for parking, camping, and game retrieval would be changed to 100 feet from designated routes.

Under this alternative, current management and enforcement problems that result from the removal of closure signs would be improved. Implementing a travel management policy that limits OHVs to designated routes that are identified on maps and on the ground with signs would be easier for the public to understand and for BLM to enforce; helping to reduce the proliferation of new routes and potential damage to riparian and wetland resources. Reducing the distance vehicles can be driven off roads for parking and camping to 100 feet from designated routes would also help to control route proliferation.

As discussed in the narrative for Alternative A, only slight differences were found for how the three action alternatives would affect riparian and wetland resources throughout most of the planning area. Substantial differences were seen, however, in the Texas Creek and Red Gulch subunits where Alternative A would expand motorized uses into riparian areas located in East Gulch, Fernleaf Gulch, and Maverick Gulch; whereas, Alternative B would not expand routes into any of these drainages and Alternative C would provide one additional trail in Maverick Gulch.

Under the Alternative C, approximately 112.5 miles of routes would directly impact 359 acres of riparian habitat through the interaction of traffic on vegetation. Compared to the other action alternatives, Alternative C would do more towards addressing the needs for protecting and improving riparian and wetland conditions than Alternative A but not as much as Alternative B. Although Alternative C would provide for an additional motorized trail in Maverick Gulch, the proposed location of the trail would avoid sensitive riparian areas along this drainage, and would not provide linkage between the Texas Creek and Red Gulch subunits.

Mitigation:Actions Applicable to All Alternatives

1. Whenever possible, and for all future route construction and reconstruction projects, relocate routes that are directly within riparian/wetlands to adjacent terraces. For new trail construction and reconstruction and maintenance of existing trails, utilize best management practices to provide stable travel facilities that will minimize impacts to soils and watersheds. Implement the recommendations outlined in Appendix 6 and Appendix 7 which establish conditions for guiding future management and development of the Texas Creek and Salida trail systems.
2. Make effective use of temporary wet weather and seasonal closures. Temporary road closures during wet periods are one of most effective tools available for protecting resources; second only to proper location, design and maintenance. During some winter-spring periods, slow snowmelt keeps many areas saturated. Many of the problems created in the watershed result from a small number of OHVs using routes during wet periods. In addition, educate public to voluntarily limit use at any time when conditions are wet.
3. Incorporate the designated routes into the BLM road maintenance plan to minimize unnecessary water drainage erosion problems.
4. Utilize the standard travel uses signing program developed by the Natural Resources Working Group and institute an aggressive sign maintenance program. Clear posting of travel ways has been shown to minimize resource impacts and route proliferation.

Cumulative Affects: 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 affects of providing a high number of additional routes to meet growing recreational demands would add to very predictable impacts to the watersheds within the Arkansas River TMP. Increases in the miles of recreational travel routes would create additional acres of semi-permeable and non-permeable surfaces that would result in increased amounts of runoff, erosion, and drainage changes.

Finding on the Public Land Health Standard for Riparian Systems: Under the No Action Alternative (existing situation), and each of the action alternatives, there are routes that would degrade riparian resources that are not improved by any of the actions presented in this EA. The lack of improvement is largely due to the impacts from Non-BLM routes, which are not affected by the decisions in this TMP. Mitigation will help some resources where they are currently affected by travel. Maintaining as much acreage within the watershed as permeable surfaces, compared to the semi-permeable and non-permeable surfaces that occurs along travel routes, would help counter large scale runoff and drainage changes. Compared to the No Action Alternative, the amount of non-permeable surface area would be reduced by any of the action alternatives. Of the three

action alternatives, Alternative A would result in the greatest number of additional routes that would have the greatest impact on the watersheds.

MIGRATORY BIRDS

Affected Environment: The planning area is a land of contrasts, a place where grasslands of the lower elevations abruptly give way to a backbone of rugged mountains and canyons to the north. The Colorado Bird Conservation Plan identifies 13 vegetation habitat types important to birds in Colorado. The habitat classifications and assignment of bird species to the habitats were developed by Colorado Bird Observatory (CBO) staff along with individuals who contributed to early development of the conservation prioritization scheme. Bird species were assigned to specific habitats based on their restriction to, or strong representation within, that habitat type. Of these 13 habitat categories, six are described for the planning area (aspen, grassland, riparian, mixed conifer, mountain shrub, Piñon-juniper). Bird species typically found in these habitats are described for each habitat type ([Map 27](#)).

Aspen

Aspen provides habitat for a variety of wildlife species from large ungulates to small non-game birds and mammals. Because aspen is seral to and is usually mixed with adjacent conifer types, the importance of aspen dominated woodlands to birds and other wildlife far exceeds the aerial extent of the stands themselves. Approximately 134 species of birds are reported to use aspen-dominated habitats. This list includes 34 cavity nesters, 7 canopy nesters, 10 shrub nesters, and 10 ground nesters. Few species are limited to aspen, but some reach their highest breeding densities within this habitat type. Bird communities within aspen stands are often composites of aspen-associated species along with many species found in the surrounding conifer habitats. However, the exact species mix depends on the relative amounts of aspen and conifer in the stand. Perhaps the most important contribution of aspen-dominated woodlands to avian nesting habitat is as a structural substrate for primary cavity excavators and secondary cavity nesters. False tinder rot is a major source of heartwood decay in live aspens; it produces a hard sapwood shell surrounding a soft interior that is ideal for cavity excavation. Habitat preferences of primary cavity excavators and the decay characteristics of aspen combine to produce much higher cavity densities in aspen than in surrounding conifer habitats. Species that are typically found in aspen habitats include broad-tailed hummingbird, house wren, Lincoln's sparrow, white-crowned sparrow, dark-eyed junco, violet-green swallow, purple martin, mountain bluebird, Cooper's hawk, western wood-pewee, warbling vireo, red-naped sapsucker, mountain chickadee, pygmy and white-breasted nuthatches, and western bluebirds.

Grassland

Grasslands provide habitat for many species. The severity of the semi-arid climate produces contrasts in vegetation. Grassland birds thus evolved in a shifting landscape mosaic, with access to patches of vegetation in a variety of successional stages and conditions. Species that are typically found in the grassland habitat in the planning area are ferruginous hawk, prairie falcon, upland sandpiper, burrowing owl, Cassin's sparrow, lark bunting, grasshopper sparrow, McCown's longspur, western meadowlark, great-horned owl, golden eagle, common raven, mourning dove and American kestrel.

Riparian

Species most commonly found in the subalpine riparian shrubland habitats are broad-tailed hummingbird, dusky flycatcher, yellow warbler, MacGillivray's warbler, Wilson's warbler, Lincoln's sparrow, song sparrow, white-crowned sparrow, and fox sparrow. In deciduous foothills riparian systems, yellow warbler is the species most frequently detected, followed by American robin, northern flicker, house wren, warbling vireo, song sparrow, western wood-pewee, and broad-tailed hummingbird. In coniferous systems, Cordilleran flycatcher is the most frequently detected species, followed by broad-tailed hummingbird, ruby-crowned kinglet, American robin, golden-crowned kinglet, Swainson's thrush, mountain chickadee, yellow-rumped warbler, and western tanager.

Mixed Conifer

Mixed conifer habitats include ponderosa pine, white fir, and Douglas fir tree species with a few other less common species intermixed. Birds typical of the ponderosa pine forest type include Merriam's turkey, Williamson's sapsucker, pygmy nuthatch, western bluebird, band-tailed pigeon, Mexican spotted owl, Grace's warbler, flammulated owl, red-breasted nuthatch, violet-green swallow, western tanager, and chipping sparrow. Ponderosa pine forests support a rich avifauna, in part a reflection of the prevalence of gambel oak in many ponderosa stands. Oak adds structure and prey--insect densities are higher in oak than in nearby conifers.

Mountain Shrub

Mountain shrubland habitat provides valuable food and cover for many wildlife species. Many shrub species produce edible fruits, and they provide a large selection of forage types. Often the soil moisture is enough for shrubs to grow densely. Gambel oak acorns are an important mast crop in many areas. Birds such as band-tailed pigeon, Merriam's turkey, Lewis's woodpecker, steller's jay, western scrub-jay, and green-tailed towhee feed on the acorns. Other birds such as the Virginia's warbler utilize mountain shrub habitat for resting, feeding, and nesting.

Piñon Juniper

Piñon-juniper habitat supports the largest nesting bird species list of any upland vegetation type in the West. Lowland riparian habitats will, across an entire year, harbor more species of birds due to their importance to migrants. A single ponderosa pine stand typically supports more species than a single piñon-juniper stand. Aspen stands may hold a higher density of birds. However, the richness of the piñon-juniper vegetation type is important due to its middle elevation. Survey tallies in piñon-juniper are similar in species diversity to the best riparian. Several species are found in the piñon-juniper habitat and include: black-chinned hummingbird, gray flycatcher, Cassin's kingbird, gray vireo, piñon jay, juniper titmouse, black-throated gray warbler, Scott's oriole, ash-throated flycatcher, Bewick's wren, mountain chickadee, white-breasted nuthatch, and chipping sparrow.

Environmental Consequences/Mitigation: Impacts to migratory birds from roads and trails are variable depending on a number of factors. Typically, impacts to birds from roads and trails aren't as great as those from intensive development where large areas of habitat are altered. However, impacts do occur and even passive recreation such as hiking, horseback riding, running, jogging and biking can affect birds and bird habitat in

a variety of ways, both short and long term. More significant impacts are associated with motorized OHV use as impacts to vegetation are greater and disturbances to birds are more likely.

Impacts can be defined as direct and indirect. Direct impacts are those that result from close encounters with birds and cause a flight reaction. The reaction is a function of the species, closeness, type and intensity of the encounter, time of day, time of year, type of habitat, vegetation screening, trail location, surrounding land use, and many other variables. Bird characteristics, including species, group size, age and sex, also determine the response to a disturbance. Disturbance by humans can cause nest abandonment, decline in parental care, increased stress, shortened feeding times, and potentially lower reproductive success. Motorized use may result in collisions with birds resulting in injury or death.

Indirect impacts are defined as impacts to habitat that do not directly impact the bird itself. The construction of a road or trail results in a loss of habitat. Vegetation removed in the process of building a trail is no longer available for use by birds. The uncontrolled proliferation of user created roads and trails adds to the impacts to habitat. The existence of a road or trail can change the characteristic of bird habitat. When a road or trail is created, increased light encourages new growth of vegetation, creating habitat edge which results in a shift in the composition of bird species. Habitat generalists (species that utilize a variety of habitats) increase while interior or obligate species (species that depend on one type of habitat) decline. Predation may also increase and in general biological diversity declines. Indirect impacts also occur as birds avoid habitat along roads to reduce their exposure to negative stimulus associated with human uses. While the habitat may provide for the needs of the species, it is not being utilized because of its nearness to a road or trail.

Another form of indirect impact is the fragmentation of habitat that occurs with increasing roads and trails. Wildlife does better in larger blocks of undisturbed habitat rather than smaller fragmented pieces. Habitat fragmentation is considered to be the greatest threat to biological diversity. Determining when a road or trail causes habitat fragmentation and how it contributes to a reduction in biological diversity is extremely difficult. Nevertheless, protecting large, undisturbed areas of wildlife habitat was considered when decisions were made concerning travel management in the Arkansas River travel planning area.

Preventing fragmentation of habitats also contributes to the maintenance of wildlife movement corridors. Wildlife movement corridors are defined as linear habitat whose primary function is to connect two or more significant habitat areas. Corridor use is influenced by topography, vegetation, species of interest and nearby human activities. A wildlife corridor should serve to provide for several functions such as providing wide-ranging animals an opportunity to travel, migrate and meet mates, allow plants to propagate, provide for genetic interchange, allow for populations to move in response to environmental changes, and to allow for individuals to recolonize habitats. Corridors are needed to maintain connectivity among formally contiguous habitats.

Public lands are an increasingly important source of land for providing the connectivity of habitats that is so important to many wildlife species. In addition, they provide some of the only remaining large blocks of contiguous wildlands (core habitat) in many areas. Within the Arkansas River planning area approximately 66% of the landscape across the entire planning area is considered interior core habitat (Table 1) that is unaffected by roads and trails. More than 73% of the public lands managed by BLM within the planning area are considered interior core habitat. The Arkansas River TMP area is dissected by private lands that were formally working ranches that provided wildlife habitat. In recent years private lands are being sold to developers and becoming subdivisions that include roads, home sites and other support facilities. As homes are built and people move into the wildlands, wildlife are being displaced and forced to move from traditional ranges. The only large habitat areas left are those that occur on public lands.

Table 1: Core Habitat Analysis

	ALTERNATIVE			
	No Action (Current)	A	B	C
Core Areas (acres)	351,651	351,274	368,230	361,141
Core Areas BLM (acres)	175,279	174,252	190,206	183,310
% of Planning Area in Core Areas	66.1	66.1	69.3	67.9
% of BLM Land in Core Areas	72.9	72.4	79.1	76.2
% of Planning Area Impacted by Traffic	33.9	33.9	30.7	32.1
% of BLM Lands Impacted by Traffic	27.1	27.5	20.9	23.8
Mean Size of 10 Largest Core Areas (acres)	33,922	33,847	37,246	35,607
Number of Core Areas > than 20,000 acres	8	8	9	9

Approximately 34% of all lands within the planning area are impacted by routes while less than 27% of public lands are impacted by routes (Table 1). BLM managers must ensure that these areas remain as suitable habitat. In order to do that, critical decisions must be made during travel management planning so that the ability of public lands to continue to provide habitat is not compromised.

Large blocks of core habitat areas in the TMP area are those that occur on public lands such as the McIntyre Hills WSA, Lower Grape Creek WSA, Upper Grape Creek WSA and the Browns Canyon WSA. In addition, topography limits roads and trails along the north and south sides of the Arkansas River canyon (McIntyre Hills and Big Hole subunits) and in areas surrounding the Badger Creek drainage (Badger Creek subunit). In compliance with Public Lands Health Standard 4, BLM managers seek to ensure that these areas remain viable as suitable habitat

Data on surface condition, route width, and relative traffic for the Arkansas River TMP area were analyzed and maps generated that depict relative habitat fragmentation on the landscape-level. Higher route densities and traffic result in less core habitat (more habitat fragmentation) and fewer acres of effective wildlife habitat.

All routes within the TMP area were examined to determine the type of route present and current use levels of that route. Routes were classified on an impact gradient from low to high using four buffer distances based on type of use and relative traffic. The following buffer distances were used:

- 165ft (50 meters) Low impact routes that receive low use, i.e. trails
- 330ft (100 meters) Moderate impact routes; moderate use, trails and unimproved roads
- 820ft (250 meters) Moderate impact routes; motorized use, unimproved routes, high use trails
- 1,335ft (407 meters) High impact routes; major improved routes with high use, high use motorized routes

These parameters defined the expected impacts to wildlife from individual and aggregate routes and were used to map and measure acres of remaining core and undisturbed wildlife habitat. These analyses were done for all four alternatives. Impacts on wildlife habitat (CDOW) were determined for several species or groups of species.

Areas of wildlife habitat inside these buffers were considered to be impacted by the route. These routes are depicted in Maps 22, 23, 24 and 25 for each alternative and show where effective core habitat remains intact. Table 1 shows a comparison between alternatives and core habitats. When analyzing the data on a landscape level (Arkansas River TMP) it becomes obvious there are rather small differences in the four alternatives. This is due, in part, to the large areas of habitat that are currently undisturbed and will remain undisturbed by roads and trails in the McIntyre Hills WSA, the Upper Grape Creek WSA, the Lower Grape Creek WSA and the Browns Canyon WSA the Phantom Canyon ACEC and other extremely rough areas such as Cooper Mountain and the Shelf Road. All alternatives result in several (8-9) core areas that are greater than 20,000 acres and mean core area size of 10 largest core areas greater than 33,800 acres (Table 1).

An additional analysis completed compared the four alternatives, the habitat types and core areas. Table 2 shows the percentages of each habitat type that remain in core habitat (based on the total acres of that habitat type in the planning area). Table 3 shows the percentage of BLM habitat that is impacted by routes. As expected, piñon-juniper habitat is the most affected (31%) because it is the habitat type that is most commonly found on the public lands in this area. Again, however, subtle differences are noted between alternatives when examining this data on a landscape level.

Table 2: Acres of Core Habitat on BLM by Habitat Type and Alternative

Habitat Type	ALTERNATIVE			
	No Action (Current)	A	B	C
Grassland	2,787	2,855	3,127	2,985
Mountain Shrub	10,744	10,782	11,960	11,424
Piñon/Juniper	114,359	115,004	125,278	120,429
Aspen	1,264	1,260	1,312	1,308
Mixed Conifer	44,324	42,571	46,623	45,286
Riparian	528	543	604	575
Total	174,006	173,015	188,904	182,007

Table 3: Acres of Habitat Impacted by Traffic on BLM by Type and Alternative

Habitat Type	ALTERNATIVE			
	No Action (Current)	A	B	C
Grassland	2,521	2,453	2,181	2,323
Mountain Shrub	6,614	6,576	5,398	5,934
Piñon/Juniper	44,706	44,062	33,788	38,637
Aspen	323	327	276	279
Mixed Conifer	9,837	11,591	7,538	8,875
Riparian	864	849	787	816
Total	64,865	65,858	49,968	56,864

Due to the size of the Arkansas River TMP area a large number of wildlife species are involved. To be practical, only a few wildlife species can be addressed in detail (See Wildlife, Terrestrial section). The assumption has been made that protection of core habitats will provide for all the species that occupy those habitats. Key species for each habitat were previously described in the Migratory Bird Affected Environment. Protection of core areas is expected to confer benefits on the greatest number of species and includes species that have the greatest need for contiguous habitats and effective corridors.

Table 3 describes traffic impacted habitat on BLM by alternative. About 200 acres of grassland habitat and 700 acres of mountain shrub habitat will be protected in Alternative C (Proposed Action) over the no action alternative. Piñon-juniper habitat is the most common habitat type in the TMP area. Under Alternative C fewer acres are impacted (38,637 acres) as compared to the no action alternative (44,706 acres). Aspen and riparian habitats affected by the TMP are relatively rare-there are less than 100 acres of difference between the four alternatives. Fewer acres of mixed conifer habitat (8,875 acres) are affected with the proposed action (Alternative C) than the No Action alternative where 9,837 acres are affected.

Mitigation: Applicable to all alternatives

In order to be in compliance with the Migratory Bird Treaty Act, BLM will avoid actions that “take” migratory birds. Generally this requires a seasonal restriction that requires that all vegetation disturbance be avoided from May 15 thru July 15. This is the breeding and brood rearing season for most Colorado migratory birds. Implementation of the Travel Management Plan will need to adhere to this restriction.

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 in the Arkansas River basin 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, the proposed *Over the River* art project on the Arkansas River, and commercial forest products harvesting. The cumulative impacts from these activities to migratory bird habitat from all action alternatives will be long-term and most adverse in the No Action and Alternative A, dispersed and long-term in Alternatives B and C.

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

Affected Environment: This Environmental Assessment (EA) analyzes the effects of implementing the Royal Gorge Field Office (RGFO) Arkansas River Travel Management Plan (TMP) on threatened, endangered, proposed, candidate, and sensitive species. Species addressed in this EA are those that were identified by US Fish and Wildlife via correspondence dated November 23, 2004 ([Appendix 16](#)). While sensitive species are not federally protected, it is BLM policy to manage these species to prevent future listing, thereby affording them the same level of protection as Threatened and Endangered (T&E) species in BLM programs. Only those species that may be affected by the implementation of the TMP are addressed in this section. Federally listed or candidate species not addressed include: Mountain plover, Black-tailed Prairie Dog, Whooping crane, Pallid sturgeon, Least tern, Piping plover, Uncompahgre fritillary butterfly, Penland alpine fen mustard, Greenback cutthroat trout, Boreal toad and Arkansas darter. The species not addressed in this document either do not occur on BLM lands or are outside the Arkansas River TMP boundaries. Those species (Threatened, Endangered, Candidate and BLM Sensitive) that occur in the TMP area and that may be affected by travel management activities are listed below. In addition, discussion of the Colorado Natural Heritage Programs (CNHP) Element Occurrence records is included.

1. Mexican Spotted Owl	Threatened-Critical Habitat
2. Canada Lynx	Threatened
3. Bald Eagle	Threatened
4. Gunnison’s Prairie Dog	BLM Sensitive
5. Peregrine Falcon	BLM Sensitive
6. Goshawk	BLM Sensitive
7. Townsends Big-eared Bat	BLM Sensitive
8. Brandegees Wild Buckwheat	BLM Sensitive
9. Golden Blazing Star	BLM Sensitive
10. Arkansas Canyon Stickleaf	BLM Sensitive

11. Degener Beardtongue
12. Rock-loving Neoparrya

BLM Sensitive
BLM Sensitive

Species Descriptions

Mexican Spotted Owl

The Mexican spotted owl (*Strix occidentalis lucida*) currently occupies a broad geographic area but does not occur uniformly throughout its range. Instead the owl occurs in disjunct localities that correspond to isolated mountain systems and canyons. The range of the MSO in the United States has been divided into six recovery units (RUs) as identified in the Recovery Plan. The planning area is included in the Southern Rocky Mountain-Colorado RU.

Mexican spotted owls (MSO) breed sporadically and do not nest every year. In good years most of the population will nest; whereas, in other years only a small portion of pairs will nest successfully. Reasons for this pattern are unknown. MSO reproductive chronology varies somewhat across its range. In Colorado, courtship apparently begins in March with pairs roosting together during the day and calling to each other at dusk. Eggs are laid in early April. Incubation begins shortly after the first egg is laid, and is performed entirely by the female. The northern spotted owl incubates for approximately 30 days, and it is assumed that the MSO incubates for a similar period. During incubation and the first half of the brooding period, the female leaves the nest only to defecate, regurgitate pellets, or to receive prey from the male, who does all or most of the foraging. The eggs usually hatch in early May with the nestling owls generally fledging four to five weeks after hatching, then dispersing in mid September to early October.

All the MSO habitats found in canyons on public lands in the Pikes Peak area are located in extremely rugged canyon habitats with steep canyon walls, cliffs, potholes and ledges. Stringers of mixed conifer vegetation are found in the canyon bottoms in these areas. The primary constituent elements essential to the conservation of the MSO include those physical and biological features that support nesting, roosting and foraging. In canyon habitats the primary constituent elements include the following attributes: cooler, often more humid conditions than surrounding areas; clumps or stringers of trees and/or canyon walls containing crevices, ledges, or caves; high percent of ground litter and woody debris; riparian or woody vegetation.

The MSO was listed as a threatened species on April 15, 1993. Two primary reasons were cited for listing: historical alteration of its habitat as a result of timber management practices, specifically the use of even-aged silviculture, plus the threat of these practices continuing. The danger of catastrophic wildfire was also cited as a potential threat for additional habitat loss. Riparian areas were also noted as an area of concern.

The general distribution of MSO on public lands in the RGFO occurs northeast of Canon City (east of Fourmile Creek), north of Highway 50 between Canon City and Penrose, and west of Highway 115 from Penrose to Colorado Springs. The northern boundary is Pikes Peak. Suitable habitat is located on the eastern and southern slopes of Pikes Peak, Beaver Creek Wilderness Study Area, Phantom Canyon and associated side canyons. MSOs have not been found west of Canon City.

In March of 2001, the US Fish and Wildlife Service designated Critical Habitat for the MSO. The entire habitat for MSOs that occur on BLM lands in Colorado is within the RGFO; however, there is no critical habitat within the TMP area. While a large area has been designated (approximately 149,000 acres), the Recovery Plan makes it clear that only those areas that contain the primary constituent elements necessary to support MSO's need to be considered as critical habitat.

Lynx

Canada lynx (*Lynx canadensis*) are medium-sized, bobtailed cats, with a black-tipped tail, large feet, tufted ears, and a grayish coat, with muted spots. They have long legs and large feet, an adaptation to walking on snow. Their main prey are snowshoe hares, but they also eat some carrion and capture ground-dwelling birds (like grouse) and small mammals such as squirrels, porcupines, beavers, and mice.

Lynx populations are cyclic with snowshoe hare population cycles; however, snowshoe hare populations are not thought to be cyclic in Colorado. Lynx require large areas of forest habitat. The species is highly mobile and characteristically disperse more than 60 miles. Estimated home range for males in the southern range is 58 square miles, and 28 square miles for females. Home range sizes vary by gender and age, prey abundance, season, and population density. As a result, they can colonize suitable but unoccupied habitats, augment existing resident populations, or disperse to habitats where they cannot survive.

Mating occurs in late winter to early spring. Gestation is approximately nine weeks; females produce one litter per year of one to six young. Young open their eyes after ten to 17 days, and they begin to walk at 24 to 30 days. The young remain with the adult female until the following spring mating season. Young lynx may remain together for weeks or months after separating from the female; traveling and hunting co-operatively. Young disperse in the fall or following spring. Individuals are considered sexually mature after approximately two years of age.

Lynx inhabit dense sub alpine spruce-fir forests with rock outcrops and large boulders. Lynx habitat in the Southern Rockies is sub alpine and upper montane forest zones between 8,000 and 12,000 feet in elevation. Relocated lynx were found in well-developed riparian and valley wetland shrub habitats of the upper montane and sub alpine zones. The core range of Canada lynx is in northern Canada and parts of Alaska below the Arctic Circle. In Colorado, Canada lynx historically occurred above 8,000 feet in elevation in the central mountain areas. The population declined due to habitat fragmentation, poisoning of wolves and grizzly bears, and trapping, among other factors.

Lynx were designated as endangered in Colorado in 1973, the same year that the last known wild lynx was illegally trapped in the Vail area. In 2000, the lynx became a federally listed threatened species. While populations persisted in Colorado and Wyoming, they were not considered to be self-sustaining and were likely to go extinct. Following the initiation of a reintroduction program, 96 lynx were reintroduced into the San Juan and Rio Grande National Forests during the winter and spring of 1998-1999 and 1999-2000. Most of the reintroduced lynx released stayed in the core area: New Mexico state line north to Gunnison, west as far as Taylor Mesa, and east to Monarch Pass. Some lynx have moved into adjacent states. As of 2005, 204 lynx have been reintroduced into Colorado. In the 2005 breeding season, at least 46 kittens comprising 16 litters were born to the reintroduced lynx in Colorado.

Very little lynx habitat is found in the TMP area (Map 28). There are small areas of habitat along the Sangre de Cristo range in the Kerr Gulch area, however, most BLM lands are generally too low in elevation to support suitable habitat.

Bald Eagle

Colorado populations of bald eagles (*Haliaeetus leucocephalus*) typically nest in large cottonwood trees along rivers and reservoirs. Eagle densities reach their peak during the winter months when migrants arrive from the north. The bald eagle is a common winter (November thru March) visitor to the Arkansas River valley. Typically, up to five birds can be found from Leadville to Canon City, and up to five birds can be found from Canon City to Pueblo Reservoir. An active bald eagle nest is located on private land along Fourmile Creek north of Canon City. These birds could be expected to forage on public lands. However, breeding use by eagles is so incidental that preferred or critical areas such as roosting or feeding sites have not been identified. Bald eagle use within the TMP area is limited to winter use along the Arkansas River corridor. Eagles usually arrive in late November and will stay in the valley until late March. Areas of high use have been identified along the river (Map 31).

Gunnison's Prairie Dog

This Gunnison's prairie dog (*Cynomys gunnisoni*) is limited to high mountain valleys and plateaus in the southern Rocky Mountains, and is found at elevations above 6,000 ft. Its distribution centers on the Four Corners region where the states of Utah, Colorado, New Mexico, and Arizona meet. The northernmost population of Gunnison's prairie dog is found in Park County, CO, while the southernmost population resides in southwestern New Mexico. Compared to the habitats of other prairie dog species, the habitat of this species varies greatly with respect to topography and vegetation. In addition, the burrow systems are more similar to those of ground squirrels than they are to other species of prairie dogs. Entrances are usually located on slopes or small hummocks rather than in depressions, which protects the burrows from flooding. Gunnison's prairie dogs are often found in semi-social aggregations; yet, colonies of these mammals are generally smaller than those of other species of prairie dogs and usually consist of fewer than 50 to 100 individuals.

Gunnison's prairie dogs are very rare in the Arkansas River TMP area. Suitable habitat for the species is not common in the mountainous topography of the planning area. The Colorado Division of Wildlife recently collected all known records of this species in the southeast portion of the state and few dog towns were documented. No occupied towns were documented in the TMP area on public land. Gunnison's prairie dogs were probably never common in the planning area due to the lack of suitable habitat.

Peregrine Falcon

Peregrine falcon (*Falco peregrinus*) habitat includes nesting and hunting sites, as well as migration and wintering areas. Typical nesting sites are cliffs more than 200 feet high that overlook water and permit extensive views of the surrounding area. Prey abundance and diversity provided by these situations are major factors in eyrie (nest) selection. Peregrines may travel up to 17 miles from nesting cliffs to hunting areas. Preferred hunting habitats include cropland, meadows, river bottoms, marshes and lakes that provide an abundance of avian prey. Birds are occasionally reported in Colorado during the winter, but most peregrines migrate to Central and South America.

Peregrine falcons in the area are found in the roughest, most rugged, inaccessible areas BLM manages (Map 31). Large canyon complexes with extensive rock are typically used during the breeding season. One peregrine falcon eyrie is located in the TMP area in the Royal Gorge Park west of Canon City. Eyries are also located outside the TMP area near Buena Vista at Chalk Cliffs and Granite, and southwest of Canon City at Bear Gulch.

Recovery goals for nesting peregrines were exceeded several years ago. Colorado documents over 100 nesting pairs of peregrines each year. The peregrine was down listed from a federal threatened species to a state listed species of special concern as recovery progressed. The BLM considers the peregrine falcon a sensitive species.

Goshawk

Northern goshawks (*Accipiter gentiles*) are medium-sized, broad-winged, long-tailed hawks. Adults have red eyes with black heads and face. Their tails are barred with dark bands and both tail and flight feathers are dark blue-gray dorsally and pale ventrally. Immature birds have yellow eyes and brown feathers with a pale belly streaked with black. Medium sized, broad-winged, long-tailed hawk. Their diet consists of small mammals such as ground squirrels, cottontail rabbits, and birds such as flickers and jays. Northern goshawks hunt from tree perches, therefore, an open under story contributes to successful prey capture.

Goshawks typically begin breeding activities in April. Eggs are generally laid around June 15 with the young fledging between July 15 and August 15. The young typically rely on adults for food until the end of September. Nests are typically large stick platform structures built in a fork near the trunk of the tree or on a large branch, and are usually 30 to 40 feet from the ground in the lower two-thirds of the tree crown. Goshawks often build more than one nest, with additional nests in adjacent trees or trees up to one mile from the active nest. The birds may alternate between these nests each year. Goshawks reuse the same territory year after year and sometimes reuse the same nest.

Northern goshawks primarily nest in older coniferous and mixed coniferous/deciduous forests with a high percent (greater than 60 percent) canopy closure. The main forest types occupied in the southwest are ponderosa pine, mixed-species, and spruce-fir. However, habitat utilization varies by region, with 13 percent of nest observations in southern Colorado and New Mexico in ponderosa pine woodlands. Average nest tree size is variable with mean tree diameters ranging from 8 to 20 inches in Colorado. Goshawks appear to prefer denser tree stands on flatter slopes for nesting sites, and require large areas of continuous forest with only small (less than 1 acre) clearings for foraging and nesting. Nests can also be in stands of aspen and are also commonly found in areas near streams. Northern goshawks require home range sizes of approximately 6,000 acres. Home ranges are comprised of nest areas (30 acres), post fledging-family areas (420 acres), and foraging areas (5,400 acres). Nests are usually located in a north facing drainage or canyon. Nest areas are occupied by breeding pairs from early March until late September.

In Colorado, northern goshawks nest in suitable areas throughout the western mountainous part of the state. In 1991, the southwestern U.S. population of northern goshawks was petitioned for listing as threatened. The USFWS determined that insufficient data exists to warrant listing. The southwestern region of the USFS listed northern goshawk as a Sensitive Species in 1992 and

the BLM subsequently listed the species as Sensitive, as well. Northern goshawks require large areas of mature, un-fragmented forests for nesting and foraging. Declines may be caused by logging, and to a lesser extent fire suppression, livestock grazing, drought, and pesticides. Goshawks are limited by prey and habitat availability. Goshawks are uncommon in the TMP area due to a lack of suitable habitats. Highest concentrations of the birds would be expected to occur along the Sangre de Cristo range.

Townsend's Big-eared Bat

Townsend's big-eared bats (*Corynorhinus townsendii*) are medium-sized bats that are slate or gray dorsally with brown at the tips of hairs. The ears are long and coil down and back across their head when hibernating, but are up and turned forward during flight. Their wingspan is 12 to 13 inches and they weigh 0.3 to 0.4 ounces. This bat feeds on caddis flies, small moths, and other insects that they either glean from vegetation or catch mid-air. In winter, Townsend's big-eared bats roost (hibernate) alone in caves or abandoned mines, though larger groups of around 30 individuals can form in Colorado. The species is not known to migrate long distances and individuals use the same roosting locations year after year. Hibernacula must have appropriate temperature and humidity for Townsend's big-eared bats to use and bats will move to another location if necessary.

Females form maternity colonies in caves, mines, and buildings in mid-March; males are generally solitary. Maternity colonies form in spring and summer and break up in August. Townsend's big-eared bats begin mating in fall and continue through winter. The female stores the sperm during hibernation and fertilization occurs in the spring. Gestation ranges from 56 to 100 days with a single young born in June. The species has a life span of up to 16 years. Only 11 maternity roosts have been identified in Colorado. In Colorado, Townsend's big-eared bats occur at elevations up to 9,500 feet. Mines are the only known roosts for Townsend's big-eared bat in Colorado. Roosts are located in abandoned mines in sagebrush, semi-desert scrub, Piñon-juniper, and ponderosa pine woodland, and montane forest. Abandoned buildings and rock crevices on cliffs are also used for day roosts and hibernacula.

Townsend's big-eared bats occur in western North America, and range from southern British Columbia to southern Mexico. In Colorado, Townsend's big-eared bats are found throughout the state except on the eastern plains. Townsend's big-eared bats are a BLM sensitive species and are considered to be declining throughout its range due to loss of suitable roost sites, its sensitivity to human disturbance, and low-reproductive rates. The availability of roost sites with suitable temperatures determines the distribution of the species. Therefore, protection of suitable roost sites is necessary to conserve this species. Townsend's big-eared bats are easily disturbed by human noise or disturbance around mines. Access to mines that are habitat for Townsend's big-eared bats should be limited to protect the species.

Townsend's big-eared bats have been documented in old mine openings near Salida at Cleora and in the Parkdale area. It is likely that they occur in other locations within the planning area; however, surveys have not been completed for the entire TMP area.

Brandegee Wild Buckwheat

The Brandegee wild buckwheat (*Eriogonum brandegei*) is as a BLM sensitive species. It is found in the valley of the upper Arkansas River in Chaffee and Fremont Counties, Colorado. It occurs on barren clay-loam soil in the Morrison formation. The Colorado Natural Areas Program designated a site in Chaffee County as the Droney Gulch State Natural Area. The Droney Gulch site represents the best known occurrence in the world for this species. This species also occurs in the Garden Park area north of Canon City outside the TMP area. Several thousand individual plants are found in several sites along Fourmile Creek. Much of the area has been disturbed by past mining and increases in off-road vehicle use in recent years. The area that contains the Buckwheat plant is designated as the Garden Park Research Natural Area by the state of Colorado and as a BLM Area of Critical Environmental Concern (ACEC). An equally important site within the TMP area is the Castle Gardens site (formally called Cleora), located southeast of Salida. The Castle Gardens site is the only site containing *Eriogonum brandegei* within the TMP area. The site is described as a north-flowing tributary to the Arkansas River that has cut through a fine textured, grey to brown deposit of the Dry Union formation. The landscape in the basin is barren, and some of the steep and sharply eroded slopes and ridges are devoid of vegetation. Most of the basin has about 10% total vegetation cover of *Eriogonum brandegei*, *Oryzopsis hymenoides* (Indian ricegrass), and *Yucca glauca* (Yucca). The surrounding landscape is dominated by Piñon pine, juniper, and mountain mahogany. CNHP has assigned this site as B1: Outstanding Biodiversity Significance and has designated the area as a Conservation Site. The Conservation site contains the barren slopes where the species is found, as well as some surrounding Piñon-juniper woodlands where the species has been documented. .

Golden Blazing Star

Golden blazing star (*Menzelia chrysantha*) is a tall plant with yellow flowers. The habitat consists of barren slopes of limestone, shale or clay at elevations of 5120 -5700 ft. This species is known from less than 20 locations in the Arkansas Valley from Pueblo Reservoir to Canon City and is not found anywhere else in the world. BLM lands support two excellent populations of blazing star in the Fourmile Creek drainage north of Canon City and the other at Blue Heron ponds in the dry uplands. Both populations of this species that occur on public lands provide an important potential haven for the Golden blazing star. A small population has been documented within the Arkansas River TMP area along Highway 9, just north of the junction of Highway 9 and Highway 50. In this area, blazing star grows along the road cuts on both sides of the highway.

Arkansas Canyon Stickleaf

Arkansas Canyon Stickleaf (*Nuttallia densa*) is a Colorado endemic, found in the Arkansas River canyon. It occupies washes, naturally disturbed sites and steep rocky slopes. It occurs on dry open sites, often with Piñon-juniper and mountain mahogany at elevations of 5800-7200 ft. This species has been documented throughout the lower elevations in the TMP area, especially within the Arkansas River canyon and associated side drainages.

Degener Beardtongue

Degener Beardtongue (*Penstemon degeneri*) is endemic to central Colorado in Fremont and Custer counties. Its habitat is Piñon-juniper woodlands and montane grasslands on coarse gravelly or rocky reddish soil with igneous bedrock. It is also found in cracks of large rock slabs. The species is limited to elevations of 6000-9500 ft. CNHP has mapped occurrences along the Arkansas River in the McIntyre Hills area.

Rock-loving Neoparrya

Rock-loving Neoparrya (*Aletes lithophilus*) is found in Colorado in Chaffee, Conejos, Fremont, Huerfano, Rio Grande and Saguache Counties. It is found on igneous outcrops or sedimentary rock derived from extrusive volcanic formations. It is usually found on north-facing cliffs and ledges within Piñon-juniper woodlands from 7000-10,000 ft elevation. CNHP has documented two occurrences in the TMP area: the Midland Hills area south of Salida near the radio tower and northeast of Spiral Drive.

Colorado Natural Heritage Program (CNHP) Element Occurrences

CNHP has Element Occurrence data for the species listed below for the Arkansas River planning area at a level of precision (seconds) that will allow for the analysis of route impacts. Several of these species have been described previously in this section of the EA. Others are not considered BLM sensitive species and will not be described in further detail. Detailed descriptions of plant associations are not included in this document. All element occurrence records have been mapped and impacts to all element occurrences will be evaluated in the Environmental Consequences section of the EA. Definitions of CNHP rankings are located in [Appendix 10](#).

<u>Specie</u>	<u>Common Name</u>	<u>Global/State Rank</u>	<u>BLM Status</u>
<u>Birds</u>			
<i>Falco peregrinus anatum</i>	American Peregrine Falcon	G4T3/S3B	Sensitive
<u>Mammals</u>			
<i>Lynx Canadensis</i>	Canada Lynx	FT SE	Threatened
<i>Plecotus townsendii pallescens</i>	Townsend's Big-eared Bat Subsp	G4 T4 S2	Sensitive
<u>Plants</u>			
<i>Eriogonum brandegeei</i>	Brandegee Wild Buckwheat	G1G2 S1S2	Sensitive
<i>Mentzelia chrysantha</i>	Golden Blazing Star	G1G2 S1S2	Sensitive
<i>Nuttallia chrysantha</i>			
<i>Nuttallia densa</i>	Arkansas Canyon Stickleaf	G2 S2	Sensitive
<i>Aletes lithophilus</i>	Rock-loving Neoparrya	G3 S3	Sensitive
<i>Penstemon degeneri</i>	Degener Beardtongue	G2 S2	Sensitive
<u>Plant Communities:</u>			
POPULUS ANGUSTIFOLIA/ JUNIPERUS SCOPULORUM	Montane Riparian Forest	G2G3 S3	
BETULA OCCIDENTALIS/ MESIC FORB	Foothills Riparian Shrubland	G3 S2	
POPULUS ANUGUSTIFOLIA/ BETULA OCCIDENTALIS	Montane Riparian Forest	G3 S2	
POPULAS ANGUSTIFOLIA/ ALNUS INCANA	Montane Riparian Forest	G1 G3 S3	
CAREX AQUATILIS	Montane Wet Meadows	G5 S4	
SALIX EXIGUA/ MESIC GRAMINOID	Coyote Willow/Mesic Graminoid	G5 S5	
POPULUS ANGUSTIFOLIA/ PSEUDOTSUGA MENZIESII	Montane Riparian Forest	G3 S2	
POPULUS ANGUSTIFILIA/ SALIX EXIGUA	Narrowleaf Cottonwood Riparian Forest	G4 S2	
POPULUS DELTOIDES SSP MONILIFERS- (SALIX AMYGDALOIDES)/ SALIX EXIGUA	Plains Cottonwood Riparian Woodland	G3 G4 S3	
JUNIPERUS SCOPULORUM	Riparian Woodland	GNR S3 S4	

Environmental Consequences/Mitigation: Analysis of impacts from the four alternatives will be described for each species listed under the Affected Environment at the beginning of this section. The reader is directed to read the impact analysis described in the Terrestrial section of the EA. Much of that discussion applies to T&E species, as well. The discussion of habitat fragmentation and maintenance of movement corridors and providing habitat connectivity are important to T&E species (see Terrestrial section of the EA).

Landscape-level Trends

Population growth experienced over the last 20 years, along with the increasing extent of private land subdivision and residential development in Fremont, Chaffee and surrounding counties have dramatically altered the state of remaining wildlife habitat in the Arkansas Travel Management Planning area. The Arkansas River TMP area is dissected by a matrix of public lands and private lands; the latter consisting of lands that were formally working ranches.

Historically, private ranches provided a level of core-interior, low-traffic wildlife habitat. In recent years, many of these ranches have been sold to developers and converted to subdivisions that include roads, home sites and other support facilities. As homes are built and people move into former open space, wildlife are being displaced and forced to move from traditional ranges. As a result, BLM public lands are an increasingly critical source of land for providing core, undisturbed habitat for all species (including T&E and sensitive species), as well as connectivity of habitats that is so important to many wildlife species. Table 1 details the level of importance of public lands in maintaining core wildlife habitat and large blocks of contiguous open space on the landscape in the planning area.

Table 1: Core Habitat Analysis

	ALTERNATIVE			
	No Action (Current)	A	B	C
Core Areas (acres)	351,651	351,274	368,230	361,141
Core Areas BLM (acres)	175,279	174,252	190,206	183,310
% of Planning Area in Core Areas	66.1	66.1	69.3	67.9
% of BLM Land in Core Areas	72.9	72.4	79.1	76.2
% of Planning Area Impacted by Traffic	33.9	33.9	30.7	32.1
% of BLM Lands Impacted by Traffic	27.1	27.5	20.9	23.8
Mean Size of 10 Largest Core Areas (acres)	33,922	33,847	37,246	35,607
Number of Core Areas > than 20,000 acres	8	8	9	9

Currently, within the Arkansas River TMP area approximately 66% of the landscape across the entire planning area is considered interior core habitat, unaffected by roads, trails, and human traffic. Conversely, approximately 34% of all lands within the planning area are impacted by routes and traffic. Approximately 27% of BLM lands are impacted by routes, trails and human traffic leaving more than 73% of the public lands managed by BLM within the planning area as interior core habitat.

Large blocks of core habitat areas in the TMP area are those that occur on public lands, such as the McIntyre Hills WSA, Lower Grape Creek WSA, Upper Grape Creek WSA and the Browns Canyon WSA. In addition, topography limits roads and trails along the north and south sides of the Arkansas River canyon (McIntyre Hills and Big Hole subunits) and in areas surrounding the Badger Creek drainage (Badger Creek subunit). In order to comply with Public Lands Health Standard 4, BLM managers seek to ensure that these areas remain viable as suitable habitat.

T&E and Sensitive Species Impact Analysis

The BLM Royal Gorge Field Office analyzed T&E and sensitive species impacts under four travel management scenarios: current levels of use, low levels of use, moderate levels of use, and high levels of use; as developed by the ID Team and in response to public input. BLM route inventory data, derived from GPS mapping and Digital Orthophotoquad interpretation, were modeled for traffic-impacts using Geographic Information System tools and comparatively assessed in terms of core-undisturbed and traffic-impacted habitat in relation to BLM, Colorado Division of Wildlife, and Colorado Natural Heritage Program wildlife habitat datasets. Analytical products included map overlays and statistical information produced to depict relative habitat fragmentation, traffic-impact areas, and remaining wildlife core areas both within the planning area and among 6th level watersheds.

All routes within the TMP area were initially examined and characterized as to type, width, type of use, and to the current levels of use. These parameters defined a *generalized* current impact assessment of a route to individuals, populations, and habitat for a particular species or group of species.

Similarly, within the GIS, habitat impact results were viewed and assessed across different scales of the landscape, such as between watersheds or across the whole TMP planning area. Routes were ranked from high to low impact based on the aforementioned attributes and buffered by four distances to determine areas of habitat that are being impacted from the effective habitat base. The traffic-buffer classes used in this assessment were:

- 165 ft. (50 meters) Low impact routes that receive low use; i.e., trails
- 330 ft. (100 meters) Moderate impact routes; moderate use, trails and unimproved roads
- 820 ft. (250 meters) Moderate impact routes; motorized use, unimproved routes, high use trails
- 1,335 ft. (407 meters) High impact routes: major improved routes with high use, high use motorized routes

For instance, a foot trail that receives low use was buffered by 165' (50 meters) on both sides of the route. Similarly, County roads that receive high use were buffered by 1,335' (407 meters or ¼ mile). These analyses were done for all four alternatives. These buffers were developed for local use and conditions referencing previous research. Future traffic

and type of use, and thus route wildlife impact, were projected from route designation per travel alternative and traffic-counter data as collected by the Royal Gorge Field Office.

Areas of T&E species habitat inside or outside of these traffic-weighted route buffers were considered to be either impacted by the route network or core-interior wildlife habitat, respectively. These routes are depicted in Maps 22, 23, 24 and 25 for each alternative and show where effective core habitat remains intact. Table 1 shows a comparison between alternatives and core habitats. When analyzing the data on a landscape level (Arkansas River TMP) it becomes obvious that differences between the four alternatives are small. This is due to the scale of observation, the relative state of road density in the planning area, and the relatively minor mileage statistics impacted by BLM travel decisions.

Similarly, at the ecosystem and landscape scale, large areas of habitat that are currently undisturbed, will remain undisturbed by roads and trails in the McIntyre Hills WSA, the Upper Grape Creek WSA, Lower Grape Creek WSA, Browns Canyon WSA and other extremely rough areas, such as Big Hole, Sommerville Table and upper Badger Creek no matter what decision results. All alternatives result in several core areas that are greater than 20,000 acres and mean core area sizes for the ten largest core areas are more than 33,800 acres (Table 1).

The T&E species impact analysis compared the four alternatives, the habitat types and core areas. Table 2 shows the percentages of each habitat type that remain in core habitat (based on the total acres of that habitat type in the planning area). Table 3 shows the percentage of BLM habitat that is impacted by routes. As expected, Piñon-juniper habitat is the most affected (31%) because it is the habitat type that is most commonly found on the public lands in this area. Only subtle differences are noted between alternatives when examining this data on a landscape level.

Table 2: Acres of Core Habitat on BLM by Habitat Type and Alternative

Habitat Type	ALTERNATIVE			
	No Action (Current)	A	B	C
Grassland	2,787	2,855	3,127	2,985
Mountain Shrub	10,744	10,782	11,960	11,424
Piñon/Juniper	114,359	115,004	125,278	120,429
Aspen	1,264	1,260	1,312	1,308
Mixed Conifer	44,324	42,571	46,623	45,286
Riparian	528	543	604	575
Total	174,006	173,015	188,904	182,007

Table 3: Acres of Habitat Impacted by Traffic on BLM by Type and Alternative

Habitat Type	ALTERNATIVE			
	No Action (Current)	A	B	C
Grassland	2,521	2,453	2,181	2,323
Mountain Shrub	6,614	6,576	5,398	5,934
Piñon/Juniper	44,706	44,062	33,788	38,637
Aspen	323	327	276	279
Mixed Conifer	9,837	11,591	7,538	8,875
Riparian	864	849	787	816
Total	64,865	65,858	49,968	56,864

Despite the large size of the Arkansas River TMP area, only a small number of T&E and sensitive species are involved. The assumption has been made that protection of core habitats will provide for all the species that occupy those habitats. Protection of core areas is expected to confer benefits on the greatest number of species and includes species that have the greatest need for contiguous habitats and effective corridors.

Data for individual species is found in Table 4. This table shows the amount of acres of core BLM habitat for each species, the acres of traffic impacted habitat and the percentage of traffic impacted habitat for that species based on the total TMP area. Data for Element Occurrence Records are found in Table 5.

Table 4: Acres and Percent of Core T&E Species Habitat Impacted by Traffic on BLM

T&E Species	ALTERNATIVE			
	No Action (Current)	A	B	C
Lynx	-	-	-	-
Core Areas (acres)	1,863	1,975	2,053	1,975
Traffic Impacted Core Areas (acres)	1,479	1,366	1,288	1,366
Traffic Impacted Core Habitat (%)	0.61	0.57	0.54	.57
Bald Eagle	-	-	-	-
Traffic Impacted Core Areas (acres)	312	312	269	312
Traffic Impacted BLM Habitat (%)	0.13	0.13	0.11	0.13

Table 5: Element Occurrence Records from 2006 CNHP Database (Acres of Traffic Impacted Habitat)

Rare Plant Species	ALTERNATIVE			
	No Action (Current)	A	B	C
Ark canyon stickleaf	48.7	46.6	45.4	46.6
Brandegees w. buckwheat	15.2	6.1	6.1	6.1
Degener beardtongue	2.0	2.0	2.0	2.0
Golden blazing star	4.4	3.7	3.9	3.7
Jeweled blazing star	8.5	5.7	5.7	5.7
Pale blue-eyed grass	0.1	0.0	0.0	0.0
Rock loving neoparry	0.0	0.0	0.0	0.0
Plant Associations*				
Coyote Willow/Bare Ground	18.0	3.4	2.7	3.2
Foothills Riparian Shrubland	2.4	0.8	0.8	0.8
Montane Riparian Forest	40.9	34.2	9.3	33.3
Cottonwood Riparian Forest	19.5	4.4	2.8	3.9
Riparian Woodland	35.1	13.5	0.0	13.5
Mammals				
Townsend's big-eared bat	0.5	0.0	0.0	0.0

* The reader is encouraged to read the Floodplains, Wetlands and Riparian Areas section of this EA for a more complete description of the riparian resources that occur within the planning area. Plant association data provided by CNHP consists of a small subset of CNHP surveyed riparian resources within the larger riparian resource base.

EFFECTS COMMON TO ALL ALTERNATIVES

Some species were included in this analysis because the potential exists for them to be found in the planning area, including Mexican spotted owl, peregrine falcon, and Gunnison's prairie dog. Upon review of the available data, including species distribution maps, it is apparent that there will be no impacts to these species from any decisions made in the TMP.

Suitable Mexican spotted owl (MSO) habitat has not been documented in the TMP planning area and there are no records of spotted owls for the area. The Royal Gorge FO has been actively inventorying and monitoring MSO in an area north and east of Canon City in the large canyon complexes in the Fourmile, Beaver Creek, and Eightmile Creek drainages. These areas contain abundant suitable habitat. Similar habitat is not found within the TMP planning area. Hence, there will be no further discussion of MSO.

Within the Arkansas River TMP area, there is one active peregrine falcon eyrie in the Royal Gorge. The eyrie is located on property owned by Canon City within the Royal Gorge Park, and has been active for many years. Another active eyrie is located outside the planning area at Bear Gulch on USFS land southwest of Canon City. While peregrines from these sites could be expected to forage in the travel planning area, no travel management decisions are being considered that will impact peregrine falcons.

There are no known locations for Gunnison's prairie dogs on public lands within the TMP area. Gunnison's prairie dogs may be found on private lands in the area in suitable habitats but BLM decisions will have no effect on private lands in the area.

T&E Analysis

Figures provided in Tables 4 and 5 show acres of habitat affected by each alternative. As previously stated, despite the large size of the Arkansas River TMP area, only a small number of T&E and sensitive species are involved. Most of the roads and trails in the TMP area are outside of habitat for T&E, sensitive species and CNHP element occurrence records. Therefore, individual discussions of T&E impacts by alternative are unnecessary and redundant. Impacts to individual species, while minimal, are described below.

Bald eagles will not be impacted by increased and uncontrolled use of roads and trails in any alternative. Only one known nest site is located within the vicinity and it is located on private land along Fourmile Creek north of Canon City (outside the TMP area). Eagles using this nest site are unlikely to utilize riparian habitats within the TMP area. Wintering bald eagles are found along the entire length of the Arkansas River from Canon City to Salida. During a typical winter up to 5 birds may be using the river. Most of the use occurs on private lands where the canyon opens up into wider valley bottoms such as the areas around Coaldale, Howard and Swissvale. These areas contain the large cottonwood galleries that provide ideal perch and roost sites for bald eagles. Table 4 shows the results of route analysis and shows that traffic impacted habitat consists of a very small amount of habitat. Because winter habitats along the river corridor are adjacent to Highway 50 it can be shown that all the impacted habitat acres are the result of the proximity to Highway 50. Decisions in the TMP will have no effect on bald eagles.

Lynx habitat throughout the TMP area is minimal and the quality of the habitat is poor. The only area where lynx habitat occurs in the TMP area is in the Sangres Foothills subunit. There are small acreages of BLM land that occur in the Kerr Gulch area but the habitat consists of low elevation, dry mixed conifer forest. Historically, many of these areas were non-lynx habitat consisting of dry ponderosa pine forests. They were converted to mixed conifer after logging of the ponderosa pine and years of active fire suppression. A small amount of lynx habitat is affected by roads and trails in the TMP area. These acres of impacted habitat occur in Kerr Gulch where the primary BLM road accesses BLM and USFS lands thru potential habitat. In all the alternatives the primary access road would remain open to motorized traffic. Therefore, Table 5 shows some acres of impacted habitat. The difference between all alternatives is only 191 acres and the difference between alternatives consists of several short access roads that extend from the primary road. Decisions in the TMP will have no effect on lynx.

Goshawks are rare on BLM lands throughout the TMP area due to a lack of large landscapes of suitable mixed conifer forest. Most BLM lands that contain suitable habitat occur in the Sangres Foothills subunit. Habitat for goshawks has not been mapped in the

TMP area. Therefore, comparisons between alternatives are not possible.

Impacts to Colorado Natural Heritage Program Element Occurrences are depicted in Table 5. Differences in acres of habitat affected for plants, plant associations and mammals are extremely small and insignificant for the four alternatives. Arkansas canyon stickleaf is a BLM sensitive plant. Table 5 would indicate that approximately 45-48 acres of habitat would be affected, depending on which alternative is selected. This plant has been mapped and documented as growing along Highway 50 and Highway 69 in many locations. The impacted acres are a result the plants occurring close to the highways and for locations in and around the Texas Creek OHV area.

Brandege wild buckwheat is found in the TMP area in the Castle Gardens area. Under the Current (No Action) alternative, 15.2 acres of habitat for this species is affected. These acres are the result of unrestricted and uncontrolled motorized use in buckwheat habitat. All other alternatives result in the same number of acres impacted (6.1 acres), because most routes were eliminated in buckwheat habitat. Some habitat is still impacted because primary BLM access roads and county roads would be not closed and one main trail would be maintained through the habitat.

Degener beardtongue, golden blazing star, jeweled blazing star and pale blue-eyed grass are included in Table 5 and show insignificant differences between alternatives. Rock loving neoparryi is not affected in any alternative. There are five plant associations in the planning area that are tracked by CNHP. All are associated with riparian corridors. These corridors are typically where roads and trails have been constructed in the past. Travel management decisions can only affect a certain number of acres of plant associations due to the fact that many of the roads are either county or BLM primary access roads. However, the data displayed in Table 5 shows a significant difference between the No Action Alternative and the three action alternatives. The No Action Alternative would affect a total of 116 acres of the five plant associations; Alternative A would impact 56 acres, Alternative B would impact 15.6 acres and Alternative C would impact 54.7 acres.

Townsend's big-eared bat is the only CNHP tracked mammal that is affected by the TMP with 0.5 acre impacted by the No Action Alternative and no impacts showing for any of the other alternatives.

Mitigation: Perform appropriate levels of T&E surveys and inventory prior to any new trail construction (applies to all alternatives). Avoid sensitive areas by rerouting existing trails where possible.

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 in the Arkansas River basin 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, the proposed *Over the River* art project on the Arkansas River, and commercial forest products harvesting. The cumulative impacts from these activities to T&E habitat from all action alternatives will be long-term and most adverse in the No Action and Alternative A, dispersed and long-term in Alternatives B and C.

Finding on Standard 4 of the Public Land Health Standards for Threatened & Endangered Species: The Standards pertinent to impact assessment of Arkansas River Travel Planning Alternatives on wildlife include those related to riparian systems, plant and animal communities; sensitive, threatened, and endangered species. Standard 4 provides direction for BLM Royal Gorge Field Office to manage T&E and sensitive species and maintain and enhance populations on both a local and landscape level and reads:

Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities. Indicators: All the indicators associated with the plant and animal communities standard apply. There are stable and increasing populations of endemic and protected species in suitable habitat. Suitable habitat is available for recovery of endemic and protected species.

Previous discussions in this document of impacts to T&E and sensitive species show that none of the alternatives identify significant impacts. Impacts that are shown are typically those situations where existing county or BLM roads are located in sensitive habitats. Decisions in the TMP do not make changes to established Non-BLM and major BLM system roads, therefore these impacts will remain. Despite this situation, decisions made in the Arkansas River Travel Management Plan will not affect the public land health standards for threatened and endangered species.

WILDLIFE, AQUATIC (includes a finding on Standard 3):

Affected Environment: Stability characteristics of aquatic wildlife populations are dependent upon the habitat in which they reside. Affects from routes to wetland and stream habitats are broad and partially described within the Floodplain, Wetland and Riparian section, Water Quality/Hydrology section, and Soils sections of this document. In summary, in-stream aquatic habitats in the planning area as related to travel management are primarily impacted by: impairment of riparian function, sediment loading from travel routes, changed water tables and channel shape from altering runoff patterns (often down-cutting), and to a lesser extent from vehicles driving directly in the waterways.

There are many viable populations of aquatic wildlife species that reside in varying aquatic habitats, both seasonal and perennial within the plan boundary. The plan area includes the Arkansas River, several large streams, small streams, intermittent streams, seeps, springs and wetlands. Man-made ponds are also common. These and other minor habitats support many different species and help build the foundation of some ecological food webs.

Important recreational fisheries are also present within this region. There are 82 miles of streams with fisheries in the plan area. A large portion, 35 miles, are along the Arkansas River. Other fisheries are scattered with only short segments on BLM throughout many of the subunits. No threatened or endangered aquatic species are imperiled due to the current transportation network. Vehicular travel and excessive road density, however, does limit the viability of the species that are present in a number of places. Turbidity in the Arkansas is well known and a portion of this is attributable to roads. Leopard Frogs are a species of Special Concern both to the State of Colorado and BLM, and potentially some streams could support Greenback cutthroat trout (a threatened species), but no introductions are currently planned on BLM within the plan area. Route induced sediment combined with other land use impairments impact food chains, pool depths, bank stability, spawning areas, and a host of other variables that limit population viability. High sediment systems in the plan area are generally more prone to increased negative effects of whirling disease and other silt favored pathogens and favor with silt tolerant invertebrates that replace species requiring clearer waters.

In order to meet Public Land Health Standards, the health of aquatic resources needs to be maintained or improved. Improvement needs to partially come by reversing the negative affects in the trend of route proliferation and poor route maintenance in some areas. To the extent possible, direct impacts to streams, riparian area, and tributary channels caused by routes and trails should be reduced through reduction in the number of crossings and miles of routes within or near drainages. Additionally, improved route maintenance and the implementation of Best Management Practices in designing and constructing roads and trails is necessary. Direct and indirect disturbance of wetland vegetation and standing or flowing water should be reduced so that these areas can function properly to provide maximum benefits to aquatic wildlife populations. Many of the Desired Future Condition images for the various subunits discuss improving problem situations.

Numerous route segments were evaluated. Each route segment has unique variables and settings that determine its relative impact to aquatic environments. Slope, soil, surrounding vegetation, distance to wetlands, and channel type are prominent variables that determine direct, indirect, and cumulative impacts to water. As discussed previously in the Floodplain Section, floodplain resource conditions in much of the planning area are degraded by many other factors that impair aquatic habitat and cannot just be attributed to travel related activities. Nevertheless, the pressure for more motorized recreation opportunities and the corresponding trend towards unmanaged growth of route networks on both public and private land are further degrading floodplain conditions that adversely affect aquatic habitats. Statistics describing the percentages of the area that support aquatic habitat and that are currently being impacted by travel routes are presented in the Floodplains, Wetlands, and Riparian Zones section.

Environmental Consequences/Mitigation: Analysis was performed by measuring and comparing the impacts on wetland resources that would result under the different alternatives. One of the most significant findings from the analysis was the discovery that only small differences existed between the three action alternatives for benefiting aquatic wildlife resources. In other words, no one alternative offered changes in travel use designations that would substantially reduce impacts on streams more than any of the

other action alternatives. The inability of the action alternatives to show any differences is largely due to the nature of the existing transportation system, including the presence of well-established, historic and traditional public uses of the roads and trails that would be difficult to change. As previously discussed, many of the roads that have the greatest impact on riparian and wetland conditions are county, state, or federal highways which are not subject actions resulting from this TMP. In addition, most routes having flexibility as to use designation were not located within or near streams, and therefore, changes made between the alternatives for these routes would have little or no effect on aquatic wildlife.

On the other hand, the planning area includes numerous short segments of routes, duplicate routes, connector routes, and public travel on Administrative Access routes that would be affected differently under each action alternative. Although most of these routes are roads and trails in non-aquatic wildlife habitat, the reduction of unnecessary roads and removing public uses from Administrative Access roads would benefit the overall conditions for aquatic wildlife.

No Action Alternative (Current Use): Under the No Action Alternative, OHV uses would continue to be limited to the existing network of roads and trails in the OHV Limited areas throughout the planning area. Only “User Created” routes would be closed. No additional motorized and non-motorized trails proposed in the Texas Creek, Red Gulch, and Salida subunits would be approved for construction. The current OHV Open areas at Texas Creek, Grand Canyon Hills, and Sand Gulch would continue to be available for off-road OHV use. Off-road travel would also continue to be allowed for parking, camping, and game retrieval within 300 feet of existing open roads.

Under this alternative, current management and enforcement problems that result from the removal of closure signs would continue to occur and would likely increase in the future as more people use the public lands for motorized forms of recreation. The current travel management policy of limiting OHVs to existing routes would continue to be confusing for the public; contributing to the proliferation of new routes and conflicts with non-motorized users. Continuing under the current policy of allowing vehicles to be drive up to 300 feet off existing roads for parking, camping, and game retrieval would also contribute to additional route proliferation.

Under the No Action Alternative, approximately 203 miles of roads and 28 miles of trails would be available to the public for motorized uses, not including 112 miles of non-BLM roads that also access the public lands in the planning area. Of the four alternatives, the No Action Alternative would do the least towards addressing the needs for protecting aquatic wildlife habitat. Achieving public land health standards and Desired Future Conditions throughout the planning area would be most difficult under this alternative.

Alternative A: Under Alternative A, OHV uses would be limited to designated routes in the OHV Limited areas throughout the planning area. The current OHV Open areas in Texas Creek, Grand Canyon Hills, and Sand Gulch would be changed to OHV Limited, and two small OHV Open areas would be designated at Turkey Rock and Reese Gulch

for riding trials bikes. All additional motorized trails proposed in the Texas Creek and Red Gulch subunits, and all additional non-motorized trails proposed in the Salida subunit would be conditionally approved for construction. The current allowance of 300 feet for driving off roads for parking, camping, and game retrieval would be changed to 100 feet from designated routes.

Under this alternative, current management and enforcement problems that result from the removal of closure signs would be improved. Implementing a travel management policy that limits OHVs to designated routes that are identified on maps and on the ground with signs would be easier for the public to understand and for BLM to enforce; helping to reduce the proliferation of new routes and potential to aquatic wildlife resources. Reducing the distance vehicles can be driven off roads for parking and camping to 100 feet from designated routes would also help to control route proliferation.

Over most of the TMP planning area, Alternative A differs only slightly from Alternatives B and C for the miles of motorized routes that would encroach within riparian areas. The most significant difference occurs in the Texas Creek and Red Gulch subunits. Currently, and as would also be the case under Alternatives B and C, Red Gulch is already largely accessible to OHVs but is not connected to the Texas Creek OHV Area. Alternative A, however, would link Red Gulch to the Texas Creek OHV Area and place additional new trails the East Gulch, Fernleaf Gulch, and Maverick Gulch drainages. Under Alternative A, additional ATV and dirt bike trails would directly impact valuable riparian habitat in these watersheds. Linking the highly used Texas Creek OHV Area with the Red Gulch subunit to the west would also very likely increase the overall amount of motorized use of the area. Texas Creek is already a popular destination for OHV recreation and expanding trails into adjoining subunits would likely result in substantially increasing the amount of use.

Many of the additional routes proposed in Alternative A within the Texas Creek and Red Gulch subunits were previously analyzed in the Texas Creek EA (CO-057-98-127 EA), which contains a detailed description and analysis of impacts that the routes would have on watershed and aquatic wildlife resources.

Under the Alternative A, approximately 165 miles of roads and 55 miles of trails would be available to the public for motorized uses, not including 108 miles of non-BLM roads that also access the public lands in the planning area. Of the three action alternatives, Alternative A would do the least towards addressing the needs for protecting and improving riparian and wetland conditions due to the relatively high number of motorized routes. Alternative A would also increase pressure on watershed resources in the Texas Creek and Red Gulch subunits where well-known erosion and user compliance issues currently exist.

Alternative B: Under Alternative B, OHV uses would be limited to designated routes in the OHV Limited areas throughout the planning area. The current OHV Open areas in Texas Creek, Grand Canyon Hills, and Sand Gulch would be changed to OHV Limited. The two small OHV Open areas proposed at Turkey Rock and Reese Gulch for riding

trials bikes would not be considered. No additional motorized trails proposed in the Texas Creek and Red Gulch subunits, and only a few of the non-motorized trails proposed in the Salida subunit would be conditionally approved for construction. The current allowance of 300 feet for driving off roads for parking, camping, and game retrieval would be changed to 100 feet from designated routes.

Under this alternative, current management and enforcement problems that result from the removal of closure signs would be improved. Implementing a travel management policy that limits OHVs to designated routes that are identified on maps and on the ground with signs would be easier for the public to understand and for BLM to enforce; helping to reduce the proliferation of new routes and potential impacts on aquatic wildlife resources. Reducing the distance vehicles can be driven off roads for parking and camping to 100 feet from designated routes would also help to control route proliferation.

As discussed in the narrative for Alternative A, only slight differences were found for how the three action alternatives would affect riparian and wetland resources throughout most of the planning area. Substantial differences were seen, however, in the Texas Creek and Red Gulch subunits where Alternative A would expand motorized uses into riparian areas located in East Gulch, Fernleaf Gulch, and Maverick Gulch; whereas, Alternative B would not.

Under the Alternative B, approximately 113 miles of roads and 22 miles of trails would be available to the public for motorized uses, not including 108 miles of non-BLM roads that also access the public lands in the planning area. Of the three action alternatives, Alternative B would do the most towards addressing the needs for protecting and improving conditions for aquatic wildlife due to the relatively low number of motorized routes. Alternative B would also avoid expanding motorized uses into sensitive riparian areas in the Texas Creek and Red Gulch subunits.

Alternative C (Proposed Action): Under Alternative C, OHV uses would be limited to designated routes in the OHV Limited areas throughout the planning area. The current OHV Open areas in Texas Creek, Grand Canyon Hills, and Sand Gulch would be changed to OHV Limited, and a small OHV Open area would be designated at Turkey Rock for riding trials bikes. Only a few additional motorized trails proposed in the Texas Creek subunit, and many additional non-motorized trails proposed in the Salida subunit would be conditionally approved for construction. The current allowance of 300 feet for driving off roads for parking, camping, and game retrieval would be changed to 100 feet from designated routes.

Under this alternative, current management and enforcement problems that result from the removal of closure signs would be improved. Implementing a travel management policy that limits OHVs to designated routes that are identified on maps and on the ground with signs would be easier for the public to understand and for BLM to enforce; helping to reduce the proliferation of new routes and potential damage to riparian and wetland resources. Reducing the distance vehicles can be driven off roads for parking

and camping to 100 feet from designated routes would also help to control route proliferation.

As discussed in the narrative for Alternative A, only slight differences were found for how the three action alternatives would affect riparian and wetland resources throughout most of the planning area. Substantial differences were seen, however, in the Texas Creek and Red Gulch subunits where Alternative A would expand motorized uses into riparian areas located in East Gulch, Fernleaf Gulch, and Maverick Gulch; whereas, Alternative B would not expand routes into any of these drainages and Alternative C would provide one additional trail in Maverick Gulch.

Under the Alternative C, approximately 153 miles of roads and 28 miles of trails would be available to the public for motorized uses, not including 108 miles of non-BLM roads that also access the public lands in the planning area. Compared to the other action alternatives, Alternative C would do more towards addressing the needs for protecting and improving aquatic wildlife habitat conditions than Alternative A but not as much as Alternative B. Although Alternative C would provide for an additional motorized trail in Maverick Gulch, the proposed location of the trail would avoid sensitive riparian areas along this drainage, and would not provide linkage between the Texas Creek and Red Gulch subunits.

Mitigation:

Actions Applicable to All Alternatives

1. Whenever possible, and for all future route construction and reconstruction projects, relocate routes that are directly within riparian/wetlands to adjacent terraces. For new trail construction and reconstruction and maintenance of existing trails, utilize best management practices to provide stable travel facilities that will minimize impacts to soils and watersheds. Implement the recommendations outlined in [Appendix 6](#) and [Appendix 7](#) which establish conditions for guiding future management and development of the Texas Creek and Salida trail systems.
2. Make effective use of temporary wet weather and seasonal closures. Temporary road closures during wet periods are one of most effective tools available for protecting resources; second only to proper location, design and maintenance. During some winter-spring periods, slow snowmelt keeps many areas saturated. Many of the problems created in the watershed result from a small number of OHVs using routes during wet periods. In addition, educate public to voluntarily limit use at any time when conditions are wet.
3. Incorporate the designated routes into the BLM road maintenance plan to minimize unnecessary water drainage erosion problems.
4. Utilize the standard travel uses signing program developed by the Natural Resources Working Group and institute an aggressive sign maintenance program. Clear posting of travel ways has been shown to minimize resource impacts and route proliferation.

Cumulative Affects:

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 affects of providing a high number of additional routes to meet growing recreational demands would add to very predictable impacts to the watersheds within the Arkansas River TMP. Increases in the miles of recreational travel routes would create additional acres of semi-permeable and non-permeable surfaces that would result in increased amounts of runoff, erosion, and drainage changes.

Finding on the Public Land Health Standard for Riparian Systems: Under the No Action Alternative (existing situation), and each of the action alternatives, there are routes that would degrade aquatic wildlife resources that are not improved by any of the actions presented in this EA. The lack of improvement is largely due to the impacts from Non-BLM routes, which are not affected by the decisions in this TMP. Mitigation will help some resources where they are currently affected by travel. Maintaining as much acreage within the watershed as permeable surfaces, compared to the semi-permeable and non-permeable surfaces that occurs along travel routes, would help counter large scale runoff and drainage changes. Compared to the No Action Alternative, the amount of non-permeable surface area would be reduced by any of the action alternatives. Of the three action alternatives, Alternative A would result in the greatest number of additional routes that would have the greatest impact on aquatic wildlife habitat.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3):

Affected Environment: Introduction: The planning area consists of a variety of habitat types. The habitat type descriptions are taken from the Partners in Flight, Colorado Bird Conservation Plan and are for the Southern Rocky Mountain Physiographic Region. Information for some species, particularly ungulates, is from the Colorado Division of Wildlife. The Natural Diversity Information System (NDIS) was also used in describing the existing environment. The habitat classification used for this effort is described in the Colorado Bird Conservation Plan. It identifies 13 vegetation-based categories. Six categories ([Map 27](#)) will be described for the TMP area (aspen, grassland, riparian, mixed conifer, mountain shrubland, Piñon-juniper).

The planning area covers an area of approximately 531,869 acres. Of this, approximately 45% (240,375 acres) are public lands administered by BLM. The topography is rugged and ranges in elevation from 5000 ft to 10,500 ft. Annual precipitation varies from 10-20 inches, much of it occurring as snowfall during the winter months. Local precipitation is heavily influenced by elevation. Elevation and exposure, and their effects on soil moisture, also strongly influence plant communities. Understory vegetation is sparse in most forest types except for aspen. Forests in the planning area may be naturally "patchy" and fragmented than most other forest types in Colorado due to the weather, topography and the effects of other forces such as fire, insects, and disease. The resulting landscape pattern is a complex mosaic of open meadows and forest stands of varying age and species composition. The primary large-scale disturbance agents are fire and insect outbreaks. Habitats are also fragmented due to the large numbers of people that live in the area that results in subdivisions, roads, towns and other infrastructure.

HABITAT DESCRIPTION

Habitat types found in the planning area are shown in Table 1. Two sources of data were used to generate figures for habitat types in the planning area. CDOW/BLM Landsat Vegetation Classification was used for upland vegetation. This data is derived from 30 meter pixel resolution taken from satellite imagery. This classification is excellent for upland vegetation types that cover large areas but less accurate for riparian vegetation classification due to the small areas of riparian vegetation that occur in the planning area. The riparian vegetation was classified using National Aerial Photography Program (NAPP) color-infrared aerial photography and riparian polygons were mapped at 1:24,000 scale. See the Riparian section of the EA for additional details. There will be no discussion of urban, agricultural, rock or alpine types since they represent such a small amount of the total habitat in the TMP area.

Table 1 - Estimated Acres of Habitat Types in the planning area.

Type	Acres (Ark_River TMP)	% of Total area	Acres (BLM)	% of BLM*
Urban	1,035	0.5	0	0
Agricultural	19,391	3	195	0
Grassland	39,335	7	5,308	13
Mountain Shrub	103,393	18	17,358	17
Pinion-Juniper	270,784	49	159,066	59
Aspen	4,518	1	1,587	35
Mixed Conifer	107,324	19	54,161	50
Rock	1,200	0.5	43	3
Alpine	3,670	1	1,408	38
Riparian	5,572	1	1,392	25

* = % of habitat type that occurs on BLM.

Grassland

Shortgrass within the planning area is dominated by the low-growing warm-season grass blue grama. Western wheatgrass is also present, along with taller vegetation, including widespread prickly-pear cactus and cholla in the south. Mixed grass (needle-and-thread, side-oats grama) communities occur locally as does mountain grasslands dominated by Arizona fescue and mountain muhly. Grasslands make up approximately 39,335 acres in the planning area with about 5,308 acres (13%) administered by BLM. Grasslands are typically intermixed within other habitat types such as Piñon-juniper and ponderosa pine forests. Large expanses of open grassland habitat are rare in the planning area.

Mountain Shrub

Mountain shrubland is typically found in the transition zone between semi-arid Piñon-juniper woodlands and the forest above. Mountain shrubland in the planning area consists primarily of gambel oak and other associated shrubs, including serviceberry, mountain mahogany, chokecherry, and snowberry. Gambel oak is a large shrub or small tree and is probably the best known of the mountain shrubs. The mountain shrubland habitat is widely distributed throughout the Arkansas River TMP area. It occupies about 103,393 acres of land in the planning area, of

which 17,358 acres (17 %) occur on lands managed by BLM. Gambel oak has been described as a climax indicator in a number of habitat types. It reproduces by suckering, and very large areas can be populated by clones. Gambel oak is extremely fire tolerant, vigorously re-sprouting from stem bases or from underground tubers and rhizomes following fire. It can recover to original heights from a fire in 30 to 40 years. A healthy stand of gambel oak contains shrubs of varying heights and has robust native bunchgrasses and forbs growing between them and relatively little bare ground. Mountain mahogany is the most common shrub species associated with gambel oak in the planning area. It grows with and adjacent to oak, but on drier sites. Chokecherry is a large shrub common to mountain shrublands, but it rarely dominates large areas. Snowberry is a lower stature species that often grow with gambel oak. Other shrubs occurring in mountain shrubland communities (e.g., Squaw currant, curl-leaf mountain mahogany, and mountain spray) do not become widespread dominants.

Piñon-Juniper

Piñon-juniper habitat extends over large areas in the planning area. The estimate of total area covered in this habitat type is 270,784 acres in the planning area, of which 159,066 acres (59%) is administered by BLM. The piñon-juniper habitat type is an evergreen woodland situated above desert or grassland vegetation and below mountain shrub. Elevations range from 4,500-7,500 ft. Colorado piñon pine is the predominate piñon species in the area and Rocky Mountain juniper is also dominate. Proportions of juniper and piñon within this habitat type vary greatly, and pure stands of either tree may occur. Typically, as elevation increases piñon dominance increases, juniper density decreases, total tree density increases, and trees become larger. piñon pines drop out completely at the lowest elevations. Depending on site variables, Piñon-juniper may range from an openly spaced savanna to a closed forest. Piñon-juniper understories vary from completely open to quite dense, with the densest understories occurring in open canopy woodland/oak communities. Soils underlying piñon-juniper often are shallow, rocky and low in fertility. Piñon-juniper habitats in the planning area are generally mixed with shrub species such as gambel oak and mountain mahogany, and provide browse for mule deer, elk and bighorn sheep.

Aspen

Aspen is not abundant; only occurring at higher elevations in the planning area. There are about 4,518 acres of aspen-dominated woodlands in the planning area, of which approximately 1,587 acres (35 %) is administered by BLM. Aspen grows under a wide variety of environmental conditions and upland sites. Required site conditions include long growing seasons, deep snow, and annual precipitation exceeding 16-20 in. In the Rockies, the best stand development occurs on well-drained, sandy to silt-loam soils and on southerly to easterly exposures. Aspen-dominated woodlands are highly valued for summer forage for livestock grazing, watershed protective cover, timber harvest, firewood, and scenic beauty. Aspen occurs primarily as an early seral species, eventually being replaced by shade-tolerant late-seral conifers. In Colorado, it is a major seral constituent of Engelmann spruce-subalpine fir, Douglas-fir, white fir, blue spruce, and ponderosa pine forests. At lower elevations typical of the Arkansas River valley, it is often found as stringers along riparian corridors, or in small mesic islands surrounded by drier pine uplands. Following severe disturbance, such as stand-replacement fires or clear cutting, aspen usually dominates sites for many decades. The value of aspen habitats to wildlife is directly related to the structural diversity of the canopy and undergrowth. Stands with a

predominantly aspen overstory allow sufficient light to reach the forest floor to support multi-layered herb and shrub understories, and are often more lush than adjacent conifer stands. As aspen dominance gives way to conifer dominance, less light reaches the forest floor, and understory diversity and abundance declines. In the planning area, the most common understory shrubs are snowberry, western serviceberry, chokecherry, and rose. The most common forbs include geranium, valerian, yarrow, and dandelion.

Mixed Conifer

This forest type is found at elevations of 5,600-10,000 ft, where it is transitional between ponderosa pine and spruce-fir forests. At lower elevations, ponderosa pines are common, with Douglas-fir on north-facing slopes and in drainages. Mixed conifer gives way to spruce-fir at higher elevations. Aspen stands are an important component, and so pervasive as to be considered an integral part of the mixed conifer forest. Other tree species present include blue spruce, white fir, lodgepole pine, limber pine, and bristlecone pine. Approximately 54,161 acres of mixed conifer is administered by BLM in the planning, out of a total of 107,324 acres overall. The stand and landscape-level structure of mixed conifer forests is shaped by fire, blowdown, and insect infestations (western spruce budworm, Douglas-fir bark beetle, and Douglas-fir tussock moth).

Riparian

This habitat type consists of subalpine riparian shrubland and foothills riparian forests. Within the planning area there are approximately 5,572 acres of riparian habitat with 1,392 acres (25 %) administered by BLM. Subalpine riparian shrublands are rare in the planning area due to the higher elevations in which they are found. These ecosystems may be extensive in broad, glacial valleys, along stream systems and other wetlands from 8,000-12,000 ft elevation. They have relatively low plant diversity; comprised mostly of willows, shrubby cinquefoil, and bog birch. The low plant diversity along with the short growing season usually results in low avian species diversity as well. However, the dense willow thickets provide many protected nest sites and an abundance of insects. This results in a high density of nesting birds in a given area. The Foothills riparian forests are distributed along stream systems in the foothills, lower mountains and mountain parks from 5,500-10,000 ft elevation. In some areas the riparian forest is dominated by a deciduous component, especially narrowleaf cottonwood, a variety of willow species, box elder, mountain alder and river birch. In other areas, Colorado blue spruce and other coniferous trees dominate, and conifers often form a mixture with cottonwoods. The understory of these systems is typically rich, with a wide variety of shrubs and herbaceous plants. The Colorado Breeding Bird Atlas reported that foothills riparian forests dominated by deciduous trees comprised nearly 85% of all foothills riparian forests, while conifer-dominated systems comprised just over 15%. Riparian areas represent a transition zone between the aquatic ecosystem and the drier uplands. The riparian zones are well defined, unique, and highly productive areas, and are sensitive to disturbance.

SPECIES DESCRIPTIONS

Bighorn Sheep

Mountain sheep, also called bighorn sheep or simply bighorns, are blocky, heavily built mammals whose color varies seasonally and geographically from grayish brown to medium

brown. Mountain sheep conjure images of pristine, wilderness conditions because of their association with the high mountains and steep canyons. In part because of impacts imposed by humans, they typically occur only on steep, precipitous terrain. In Colorado, mountain sheep prefer high-visibility habitat dominated by grass, low shrubs, and rock cover, areas near open escape terrain, and topographic relief. Vegetation succession has led to declines in sheep in recent years on some ranges.

The bulk of the diet is grasses and grass-like plants, browse, and some forbs. At lower elevations browse appears to be the staple in winter. Mountain sheep are gregarious, social mammals. They have a high degree of site fidelity, which ties them closely to areas that are familiar and leads to slow rates of expansion. Such fidelity renders them vulnerable to increased stress levels when a disturbance to their range occurs. During spring and summer, mountain sheep segregate by sex and age. Rams form small bachelor herds, while females, lambs, and younger rams form larger units.

Seasonally, mountain sheep may make relatively short migrations from summer to winter ranges. Many populations make this migration through a series of deliberate, short-distance moves; using favored habitat along the way. Barriers to movement include large expanses of timber or dense brush (which restrict the view), as well as large rivers and wide valley floors.

Bighorns are common in the planning area primarily along the Arkansas River corridor ([Map 19](#)). The bighorn sheep population has been estimated to be approximately 500-550 individuals. These low elevation sheep have become an important part of bighorn sheep management in Colorado and have established themselves into three herds; the Arkansas Canyon, Grape Creek, and Browns Canyon herds. Although some interchange between the herds has occurred, it is not common.

The Browns Canyon herd (approximately 125 sheep) was established after reintroduction efforts in the early 1980s. The main herd, approximately 50-60 head, is located primarily in the Turret, Long Gulch, Railroad Gulch, and Stafford Gulch areas on BLM and USFS lands east of the Arkansas River. A smaller herd of about 30 sheep inhabits the lower end of Browns Canyon throughout the year.

The Arkansas Canyon herd, which numbers approximately 120 sheep, is located north of the river and uses the south-facing slopes between Big Hole and Parkdale year-round. Ewes generally move up elevation to rougher terrain to lamb in the spring. Because the area lacks natural springs, this herd uses the Arkansas River as a water source, often in mid-morning to mid-afternoon.

The Grape Creek herd consists of approximately 115 sheep and is located south of the Arkansas River. Also established in the 1980s, this herd primarily uses two areas: lower Grape Creek between Temple Canyon and Bear Gulch and along Highway 50 south of the river just west of Texas Creek to Baker Gulch.

The north herd occurs most frequently between Pinnacle Rock and the railroad siding at Parkdale. However, a smaller group of sheep has also been detected along the east side of the river in the vicinity of Wellsville. A transplant of sheep occurred several years ago in Fernleaf Gulch and sheep use has expanded in the area. Sheep are habitually observed in several areas between Parkdale and Echo Canyon. These include; areas north of Pinnacle Rock to Three-

Rocks Rapid and from north of Five Points picnic area to $\frac{3}{4}$ km east. The north side of the river between the Parkdale Siding and Pinnacle Rock encompasses winter and lambing range for the north herd of sheep, as well as access to the river for drinking and possibly movement or migration routes. Areas commonly inhabited on the south side of the canyon include an area east of the curve near Pinnacle Rock and southeast of the Five-Points Picnic area.

Elk

The elk is a large cervid whose general body color is pale tan or brown. Elk are among the better studied big game mammals of North America. Once the animals ranged well eastward on the Great Plains, but today they are associated with semi-open forests or forest edges adjacent to parks, meadows, and alpine tundra.

Generalist feeders, elk are both grazers and browsers. In the northern and central Rocky Mountains, grasses and shrubs compose most of the winter diet, with the former becoming of primary importance in the spring months. Forbs become increasingly important in late spring and summer, and grasses again dominate in the fall. Browse constitutes over 56 percent of the winter diet. Elk breed in the fall with the peak of the rut in Colorado occurring in late September.

Most calves are born in late May or early June. Calving grounds are carefully selected by the cows and are generally in locations where cover, forage, and water are in juxtaposition. During spring and summer adult bulls usually segregate from cows, calves, and younger bulls, and form small bands of their own. Elk tend to inhabit higher elevations during spring and summer and migrate to lower elevations for winter range. During winter, elk form large mixed herds on favored winter range.

Mortality is due mostly to predation on calves, hunting, and winter starvation. Elk were almost extirpated from Colorado in the early 1900s when market hunting caused populations to decline to 500 to 1,000 individuals. A very successful program of restoration (using elk from Wyoming) and careful management have led to current high elk population in Colorado.

Elk are distributed throughout the travel planning area in all habitats ([Map 26](#)). In the last ten years elk have become established in less traditional habitats such as low elevation Piñon-juniper habitats. Elk use of hayfields and wet meadows on private lands is common and in many locations cause damage to private lands. Elk numbers are at or above Colorado Division of Wildlife objectives and efforts are underway to reduce elk numbers in many areas.

Mule Deer

Mule deer are medium-sized cervids with conspicuously long ears and a coarse coat. Mule deer occupy all ecosystems in Colorado from grasslands to alpine tundra. They reach their greatest densities in shrublands on rough, broken terrain, which provide abundant browse and cover.

In the Rocky Mountains, fall and winter diets of mule deer consist of browse from a variety of trees and shrubs. In the spring and summer, browse contributes 49 percent of the diet, and forbs and grasses make up about 25 percent of each. Mule deer seem to be able to survive without free water except in arid environments. Over much of Colorado the species is migratory, summering at higher elevations and moving down slope to winter range. During midwinter, deer move to

lower elevations and forage on more protected south-facing exposures. This latter movement is timed with severity of weather. Spring and summer ranges are most typically mosaics of meadows, aspen woodlands, alpine tundra-subalpine forest edges, or montane forest edges. Montane forests and Piñon-juniper woodlands with good shrub understory are often favored winter ranges.

In Colorado, mule deer breed in November and December. Yearling females typically produce a single fawn, and older females in good condition produce twins. Does are solitary during fawning. They form small groups of yearlings, does, and fawns when the young are several months old. As winter approaches the size of herds increases and large numbers may congregate on wintering grounds. When not in rut, adult males often form pairs or small groups of three to five individuals.

Mortality in mule deer varies with age class and region. Fawn mortality is due to predation and starvation. Most mortality in older age classes occurs from hunting or winter starvation. Predators include coyotes, bobcats, golden eagles, mountain lions, black bears, brown bears, and domestic dogs.

Mule deer are found in the planning area in all ecosystems ([Map 30](#)). Highest densities are found in mountain shrub and mixed conifer communities at approximately 7500 ft elevation. Mule deer in the area frequently use wet, hay meadows on private lands, especially in the spring. Deer densities are slowly increasing after several years of below average populations.

Black Bear

A medium-sized bear, this species is Colorado's largest surviving carnivore. Color varies greatly, from black to pale brown and blond. Black bears can survive in practically any habitat that offers sufficient food and cover, from the deserts of Arizona to the coniferous forests of northern Canada. In Colorado the species is most common in montane shrublands and forests, and subalpine forests at moderate elevations, especially in areas with well-developed stands of oak brush or berry-producing shrubs, such as serviceberry and choke-cherry. However, the animals also occupy habitats ranging from the edge of the alpine tundra to the lower foothills and canyon country.

Although their mainstay is vegetation, black bears are omnivorous and the diet depends largely on what kinds of food are seasonally available. In spring, emerging grasses and succulent forbs are favored. In summer and early fall, bears take advantage of a variety of berries and other fruits. In late fall, preferences are for berries and mast (acorns), where available. When the opportunity is present, black bears eat a diversity of insects, including beetle larvae and social insects (ants, wasps, bees, termites, etc.), and they kill a variety of mammals, including rodents, rabbits, and the young or unwary ungulates.

Black bears for the most part are retiring and secretive animals, typically staying close to rough topography or dense vegetation that provides escape cover. Numbers are usually low in any particular locale, making it difficult to census and study the animals. In Colorado, winter denning may begin as early as the first week in October and extend to late December. In Colorado, black bears generally use rock cavities or excavations under shrubs and trees for den

sites. Black bears in Colorado probably breed from early June to perhaps mid-August. Cubs are born in the den in late January or February, while the mother is in hibernation. Litter size is two or three. Black bears are typically solitary, except for family groups (a sow and cubs), or aggregations at concentrated food resources, where bears may show a relatively high tolerance for each other.

Black bear populations are difficult to estimate. Black bears are locally common in suitable habitats in all of the planning area ([Map 20](#)), and occur in all habitat types throughout the area. Highest population densities occur in the montane shrublands along the Sangre de Cristo range.

Mountain Lion

The mountain lion is the largest cat in the United States. Its color is brownish to reddish brown. Colorado individuals are among the largest representatives of the species. Mountain lions inhabit most ecosystems in Colorado, including the eastern plains according to periodic reports. They are most common in rough, broken foothills and canyon country, often in association with montane forests, shrublands, and Piñon-juniper woodlands.

Mountain lions may hunt either during the day or at night, requiring sufficient cover for stalking prey and a lack of high human activity. Most kills are reported from brushy, wooded, or rough terrain. They hunt by stealth rather than by chase, and the kill is accomplished with a final short rush and lunge. Mountain lions prey mainly on deer in North America and also take elk and moose, where they are available. In some situations they prey on mice, ground squirrels, beavers, rabbits, porcupines, raccoons, and domestic livestock.

Resident mountain lions maintain contiguous home ranges, whose size varies seasonally depending on prey density as well as a lion's sex, reproductive condition, and age. In western states, individual mountain lions often show distinct winter-spring and summer-fall home ranges that correspond to movements of ungulate prey and local weather conditions. In Colorado, much of the best mountain lion habitat is at mid elevations, such as the foothills of the Front Range. In these habitats resident deer herds may be relatively sedentary and lions rarely make significant seasonal shifts in home range.

Mountain lions have the widest distribution of any mammal in the New World. They once were distributed over all of the conterminous United States, but populations mostly have been extirpated in the East and over significant areas in the West as well. In Colorado, the species is still common in much of the western two-thirds of the state, although largely eliminated from the eastern plains. Mountain lions are common in the planning area and some of the highest densities in the state are found in the Arkansas River watershed ([Map 29](#)). There are no population estimates available for lions in the planning area.

Raptors

A variety of raptor species occur in the planning area ([Map 31](#)). The following species have been documented as occurring regularly in the area: golden eagle, peregrine falcon, prairie falcon, red-tailed hawk, Coopers hawk, sharp-shinned hawk, goshawk, kestrel and osprey. The following species rarely occur in the TMP planning area due to the small amount of suitable habitat: ferruginous hawk, rough-legged hawk, Swainsons hawk and northern harrier.

Golden eagles are common in the area and nest in suitable habitats, primarily cliffs and rock outcroppings. The large amount of canyon habitat found along the Arkansas River and adjacent drainages provide abundant nest sites. Peregrine breeding pairs nest on cliffs and forage over adjacent coniferous and riparian forests. Migrants and winter residents occur mostly around reservoirs, rivers, and marshes, but may also be seen in grasslands, agricultural areas, and less often in other habitats. Only one active peregrine nest (Royal Gorge Park) can be found within the TMP area. Prairie falcons are widespread in the area utilizing cliff and rock habitats. Red-tailed hawks are the most common broad-winged hawk found in the area at all elevations and most habitat types. The forest hawks: Coopers hawk, goshawk and sharp-shinned hawk occur in smaller numbers due to the absence of large tracks of forested landscape. Kestrels can be found at the lower elevations. Ferruginous, rough-legged, northern harrier and Swainsons hawk are primarily plains species that would rarely be observed in the planning area. Ospreys are regular migrants along the Arkansas River.

Merriam's Turkey

The Merriam's turkey is a fairly common resident in foothills and mesas of southern Colorado, primarily found from Montezuma County east to Archuleta County and from Las Animas County east to southwestern Baca County and north to Fremont County. The Merriam's subspecies is the native form but the Rio Grande subspecies was introduced on the eastern plains starting in 1981, and now common along the major rivers including the Arkansas River. This subspecies is not native to Colorado. The Merriam's turkey is very common in the planning area in suitable habitat ([Map 32](#)). Merriam's are found primarily in ponderosa pine forests with an understory of gambel oak. Tall pines are used during all seasons for roosting. In the planning area it is often found in other foothill shrublands (mountain mahogany), Piñon-juniper woodlands, foothill riparian forests, and in agricultural areas. Turkeys are found in large flocks during the winter months in several areas along the Sangre de Cristo Range. Smaller flocks are located near agricultural areas and along riparian habitats. During the spring birds disperse to habitats adjacent to the winter ranges and can be found throughout the planning area, except at higher elevations.

Environmental Consequences/Mitigation: In February 1997, Standards for Public Land Health in Colorado (Standards) were approved by the Secretary of Interior and adopted as decisions in all of BLM's land use plans, commonly referred to as Resource Management Plans (RMP). The Standards describe natural resource conditions that are needed to sustain public land health. The Standards encompass upland soils; riparian systems; plant and animal communities; special, threatened, and endangered species; and water quality. The Standards relate to all uses of the public lands, including recreational use.

Standard 3 reads: *Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes. Indicator: Landscapes exhibit connectivity of habitat or presence of corridors to prevent habitat fragmentation.*

In January 2000, BLM formed an implementation team to formulate recreation guidelines to address OHV use on public lands. The recreation guidelines also provide for healthy plant and animals communities and Standard 3.3. directs BLM to “Protect wildlife habitat by preserving connectivity and avoiding fragmentation”. There is also direction for BLM to manage wildlife habitat and populations on a landscape level and to assure connectivity is maintained and enhanced and that fragmentation is avoided.

Impacts to wildlife species from roads and trails are variable depending on a number of factors. Typically, impacts to wildlife from roads and trails aren't as great as those from intensive development where large areas of habitat are altered. However, impacts do occur and even passive recreation such as hiking, horseback riding, running, jogging and biking can affect wildlife and wildlife habitat in a variety of ways, both short and long term. More significant impacts are associated with motorized OHV use as impacts to vegetation are greater and disturbances to animals themselves are more likely.

Impacts can be defined as direct and indirect. Direct impacts are those that result from close encounters with wildlife that cause a flight reaction. The reaction is a function of the species, closeness, type and intensity of the encounter, time of day, time of year, type of habitat, vegetation screening, trail location, surrounding land use, and many other variables. Wildlife characteristics, including type of animal, group size, age and sex, also determine the response to a disturbance. Disturbance by humans can cause nest abandonment, decline in parental care, increased stress, shortened feeding times, and potentially lower reproductive success. Motorized uses sometimes result in collisions, resulting in injury or death of animals.

Indirect impacts are defined as impacts to habitat that do not directly impact the animal itself. The construction of a road or trail results in a loss of habitat. Vegetation removed in the process of building a trail is no longer available for use by wildlife. The uncontrolled proliferation of user created roads and trails adds to the impacts to habitat.

The existence of a road or trail can change the characteristic of wildlife habitat. When a road or trail is created, increased light encourages new growth of vegetation, creating habitat edge which results in a shift in the composition of wildlife species. Habitat generalists (species that utilize a variety of habitats) increase, while interior or obligate species (species that depend on one type of habitat) decline. Predation may also increase and in general biological diversity declines. Indirect impacts also occur as wildlife avoid habitat along roads to reduce their exposure to negative stimulus associated with human uses. While the habitat may provide for the needs of the species, it is not being utilized because of its nearness to a road or trail.

Another form of indirect impact is the fragmentation of habitat that occurs with increasing roads and trails. Wildlife do better in larger blocks of undisturbed habitat rather than smaller fragmented pieces. Habitat fragmentation is considered to be the greatest threat to biological diversity. Determining when a road or trail causes habitat fragmentation and how it contributes to a reduction in biological diversity is extremely

difficult. Nevertheless, protecting large, undisturbed areas of wildlife habitat was considered when decisions were made concerning travel management in the Arkansas River TMP planning area.

Preventing fragmentation of habitats also contributes to the maintenance of wildlife movement corridors. Wildlife movement corridors are defined as linear habitat whose primary function is to connect two or more significant habitat areas. A good example of a movement corridor is the habitat that separates elk summer and winter range. Elk need the area between summer and winter range to move back and forth, however, they may not spend much time in the corridor itself. Corridor use is influenced by topography, vegetation, species of interest and nearby human activities. A wildlife corridor should serve to provide for several functions, such as providing wide-ranging animals an opportunity to travel, migrate and meet mates, allow plants to propagate, provide for genetic interchange, allow for populations to move in response to environmental changes, and to allow for individuals to re-colonize habitats. Corridors are needed to maintain connectivity among formally contiguous habitats.

Public lands are an increasingly important source of land for providing the connectivity of habitats that is so important to many wildlife species. In addition, they provide some of the only remaining large blocks of contiguous wildlands (core habitat) in many areas. Within the Arkansas River planning area approximately 66% of the landscape across the entire planning area is considered interior core habitat (see Table 2) that is unaffected by roads and trails. More than 73% of the public lands managed by BLM within the planning area are considered interior core habitat. The Arkansas River TMP area is dissected by private lands that were formally working ranches that provided wildlife habitat. In recent years private lands have been sold to land developers and platted as subdivisions that include roads, home sites and other support facilities. As homes are built and people move into the wildlands, wildlife are being displaced and forced to move from traditional ranges. The only large habitat areas left are those that occur on public lands. Approximately 34% of all lands within the planning area are impacted by routes, while 27% of public lands are impacted by routes (Table 2). BLM managers must ensure that these areas remain as suitable habitat. In order to do that, critical decisions must be made during travel management planning so that the ability of public lands to provide habitat is not compromised.

Table 2: Core Habitat Analysis

	ALTERNATIVE			
	No Action (Current)	A	B	C
Core Areas (acres)	351,651	351,274	368,230	361,141
Core Areas BLM (acres)	175,279	174,252	190,206	183,310
% of Planning Area in Core Areas	66.1	66.1	69.3	67.9
% of BLM Land in Core Areas	72.9	72.4	79.1	76.2
% of Planning Area Impacted by Traffic	33.9	33.9	30.7	32.1
% of BLM Lands Impacted by Traffic	27.1	27.5	20.9	23.8
Mean Size of 10 Largest Core Areas (acres)	33,922	33,847	37,246	35,607
Number of Core Areas > than 20,000 acres	8	8	9	9

Terrestrial Species Impact Analysis

Analysis of available data for the Arkansas River TMP area resulted in maps depicting relative habitat fragmentation and remaining wildlife core areas among 6th level watersheds, as measured by road density. Higher road densities result in less core habitat (more habitat fragmentation) and fewer acres of effective wildlife habitat. All routes within the TMP area were examined to determine the type of route that was present and the current use levels of that route. These parameters defined the expected impacts to wildlife from the individual routes on the landscape. Routes were classified from high impact to low impact and impacts were determined for several species or groups of species. These data were used when decisions were made on how routes should be managed. Additionally, routes were buffered by four distances to determine areas of habitat that are being lost from the effective habitat base (see [Appendix 17 - Research References for the Development of Buffer Distances Used in the Arkansas River TMP Route Impact Analysis](#)).

These analyses were done for all four alternatives. For instance, a foot trail that receives low use was buffered by 165' (50 meters) on both sides of the route. Similarly, County roads that receive high use were buffered by 1,335' (407 meters or ¼ mile). The following buffer distances were used:

- 165ft (50 meters) Low impact routes that receive low use, i.e. trails
- 330ft (100 meters) Moderate impact routes; moderate use, trails and unimproved roads
- 820ft (250 meters) Moderate impact routes; motorized use, unimproved routes, high use trails
- 1,335ft (407 meters) High impact routes; major improved routes with high use, high use motorized routes

Areas of wildlife habitat inside these buffers were considered to be impacted by the route. These routes are depicted in [Maps 22, 23, 24 and 25](#) for each alternative and show where effective core habitat remains intact. In some cases these core habitat areas extend outside the TMP area. Table 2 shows a comparison between alternatives and core habitats. When analyzing the data on a landscape level (Arkansas River TMP) it becomes obvious there are rather small differences in the four alternatives in most areas. This is due, in

part, to the large areas of habitat that are currently undisturbed and will remain undisturbed by roads and trails in the McIntyre Hills WSA, the Upper Grape Creek WSA, the Lower Grape Creek WSA and the Browns Canyon WSA. In addition, topography limits roads and trails along the north and south sides of the Arkansas River canyon (McIntyre Hills and Big Hole subunits) and in areas surrounding the Badger Creek drainage (Badger Creek subunit). However, in some subunits the core habitat changes considerably under the four alternatives. All alternatives result in several core areas that are greater than 20,000 acres and mean core area sizes for the ten largest core areas are more than 33,800 acres (Table 2). There are important differences in alternatives and core habitats for certain subunits that have the potential to impact wildlife. Impacts to subunits will be described under each alternative.

An additional analysis was conducted that compared the four alternatives, the habitat types and core areas. Table 3 shows the acres of each habitat type that remain in core habitat. When viewed at a landscape scale, differences are small. The Proposed Action (Alternative C) would protect an additional 6,100 acres of Piñon/juniper core habitat over the No Action alternative. This is the largest difference and is expected due to the large amount of Piñon/juniper habitat in the TMP area.

Table 3: Acres of Core Habitat on BLM by Habitat Type and Alternative

Habitat Type	ALTERNATIVE			
	No Action (Current)	A	B	C
Grassland	2,787	2,855	3,127	2,985
Mountain Shrub	10,744	10,782	11,960	11,424
Piñon/Juniper	114,359	115,004	125,278	120,429
Aspen	1,264	1,260	1,312	1,308
Mixed Conifer	44,324	42,571	46,623	45,286
Riparian	528	543	604	575
Total	174,006	173,015	188,904	182,007

Table 4 shows the acres of BLM habitat that are impacted by routes. As expected, Piñon-juniper habitat is the most affected because it is the habitat type that is most commonly found on the public lands in this area. Approximately 6,100 acres of Piñon/juniper habitat would be protected from traffic impacts under the Alternative C (Proposed Action) compared to the No Action alternative. Alternative C, across all habitat types, protects a total of 8,000 acres of habitat over the No Action alternative.

Table 4: Acres of Habitat Impacted by Traffic on BLM by Type and Alternative

Habitat Type	ALTERNATIVE			
	No Action (Current)	A	B	C
Grassland	2,521	2,453	2,181	2,323
Mountain Shrub	6,614	6,576	5,398	5,934
Piñon/Juniper	44,706	44,062	33,788	38,637
Aspen	323	327	276	279
Mixed Conifer	9,837	11,591	7,538	8,875
Riparian	864	849	787	816
Total	64,865	65,858	49,968	56,864

Due to the size of the Arkansas River TMP area a large number of wildlife species are involved. Impacts to a few key wildlife species are discussed in detail. The assumption has been made that protection of core habitats will provide for all the species that occupy those habitats. Key species for each habitat were previously described in the Affected Environment. Protection of core areas is expected to confer benefits on the greatest number of species and includes species that have the greatest need for contiguous habitats and effective corridors.

Data for individual species is found in Table 5. This table shows the amount of acres of core BLM habitat for each species, the acres of traffic impacted habitat and the percentage of traffic impacted habitat.

Table 5: Acres of Core Habitat Available for each Species by Alternative (all types of habitat: winter range, production areas, summer ranges etc. have been combined for each species in this analysis, with the exception of mule deer).

	ALTERNATIVE			
	No Action (Current)	A	B	C
Bighorn Sheep				
Core Areas, BLM (Acres)	95,362	94,692	102,051	98,239
Traffic Impacted Core Areas (Acres)	30,434	31,105	23,746	27,557
Traffic Impacted Habitat (%)	12.7	12.9	9.9	11.5
Elk				
Core Areas, BLM (Acres)	101,626	102,893	108,422	106,262
Traffic Impacted Core Areas (Acres)	27,439	26,172	20,643	22,803
Traffic Impacted Habitat (%)	11.4	10.9	8.6	9.5
Mule Deer				
Core Areas, BLM (Acres)	174,273	173,159	189,114	182,217
Traffic Impacted Core Areas (Acres)	63,301	64,415	48,461	55,357
Traffic Impacted Habitat (%)	26.3	26.8	20.1	23.0
Black Bear				
Core Areas, BLM (Acres)	167,486	166,798	182,047	175,512
Traffic Impacted Core Areas (Acres)	62,036	62,724	47,475	54,010
Traffic Impacted Habitat (%)	25.8	26.1	19.7	22.5
Mountain Lion				
Core Areas, BLM (Acres)	175,279	174,251	190,206	183,310
Traffic Impacted Core Areas (Acres)	65,238	66,266	50,311	57,208
Traffic Impacted Habitat (%)	27.1	27.5	20.9	23.8
Raptors				
Core Areas, BLM (Acres)	538	562	568	562
Traffic Impacted Core Areas (Acres)	287	263	257	263
Traffic Impacted Habitat (%)	0.12	0.11	0.11	0.11
Merriam's Turkey				
Core Areas, BLM (Acres)	155,481	154,562	168,650	161,947
Traffic Impacted Core Areas (Acres)	53,970	54,890	40,802	47,504
Traffic Impacted Habitat (%)	22.4	22.8	17.0	19.7

No Action Alternative (Current Use)

Under this alternative use is limited to existing routes that would remain open except for those that have been closed under previous activity plans. The core areas of wildlife habitat that would be available under the No Action Alternative are displayed on [Map 25](#). The alternative does not address the increased use on the planning area's routes and does not provide for proactive future management. BLM has made the assumption that traffic levels on roads and trails on public lands will increase as more people recreate on public lands. Under this alternative use will increase, conflicts will increase, damage to public land resources will increase and wildlife will become more dependent on public lands for habitat. While not readily apparent in the data, the No Action Alternative has the greatest potential to impact wildlife species due to anticipated population growth and increased

human use of the public lands. Data depicted in the tables shows impacts for the current situation that is recognized as not remaining the same. All the other alternatives channel, control, and manage travel at different levels, but prevent the uncontrolled proliferation of new roads and trails in areas where they currently do not exist. Under the No Action Alternative the number of core areas greater than 20,000 acres is 8 with the mean size of the 10 largest areas at 33,922 acres.

Table 2 demonstrates the importance of public lands in providing core habitats while private lands become less able to support wildlife populations. While some habitats are less impacted, others such as Piñon-juniper, mountain shrub and mixed conifer are affected under this alternative (Table 4). BLM manages large areas consisting of these habitat types and must be proactive in maintaining these habitats as intact as possible for future wildlife needs. Table 5 demonstrates the impacts to a variety of wildlife species from this alternative. More acres of core habitat will be available for all species under the Proposed Action as compared to the No Action alternative.

Alternative A

This alternative analyzes the effects of implementing OHV route designations that provide a high level of motorized access and recreational use. The core areas of wildlife habitat that would be available under Alternative A are displayed on [Map 22](#). This alternative allows for increased recreational travel opportunities with an emphasis on recreational benefits, opportunities, and access by providing maximum hiking, biking, equestrian, and OHV travel opportunities for the public. It accepts a higher environmental cost to public land health as measured by the cumulative travel-related impacts to soils, watersheds, riparian and wetlands, plant and animal communities. It also does not respond to larger ecosystem issues of fragmentation of wildlife habitat, increasing road densities, and loss of open space.

While the high amount of use under Alternative A allows for increased recreation use over a much larger area, it does limit use to that identified in the travel plan, as opposed to the No Action Alternative, which would allow for uncontrolled growth over time and potentially result in impacts that are more significant than Alternative A. Alternative A allows motorized uses in many areas, thus reducing core habitat areas and increasing fragmentation (Table 2). Habitat fragmentation is increased in this alternative in the Upper Grape Creek, Big Hole, Texas Creek, and Salida subunits. Alternative A also would add roads and trails in the Texas Creek subunit that were closed in a previous activity plan for the Texas Creek OHV area. That effort, completed in 1998, restricted motorized uses in sensitive wildlife habitats. Alternative A would add roads and trails in sensitive wildlife habitats in the Texas Creek area that would further contribute to habitat fragmentation in this area. Under Alternative A, the increased number of mountain bike trails in the Salida subunit would also impact wildlife habitat in that subunit.

Alternative B

The core areas of wildlife habitat that would be available under the Alternative B are displayed on [Map 23](#). This alternative emphasizes the protection of ecosystems to restore, maintain and improve public land health by providing a relatively low level of

access and travel opportunities. Improved public land health translates to improvements in habitat conditions and wildlife populations. Core areas for wildlife habitat are maximized in this alternative, thereby reducing habitat fragmentation and maintaining wildlife corridors. Table 2 shows that the number of core areas greater than 20,000 acres are increased by one and the combined size of the area of the 10 largest core areas is 37,246 acres; an increase of nearly 3,500 acres over Alternative A. More and larger core areas translate into less fragmentation and positive benefits for wildlife. Moreover, this alternative also provides the highest percentage (79%) of the BLM lands as core wildlife areas and reduces the percentage of traffic impacted wildlife habitat on BLM lands to 21%. Core wildlife habitat is maintained in the Upper Grape Creek, Texas Creek, Big Hole and Salida subunits. Therefore, Alternative B will benefit wildlife more than the other alternatives.

Alternative C (Proposed Action)

Alternative C represents the Proposed Action. The core areas of wildlife habitat that would be maintained under Alternative C are displayed on [Map 24](#). This alternative analyzes the effects of implementing OHV route designations that provide access and recreational use within the limits of the land and resources to sustain recreational impacts over time, and within the capabilities of the BLM to maintain and enforce the proposed designated system of roads and trails.

This alternative is designed to apply travel management on a landscape level with a balanced emphasis on recreation travel, ecosystem maintenance, and public land health as measured by the condition of soils, watersheds, riparian and wetlands, plant and animal communities. It would reduce road and trail densities to prevent disturbances to watersheds, riparian and wetlands, plant and animal communities and maintain viable interior habitat while channeling increasing human traffic flow away from remote land parcels with valuable wildlife habitat. It would respond to larger ecosystem issues of fragmentation of wildlife habitat, private land subdivision, increasing regional road densities, loss of open space, increasing human traffic, and accelerating spread of user created routes on Public Lands. This alternative would benefit the wildlife resource by allowing for recreation use in areas that least affect wildlife and protecting habitat areas from motorized use where it is not appropriate. Table 1 demonstrates that this alternative is very similar to Alternative B because critical core areas would be maintained and core area sizes are similar. Under this alternative there are nine core areas greater than 20,000 acres, the same as Alternative B. The mean core area size of the 10 largest core areas is only 1,639 acres less than Alternative B. Core habitat for wildlife species would be maintained with this alternative.

Mitigation:

Mitigations Applicable to All Alternatives

1. Whenever possible, and for all future route construction projects, avoid locating routes that would adversely affect core wildlife habitat and migration corridors. Implement the recommendations outlined in [Appendix 6](#) and [Appendix 7](#), which establish conditions for guiding future management and development of the Texas Creek and Salida trail systems.

2. Make effective use of seasonal closures. Seasonal road closures are effective for reducing impacts to wildlife. Disturbances to wildlife can be minimized by closing routes during critical wintering and birthing periods. In addition, educate public to the need for seasonal closures for reducing wildlife disturbance.

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 in the Arkansas River basin 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, the proposed *Over the River* art project on the Arkansas River, and commercial forest products harvesting. The cumulative impacts from these activities to T&E habitat from all action alternatives will be long-term and most adverse in the No Action and Alternative A, dispersed and long-term in Alternatives B and C.

Finding on the Public Land Health Standard for Plant and Animal Communities

(partial, see also Vegetation and Wildlife, Aquatic): Standard 3 reads: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes. Indicator: Landscapes exhibit connectivity of habitat or presence of corridors to prevent habitat fragmentation.

The No Action Alternative would seriously threaten habitat connectivity and maintenance of core habitat areas, the most critical attributes of healthy landscapes. The potential exists for a proliferation of roads and trails into previously undisturbed core habitat. The public land health standard for plant and animal communities may be compromised under this alternative.

Alternative A would also threaten the most critical attributes of healthy landscapes: habitat connectivity and maintenance of core habitat areas. However, the impacts would be less than the No Action Alternative. Alternative A identifies more roads and trails for public use but still limits the uncontrolled proliferation of roads and trails in many key core areas. The public land health standard for plant and animal communities would be maintained under this alternative.

Alternative B would maintain the most habitat connectivity and preserve the greatest amount of core habitat area, critical attributes of healthy landscapes. Alternative B identifies fewer roads and trails for public use and still limits the proliferation of roads and trails in many key core areas. The public land health standard for plant and animal communities will be maintained under this alternative.

Alternative C would maintain a high level of habitat connectivity and preserve a large amount of core habitat area, critical attributes of healthy landscapes. Alternative C would identify fewer roads and trails for public use than Alternative A and more than Alternative B. Alternative C would still limit the proliferation of roads and trails in many key core areas. The public land health standard for plant and animal communities would be maintained under this alternative.

WASTES, HAZARDOUS OR SOLID

Affected Environment: Easy access to Public Lands from Canon City, Salida, 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. Both types of wastes are cleaned up and properly disposed of as an ongoing part of Public Land management.

Environmental Consequences & Mitigation:

Impacts Common to All Alternatives: None of the considered alternatives will directly result in the generation, use, storage or disposal of hazardous or solid waste as a direct result of this action. Specific mitigation for hazardous or solid waste is unnecessary. It will remain the policy of the BLM that dumped wastes will be legally disposed of as soon as they become known, as a means of protecting the safety of the Public Land user and land management employees. In cases where the person responsible for the dumping can be determined, legal action will be taken to compensate the government for disposal costs and to deter additional dumping by the public.

FIRE MANAGEMENT

Affected Environment: The Public Lands addressed in the proposed Travel Management Plan are included within portions of the C-2 Middle Arkansas and C-4 Upper Arkansas Fire Management Units as identified and described in the 2004 Royal Gorge Field Office Fire Management Plan.

As the proposed Travel Management Plan will impact off road motorized vehicle and other non-motorized use, its outcome may affect the extent and frequency of future human caused wildland fire occurrence within the planning area. The current Fire Management Plan emphasizes that a suppression oriented response is required for all human caused fires, and this direction would apply to all alternatives under consideration. Historical fire occurrence within the Arkansas River Travel Management planning area is statistically dominated by lightning caused fires. Human caused ignition sources account for approximately 20% of the planning area fire occurrence with railroads being the leading statistical human cause. Other specific human caused ignition sources include abandoned campfires, smoking, fireworks, exhaust systems and exhaust sparks.

Environmental Consequences:

No Action Alternative (Current Use): No appreciable short term change in the existing historical pattern of human caused fire occurrence is expected. However, depending on the actual increase in recreational use based on the region's anticipated future population growth, human caused fire occurrence will correspondingly increase. Long term human caused fire occurrence under this alternative will likely be somewhat higher than that which can reasonably be expected under the Proposed Action and Low Use Alternatives.

Alternative A: This alternative provides the highest level of motorized vehicle accessibility, and can generally be expected to result in a higher number of human caused fire incidents. Presumably, the greater number of available motorized vehicle miles suggested under this alternative would also facilitate suppression vehicle access, thereby reducing response time which will improve the efficiency of suppression operations resulting in fewer acres burned. While this alternative presents the highest potential for an increase in the number of human caused fires, the corresponding fire size potential should decrease.

Alternative B: Under this alternative, with significantly fewer miles available for motorized vehicle access, human caused fire occurrence can be expected to decline. This alternative has the lowest potential for human caused fire occurrence of all alternatives under consideration. As human caused risk factors associated with vehicle access are reduced, human ignition sources will be further confined within a shorter distance from established motorized travel routes. Under this premise and depending on the situation, a shortened timeframe for suppression force response would inevitably limit the size of most fire incidents.

Alternative C (Proposed Action): The Proposed Action reduces the number of miles available to motorized use, and correspondingly limits potential human caused ignition sources. A significant reduction in human caused fire occurrence would not be expected under this alternative, but as the regional population base continues to grow, some increase in human caused risk can reasonably be expected over the long term. The decrease in the total miles of motorized routes is not substantial and is not anticipated to have a significant impact on human caused risk factors.

Mitigation: Applicable to all Alternatives

1. Fire prevention and education activities should continue to focus on OHV user groups, clubs and organizations.
2. Increase fire patrol presence, enforcement activities and signing especially during periods of high fire danger and when fire restrictions are implemented.

Cumulative Effects

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

FOREST MANAGEMENT

Affected Environment: The travel management planning area includes most of the major forest types found throughout in the Royal Gorge Field Office (RGFO). The dominant forest type in the lower elevations is the Piñon and juniper woodlands. There is currently 30,000 acres of Piñon/juniper woodlands within the planning area that do not meet health standards, due to high tree densities. These high forest densities result in a loss of understory plant diversity.

Ponderosa pine is found in the mid elevations. This tree species is typically found in pure stands or mixed with Douglas-fir and/or Piñon and juniper. Aspen, spruce, white fir, lodgepole pine and Douglas-fir are found in the higher elevations of the planning area. Aspen is typically found as scattered small stands within forests dominated by conifers. Most aspen stands within the area are being encroached upon by conifers.

The tree species found throughout the assessment area are hardy and drought-tolerant, and are well suited to the landscape. To ensure optimum tree health, forest management recommendations include providing adequate spacing and water, and avoiding wounding of the trees. Generally, overcrowded forests are more susceptible to insect and diseases than trees with adequate light and space. Maintaining a mix of forest age classes or stages in development in a mosaic pattern will maximize forest age class diversity and provide a wider variety of habitat.

The lack of disturbance has reduced age class diversity over the area and allowed the encroachment of shade tolerant species into the understory of shade intolerant species. Some of the stands are inoperable for mechanical equipment due to steep slopes and lack of access. Thinning and burning in all vegetative types will improve forest health, reduce fuels, and increase diversity by returning a natural component of the ecosystem.

Substantial changes have taken place in the forests over the past 150 years. Past forest management activities includes heavy harvesting during the settlement of the Arkansas River Valley. Timber was utilized for energy and to build infrastructure. More recently, from the 1960's to the early 1980's, timber was harvested for lumber near Arkansas Mountain, Kerr Gulch, Crampton Mountain, and Sand Gulch. Most of the roads within the subunits were created for grazing, hunting, forest product removal, minerals extraction, and for recreation activities.

Current forest conditions exhibit several indicators of poor health including overstocked small diameter trees, moderate to high natural fuel accumulations, limited herbaceous production, and an increase in bark beetle activity. Many forested stands within the planning area have between 500 to 2500 trees per acre. These high forest densities result in individual tree competition for limited nutrients, water and sunlight. There is evidence that wildfire was once part of these forests and that past logging has occurred throughout much of the area.

Most of the larger trees have been harvested and naturally occurring wildfire has been suppressed. Wildfires played an important ecological role in maintaining the function and pattern of the vegetation on the landscape. Wildland fires reduced natural fuel accumulations, maintained forest health by keeping tree densities low, recycled nutrients, maintained openings

and parks, and improved wildlife habitat. The past 100 years of wildfire suppression, cattle grazing, rural development, and forest management have interrupted the natural frequency and intensity of wildfires, which has resulted in overstocking of the forests. These overstocked stands of mainly small trees provide a ladder for wildfire to move into the forest canopy. Canopy or crown fires are the most destructive and difficult to control.

Bark beetle activity has increased within all forest types and is expected to continue to expand due to the high tree densities. Future forest health and fuels reduction work would likely include using existing roads to move in machinery and remove forest products. Existing roads provide the best, sometimes the only, feature on the landscape that will serve as a fuel break for fire control.

Some commercial fuel wood harvesting and off road travel is occurring in this area. Both commercial and personal use Christmas tree and transplant harvesting occurs in designated locations within several of the subunits. On-going forestry and fuels reduction projects include Kerr Gulch, Western Fremont Forest Health and Fuels Reduction, Road Gulch, Poverty Mountain, Arkansas Mountain, Soapy Hill, Sand Gulch, and 3-Peaks. These projects protect recreation opportunities by creating healthy disturbance resilient forests.

Personal use firewood gathering is authorized by permit throughout most of the Arkansas River planning units. Stipulations for minimizing resource damage are attached to each permit that is issued. Forest product permits that are issued to the general public currently include a stipulation that limits parking to within 10 feet of existing open roads.

Environmental Consequences & Mitigation

On a minimal scale, closing roads would limit the public's ability to access forest products in some areas. Closing roads with exclusive private landowner access could actually help to reduce theft of forest products. There are suspected cases within the planning area where private landowners with exclusive access are believed to be removing forest products without the required permit. Most roads selected for closure in the proposed action alternative have exclusive access or are in such poor condition that major reconstruction would be needed before they could be used for removing forest products.

Changing existing roads to trails would likely increase the costs of future forest management. Modifying old roads to be managed as ATV or single-track trails could cause controversy when forest health work requires utilization of a designated trail that at one time was a road.

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

Future and on-going forestry operations would utilize some of the roads within the planning area to remove forest products and allow mechanical access. Additionally,

some forest and fuels projects would require temporary road construction in order to remove forest products. Standard timber sale and service contracts require closing all temporary roads once the forest products have been removed and treatment has been completed. It could be possible to close some existing roads identified for closure through forestry contracts.

No Action Alternative: The No Action alternative would be the least costly to implement, but would result in a lost opportunity to close exclusive access roads, reduce erosion along roads in poor condition, and prevent resource damage from off-road travel.

Alternative A: Compared to the other action alternatives, Alternative A would provide the most opportunities for gathering forest products, due to the fact that most forest products are gathered close to open roads.

Alternative B: Of the three action alternatives, Alternative B would provide the fewest opportunities for gathering forest products, since fewer open roads would be available.

Alternative C (Proposed Action): The proposed action would only slightly effect the public's ability to gather forest products. If future forestry needs are considered after travel management has been implemented, the proposed action should have little impact on future treatments.

Mitigation: Applicable to all of the alternatives

1. Monitor off road travel from forest products gathering to avoid creating new roads. Typical personal use gathering includes 1 or 2 trips off road to gather forest products in a specific area.
2. Ensure all temporary roads created by forestry activities are properly closed to avoid the creation of new roads. Close roads with gates where possible to facilitate future forest management.

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

Affected Environment: The affected environment includes the Arkansas River corridor and immediately surrounding areas between Salida and Canon City, Colorado. This region contains important mineral resources including several active mines as well as historic mining districts that produced gold, copper, coal, clay, oil, and pegmatites in the early 1900's. The geology of the area consists primarily of Precambrian and metamorphic terrain covered in alluvial deposits of the Arkansas River. The alluvial deposits are mined for placer minerals such as gold, especially along the banks of the Arkansas River, and for sand and gravel used in construction. Additionally, the Precambrian rock is mined for decorative stone used in landscaping and in road work.

Active mining is occurring in 7 of the 14 subunits including the Salida, Badger Creek, Sangres Foothills, Red Gulch, West McCoy Gulch, Road Gulch, and Custer County Subunits. In general, access for any mining activity is described and approved in the associated mining plan which also includes a reclamation plan for any disturbance created accessing the mined area. Current use of all roads used to access active mines is designated as either administrative access or open to all motorized vehicles. The status of these access roads would remain unchanged in alternatives A, B, and C and therefore this travel management plan would not have an affect on active mining within the analysis area.

Environmental Consequences/Mitigation:

No Action Alternative: No impact to mineral resources; all mining access proposed as administrative access or open to all motorized vehicles

Alternative A: No impact to mineral resources; all mining access proposed as administrative access or open to all motorized vehicles

Alternative B: No impact to mineral resources; all mining access proposed as administrative access or open to all motorized vehicles

Alternative C (Proposed Action): No impact to mineral resources; all mining access proposed as administrative access or open to all motorized vehicles

LAW ENFORCEMENT

Affected Environment: Problems with unauthorized or illegal OHV 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 OHV use regulations is comprised of three main problems:

Manpower Limitations: At present only one law enforcement officer (Ranger) is stationed in the Royal Gorge Field Office. A single Ranger is responsible for enforcement activities on all public lands. In addition to enforcing OHV use violations, the Ranger must also handle mineral, land and realty, grazing, recreation, wild horse and burro, and other program violations.

Low Fines for Violations of OHV Regulations: Under the present BLM collateral fine schedule the fine for operating a motor vehicle off existing or designated routes is \$50.00. Many OHV users accept the risk of paying a small fine because they realize that law enforcement is limited and the possibility of getting caught is minimal. Some violators have commented that paying the small fine is just part of the cost of recreating on public land. Attempts to raise the fines for violations of OHV and other BLM regulations have been on-going for many years. Currently, a new collateral schedule has been proposed and presented to the Justice Department for approval but no action has occurred to date.

Current Travel Management Policy: Under the BLM’s current OHV regulations, motorized travel in the Arkansas River TMP area is permitted on all existing roads and trails, with the exception of those where motorized access has been restricted by activity plans or special orders. Roads are assumed to be open to OHVs unless posted as closed.

The current OHV regulations are difficult for the public to understand and for the BLM to enforce. Although the current regulations prohibit driving off existing roads and trails, many unauthorized “User Created” travel routes have been developed over the years that visitors now regard as existing motorized roads or trails. The creation of such roads and trails often results in damage to public lands, causes adverse impacts to other resources, or creates conflicts with other users. Signs are posted on “User Created” routes indicating that they are closed to motorized use but many do not stay up for very long.

Environmental Consequences and Mitigation

Impacts Common to All Action Alternatives: The primary benefit for law enforcement in switching to a designated route system is that Rangers will know the routes that are available for designated uses. This will 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 all of the action alternatives will 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.

No Action Alternative: Under the No Action Alternative, law enforcement personnel would continue to operate under current travel management regulations and that limit the ability to effectively enforce the closures of User Created routes.

Alternative A: Alternative A would implement a designated route travel management system that would improve the ability of law enforcement personnel to enforce OHV restrictions. Alternative A would initially create a greater need for 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, a lower level of law enforcement presence could possibly be required.

Alternative B: Alternative B would implement a designated route travel 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 are designated for OHV 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 illegal routes.

Alternative C (Proposed Action): The Proposed Action would implement a designated route travel management system that would improve the ability of law enforcement personnel to enforce OHV restrictions. The Proposed Action would initially create a

greater need for compliance and law enforcement actions but this could improve over time as users become familiar with the new travel management system.

PALEONTOLOGY

Affected Environment: The affected environment includes the Arkansas River corridor and immediately surrounding areas between Salida and Canon City, Colorado. Although several important paleontologic resources are found within the affected area, the geologic formations that contain the most important paleontologic resources are located within the Salida and Grand Canyon Hills subunits. These are the Dry Union Formation especially in the King Gulch area south of Salida in the Salida Subunit, and the Morrison and Dakota formations located near Temple Canyon City Park west of Canon City within the Grand Canyon Hills Subunit. These formations are important because they regularly produce abundant identifiable vertebrate remains that have high scientific value and importance.

To protect the paleontologic resources from human degradation, access to these highly sensitive paleontologic resources should be limited. In general, alternatives B and C considered for this travel management plan would limit access to these areas better than Alternative A because alternatives B and C are lower use alternatives than A.

Salida Subunit, Dry Union Formation: Alternatives A, B, and C propose to close a network of user created routes located below the radio tower in King Gulch south of Salida that contain high concentrations of vertebrate remains. This action would benefit the paleontologic resources located here by limiting travel within this area to non-motorized travel which would generally reduce impact to paleontologic resources in the area.

Grand Canyon Hills Subunit, Morrison and Dakota Formations: Alternatives A, B, and C would limit use of areas that contain significant paleontologic resources to foot travel and/or administrative access.

Environmental Consequences/Mitigation:

No Action Alternative: Potential impacts to paleontologic resources would continue to occur under this alternative. Under the No Action Alternative motorized uses would continue to be available on existing routes and areas with paleontologic resources would be more susceptible to damage.

Alternative A: No impact to paleontologic resources; all routes adjacent to paleontologic resources are proposed for foot travel or administrative access only.

Alternative B: No impact to paleontologic resources; all routes adjacent to paleontologic resources are proposed for foot travel or administrative access only.

Alternative C (Proposed Action): No impact to paleontologic resources; all routes adjacent to paleontologic resources are proposed for foot travel or administrative access only.

NOISE

Affected Environment: Ambient sound and noise levels vary greatly throughout the Arkansas River Travel Management Planning area. Ambient sound includes the Arkansas River, wind, and noise originating from vehicle traffic on state highways and Fremont County roads. Other noise sources include industrial activities, farming and ranching activities, mining, 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 US 50 create are the largest noise contributors to public lands in this area. Most of the public lands in the area are more influenced by the noise from motor vehicles on roads and trail than from other sources. Those subunits that border US 50 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 highway 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 highway 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 roads and trails is another major source of noise in some portions of the planning 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 subunits with the highest noise levels are those that contain numerous roads and trails that attract high amounts of ATV and dirt bike use.

Within the Arkansas River TMP area, the subunits that are most affected by noise from recreational vehicles include Texas Creek, Salida, and portions of Sangres Foothills in the Kerr Gulch and Falls Gulch areas. The subunits that are least affected by noise from recreational vehicles are Grape Creek, McIntyre Hills, and Browns Canyon.

An additional source of noise in some of the subunits comes from target shooting. Throughout most of the planning area, target shooting is an isolated, intermittent, and legal activity. In some subunits, however, the amount of target shooting has increased sharply and has become established as the dominant use in local areas. In addition to the noise, areas that experience high levels of recurring use for target shooting often experience problems with littering, trash dumping, and conflicts with other uses as well.

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 Federal, state and local roads increases. These increases are fueled primarily by increasing rural residential development and recreational uses.

Currently, visitors to the public lands in the planning area can find a variety of areas that vary with the amount of noise that may or may not affect their recreational experiences. Those

seeking peace and quiet with low levels of noise can find it in subunits like Grape Creek and McIntyre Hills. Those who can tolerate higher levels of noise can utilize subunits like Salida and Grand Canyon Hills. There are numerous subunits that provide a range of noise levels between these extremes.

Environmental Consequences/Mitigation:

No Action Alternative: Noise levels under this alternative will change in a variety of ways. In a few areas, noise levels will go down as illegally created roads are closed. In most areas, however, noise levels will increase, varying from slight increases in some areas (the subunits with fewer motorized routes) to major increases in others (such as in the Texas Creek and Salida subunits). Though some increases in noise levels will come from increasing development on adjacent private lands, most of the increases on public lands will come from recreational vehicle use. Overall, under this alternative, noise levels will experience a slow but gradual increase throughout the planning area. A variety of noise levels will still be able to be found in the planning area, as not all subunits will experience the same levels and types of increases in noise.

Under this alternative, concentrated target shooting would continue at Turkey Rock and adjacent to the city of Salida and noise levels from this source would continue to slowly increase over time. The levels of noise from target shooting in the remainder of the planning area would generally remain the same but could experience slight increases from increased levels of recreational use in some areas.

Alternative A: Under Alternative A, noise levels are expected to rise in the planning area but only a small amount over that described for Alternative C. This increase would be slight in areas that are currently relatively quiet, and could rise sharply in those subunits that currently receive a moderate to high amount of motorized use. The 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 increase in use throughout the planning area. Subunits like Grand Canyon Hills, Crampton Mountain, and Road Gulch could see low to moderate increases in noise levels. The overall increase in visitors would probably result in low to moderate increases in noise levels on those BLM roads 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 C.

Under Alternative A, there would be a marked improvement in lowered noise levels resulting from the closure of all the concentrated target shooting areas. Some of the users will undoubtedly look to other nearby public lands but this will be in the form of dispersed target shooting and the impacts to noise will be more spread out and intermittent.

Alternative B: Under Alternative B, noise levels are expected to decrease in the planning area but only a small amount under that described for the Alternative C. The decrease would be slight in areas that are currently relatively quiet but substantial in those subunits with the largest amount of road closures. Under this alternative, noise levels in the Sangres Foothills and West McCoy Gulch subunits would drop sharply. The overall

increase in visitors would probably result in a low to moderate increase in noise levels on those public land roads that remain open and on adjacent Federal, state, and local roads. This would be caused by users of motorized vehicles shifting their use to those roads that remain open.

Under Alternative B, concentrated shooting would remain generally the same as under the No Action Alternative. This would result in high noise levels in portions of the Badger Creek and Salida subunits that would continue to slowly increase over time. The levels of noise from target shooting in the remainder of the planning area would generally remain the same but some areas could experience slight increases from increased levels of recreational use.

Alternative C (Proposed Action): Under the Proposed Action, noise levels can be expected to increase in some of the subunits, while decreasing in other sub-units. Lower levels of noise are anticipated in areas where roads 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 the Sangres Foothills subunit in Kerr Gulch and Falls Gulch. Increased noise levels would occur in the Texas Creek and Crampton Mountain subunits. The remaining subunits would generally retain current noise levels, with some road closures offset by overall increases in use levels.

Overall, the proposed closure of certain roads would result in decreased noise levels in the immediate vicinities of closed roads. Conversely, roads that remain open or the new routes that are constructed would lead to increases in noise levels in the surrounding areas. In the planning 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.

Under the Proposed Action, the amount of noise from concentrated target shooting areas would decrease, with the closure of the areas at Turkey Rock and near the town of Salida. Noise from dispersed target shooting may increase in those subunits nearest to Salida and Howard, as shooters look for other suitable places to practice their sport.

Mitigation: The following mitigation would apply to all alternatives.

1. Implement public information/education efforts to encourage controlling noise levels while recreating on public lands.
2. Enforce state noise level standards pertaining to the operation of motor vehicles.

Cumulative Effects

In addition to growth in recreational travel, other reasonably foreseeable actions that could effect regional ambient sound and noise levels over the next 10 years on private and public lands in the Arkansas River basin 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, the proposed *Over the River* art project on the Arkansas River, and commercial forest products harvesting. 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 the No Action and Alternative A, contained and long-term in Alternatives B and C.

RANGE MANAGEMENT

Affected Environment: The area covered by this plan includes approximately 77 livestock grazing allotments. BLM grazing permits authorize specific ranchers, or permittees, to utilize these allotments for domestic livestock grazing. These permits specify livestock numbers and the periods of authorized grazing use for each allotment. Grazing use on Public Land is managed to comply with the *Guidelines for Livestock Grazing in Colorado* and help achieve *Standards for Public Land Health*.

Over the years, numerous range improvements (fences, springs, stock ponds, etc.) have been authorized and constructed on many of the grazing allotments in the planning area. Maintenance of these improvements is normally assigned to the individual grazing permittee on each allotment. Permittees are also responsible for checking their livestock and ensuring that they are in compliance with the dates, times and locations specified in individual grazing permits. This requires that permittees utilize many of the roads and trails within each allotment by foot, horseback or vehicle. Except where it is prohibited in special areas, such as the four Wilderness Study Areas, BLM has historically allowed grazing permittees vehicular access for performing administrative work on the allotments (i.e., maintenance responsibilities or management requirements). BLM has also traditionally permitted occasional vehicle use off roads as part of the administrative use of grazing allotments. In some cases, grazing permittees and the public share the use of many of the existing roads and trails on the allotments. On some allotments, many of the roads and trails utilized by the permittee are only accessible by crossing private land and thus are not available for use by the general public.

During the preliminary phases of this travel management plan, comments were received from permittees who have grazing allotments located within the Badger Creek, Little Hole, Texas Creek, and West McCoy Gulch Subunits. These comments were specific as to which routes should be closed and which should be left open and areas where specific conflicts are present between livestock grazing and motorized recreational use. These conflicts included issues such as gates being left open resulting in cattle moving into pastures where they were not authorized, harassment of cattle by ATV operators, and damage to vegetation by OHV use. General comments from grazing permittees have also been received to the effect that grazing permittees are required to follow Grazing Guidelines to meet the Public Land Health Standards, while OHV use on their grazing allotments is damaging soil and vegetation to a degree that the Health Standards may not be met.

In most cases, the limited amount of use made by individual grazing permittees or BLM staff is not sufficient to cause substantial impacts to Public Lands. There may be cases, however, where specific roads that are needed for range management purposes are causing or contributing to

erosion or other problems. Although such roads are used only occasionally by the permittee, their slope, location or design may be causing problems that need to be corrected.

Environmental Consequences:

Consequences Common to All Alternatives: None of the alternatives would affect access or uses of existing roads and trails for administering grazing operations. Authorized holders of grazing permits would still be allowed to drive on existing roads for the purpose of managing their grazing operations under all of the alternatives. A number of the routes utilized in range management activities are included in the “Non-system” category under each of the alternatives. The Non-system category includes routes that are closed to motorized use by the public but that may be used by authorized persons for administrative purposes. BLM grazing permittees will continue to be allowed vehicular use on Non-system roads needed for managing their operations. Occasional off road vehicle use will also be permitted for administrative purposes only and where such use does not result in undo resource damage. Vehicle use by permittees of BLM non-system roads for purposes other than official administrative duties will not be authorized. Permittees will only be allowed vehicle use on non-system roads on allotments where they hold a valid BLM grazing authorization.

The use of Public Lands for grazing does not preclude other uses from occurring on these same parcels, such as hunting, target shooting, hiking, horseback riding, etc. BLM regulations prohibit anyone, including grazing lessees or permittees, from interfering with lawful uses or users of Public Land, including obstructing free transit by force, threat, intimidation, signs, barriers or locked gates. Other uses, however, sometimes have negative impacts on livestock and grazing operations when gates are not closed, fences are cut, or when livestock are disturbed by high levels of activity. Likewise, the presence of livestock sometimes results in conflicts with other recreational uses. As a general rule, areas that are readily accessible to the public and that receive high levels of recreational use usually result in increased conflicts and have greater impacts on livestock and grazing than areas with limited access and low levels of recreational use. As a result of projected population growth in the region and increased recreation use on Public Lands, the level of conflict with other uses and impacts on livestock and grazing are expected to increase in the future under all of the alternatives.

No Action Alternative: The No Action Alternative includes 327.5 miles of existing travel routes that would be available to the public for all types of recreational uses. Of this total, approximately 232.3 miles would be open to motorized travel, and 35.1 miles would be limited to non-motorized uses. Approximately 60.2 miles would be managed as Non-system routes and would be available for administrative uses only.

The No Action Alternative would generally maintain the status quo for grazing and range management. Access and travel for managing permitted grazing operations would not be affected. Conflicts with other uses resulting from grazing and impacts to livestock and grazing operations would gradually increase as recreational uses on Public Lands increase. Those sub-units containing high densities of travel routes and motorized access, such as Texas Creek, Badger Creek, and West McCoy Gulch would be most affected by

conflicts and impacts to grazing caused by higher levels of recreational traffic. The level of conflicts and impacts to grazing in those sub-units that currently experience low to moderate levels of motorized use, such as Red Gulch, Road Gulch, Crampton Mountain, and Sangres Foothills could increase substantially as recreation uses in these areas increases over time. Conversely, grazing operations in those sub-units that have limited access and low densities of travel routes, such as Grape Creek, Big Hole and Browns Canyon would not be substantially affected.

Alternative A: Alternative A includes 372.1 miles of designated travel routes that would be available to the public for all types of recreational uses. Of this total, approximately 219.9 miles would be open to motorized travel, and 106.9 miles would be limited to non-motorized uses. Approximately 43.5 miles would be managed as Non-system routes, and would be available for administrative uses only.

This alternative would not affect access and the use of travel routes for managing permitted grazing operations. Due to the relatively high number of routes that would be available to the public for recreational uses, Alternative A would provide high travel route densities and high levels of traffic that would have the most impacts on livestock and the management of grazing operations of all the alternatives. Under Alternative A, most of the existing travel routes and many new routes would be available to the public for motorized uses throughout all sub-units of the planning area, and numerous new routes would be constructed into remote areas that could increase traffic and disturbances to livestock.

Alternative B: Alternative B includes 239.7 miles of designated travel routes that would be available to the public for all types of recreational uses. Of this total, approximately 135.1 miles would be open to motorized travel, and 43.3 miles would be limited to non-motorized uses. Approximately 61.3 miles would be managed as Non-system routes, and would be available for administrative uses only.

Alternative B would not affect access and the use of travel routes for managing permitted grazing operations. Because of the relatively low number of routes that would be available to the public for recreational uses, Alternative B would provide for low levels of traffic that would have the least impacts on livestock and the management of grazing operations of all the alternatives. Under Alternative B, many existing travel routes throughout all sub-units of the planning area would be closed to use or limited to non-motorized travel, and no new routes would be constructed that could increase traffic and disturbances to livestock in remote areas.

Alternative C (Proposed Action): The Proposed Action includes 310.8 miles of designated travel routes that would be available to the public for all types of recreational uses. Of this total, approximately 181.2 miles would be open to motorized travel and 76.8 miles would be limited to non-motorized uses. Approximately 52.8 miles would be managed as Non-system routes and would be available for administrative uses only. The Proposed Action would reduce by 17 miles the amount of travel routes for public use than the No Action Alternative. There would be about 50 fewer miles of motorized

routes but about 35 more miles of non-motorized routes than in the No Action Alternative. The additional 23 miles includes 3 miles of new ATV and motorcycle routes and 20 miles of new foot, horse, and bicycle routes

Compared to the No Action Alternative, conflicts with other uses and the impacts to livestock and the management of grazing operations resulting under the Proposed Action would increase in some areas but would improve in others. The Proposed Action would not affect access and the use of routes for managing permitted grazing operations. The construction of approximately 13 miles of new ATV and motorcycle routes in the Texas Creek subunit would increase the route density and traffic levels in the area and result in increased impacts to livestock and grazing operations. The impact would increase the difficulty of livestock to utilize the forage in the areas of increased motorized use. In addition, the development of new foot and horse trails in the Salida subunit would improve access and attract increased numbers of recreational users into remote areas that could result in increased disturbance to livestock and potential grazing/recreation conflicts. The impacts to range management would be reduced in other areas, such as West McCoy Gulch subunit, where existing motorized travel routes would be designated for non-motorized uses, resulting in lower amounts of traffic and disturbing activities.

Mitigation:

1. Non-system route use and vehicle use off routes for livestock management purposes should be monitored on each allotment as part of BLM's on-going range management program.
2. In areas where specific routes are needed for range management purposes but also may be causing or contributing to erosion or other problems, BLM will address maintenance needs on a case-by-case basis. Actions may include assignment of route maintenance responsibilities to the permittee, BLM maintenance of routes, adjustments in the maintenance or management practices on the allotments, or route closure/rehab.
3. New travel routes established under the Proposed Action and High Use alternatives should be located so as to minimize impacts to existing range improvements or livestock water sources.
4. In locations where there are chronic problems with gates being left open, "please close gate" signs will be posted or ATV cattleguards will be placed.

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 in the Arkansas River basin 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, the proposed *Over the River* art project on the Arkansas River, and commercial forest products harvesting. The cumulative effects to range management will be long-term and most adverse and dispersed in the No Action and Alternative A, limited and long-term in Alternatives B and C.

REALTY AUTHORIZATIONS:

Affected Environment: This planning area is made up of one very large “block” of Public land that is contiguous the length of the planning area, a handful of moderately sized “blocks” of Public land, and numerous very small isolated generally unmanageable parcels. There is relatively good public access to most of the “blocks” and parcels, although topographically portions of the “blocks” would be considered inaccessible or at least having only difficult foot access. Some of the small parcels do not have legal public access. The majority of the land is identified in the Royal Gorge Resource Management Plan for retention and multiple use management, although many of the small isolated parcels are identified for eventual disposal out of Federal ownership.

Roads and trails within the planning area have been constructed or created by many means and to satisfy many purposes. Historically, The Public lands were considered open to any and all off road travel and because of that, the majority of the roads were created to get from some point A along an existing road to some point B where a person wanted to get to. The reasons include livestock management, forest development, fuel wood sales, mining development, cutting travel short-cuts, access to homesteads or home sites, access to utility lines and communication sites, hunting access, and most recently for increasing recreational activities.

There are many roads within the planning area that are legally authorized uses of the Public lands. These roads remain under BLM control, in that the BLM determines the appropriate public use of the road and may close the road to all but the authorized holder of the right-of-way. Generally, if there is legal public access to these roads they remain open to public use, unless as determined differently.

The Federal Land Policy and Management Act of 1976 (FLPMA) Title V grants the BLM authority to grant rights-of-way for all kinds of uses, including roads and trails. Any private individual, group, or commercial use (road or trail) on Public land must be authorized prior to construction or maintenance. It is BLM policy to only authorize road rights of way where a private landowner needs to cross Public land, where the private land is surrounded by Public land and an environmentally acceptable route is determined to be acceptable. Hence, any user created trail or road on Public land is unauthorized and in trespass on the Public lands. Federal regulations allow for the prosecution of trespassers through administrative financial liability means and provides for closure and rehabilitation of such unauthorized roads or trails. Authorized right-of-way roads or trails may be left open to public use or closed by BLM, or type of use managed. If closed by BLM (or where there is no legal public access), only the holder of the right-of-way is allowed to use and maintain the road or trail for mechanized transportation. In this plan, these roads and trails are noted as Administrative Access (AA) in gold. An inventory of all rights-of-way is maintained by BLM in the Master Title Plat (MTP-geographic based) and Lands Record System (LR2000-data based) systems.

BLM also has acquired easements across non-BLM lands for access to Public lands. Seven are for public access and four are for BLM administrative access only. BLM has a responsibility to maintain those roads (11 miles).

Environmental Consequences/Mitigation:

No Action Alternative: The Royal Gorge Resource Management Plan (RGRMP) requires all roads and trails on Public lands (234 miles) to be maintained to protect the environment. Roads authorized by a right-of-way are required to be maintained by the holder. All other roads and trails are maintained by the BLM. Due to the extensive road and trail network and limited budget to accomplish maintenance, only critical maintenance work is accomplished annually. Emergency repairs due to washouts and similar damage often creates budgetary problems for the field office. There are many miles of roads that should be maintained that are being neglected due to lack of funding. The occasional recreational use infrequently causes appreciable damage and the BLM attempts to temporarily close those roads where that might occur. On the other hand, daily repetitive traffic such as a driveway use frequently causes substantial damage that can be expensive to correct.

Realty Authorizations would not be impacted by the decisions of this plan, except where in the rare case that an authorized road will be closed to public travel and the holder would be required to enter through a locked gate, and where an unauthorized user becomes prohibited by the closure of a road. All authorized roads are designated as administrative access as a minimum means of assuring the holders rights of access. Future road needs for authorized activities are reviewed and determined if necessary, environmentally acceptable, and mitigation developed as necessary on a case by case basis, using the Royal Gorge Resource Management Plan designations under the utility corridor study: 1. Exclusion Areas, 2. Avoidance Areas, and 3. Open Areas. These three categories were determined by certain resource values analysis in the RG RMP.

Alternative A: The Royal Gorge Resource Management Plan (RG RMP) requires all roads and trails on Public lands (263 miles) to be maintained to protect the environment. Roads authorized by way of a right-of-way are required to be maintained by the holder. All other roads and trails are maintained by the BLM. Due to the increase in the extensive road and trail network and no change in the limited budget to accomplish maintenance, less critical maintenance work would be accomplished annually. Emergency repairs due to washouts and similar damage would create more frequent budgetary problems for the field office. There would be even more miles of roads that should be maintained that would be neglected because of this situation.

Realty Authorizations would be less likely to be impacted by the decisions of this plan, where in the rare case that an authorized road will be closed to public travel and the holder would be required to enter through a locked gate, and where an unauthorized users motorized use becomes prohibited by the closure of a road.

Alternative B: The Royal Gorge Resource Management Plan (RG RMP) requires all roads and trails on Public lands (135 miles) to be maintained to protect the environment. Roads authorized by way of a right-of-way are required to be maintained by the holder. All other roads and trails are maintained by the BLM. Due to the slightly reduced road and trail network and no change in the limited budget to accomplish maintenance, more

critical maintenance work would be accomplished annually. Emergency repairs due to washouts and similar damage would create less frequent budgetary problems for the field office. There would be fewer miles of roads that should be maintained that would be neglected because of this situation.

Realty Authorizations would be slightly more likely to be impacted by the decisions of this plan, where in the rare case that an authorized road will be closed to public travel and the holder would be required to enter through a locked gate, and where an unauthorized users motorized use becomes prohibited by the closure of a road.

Alternative C (Proposed Action): The Royal Gorge Resource Management Plan (RG RMP) requires all roads and trails on Public lands (202 miles) to be maintained to protect the environment. Roads authorized by way of a right-of-way are required to be maintained by the holder. All other roads and trails are maintained by the BLM. Due to the slightly reduced road and trail network and no change in the limited budget to accomplish maintenance, more critical maintenance work would be accomplished annually. Emergency repairs due to washouts and similar damage would create less frequent budgetary problems for the field office. There would be fewer miles of roads that should be maintained that would be neglected because of this situation.

Realty Authorizations would be slightly more likely to be impacted by the decisions of this plan, where in the rare case that an authorized road will be closed to public travel and the holder would be required to enter through a locked gate, and where an unauthorized user's motorized use becomes prohibited by the closure of a road.

RECREATION

Affected Environment: Overview

Recreational use within the planning area 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; 8.4% increase from 2000 to 2005). Approximately 3.5 million Colorado Front Range residents live within a three hour drive of the planning area. Population growth within Fremont, Chaffee, and Custer counties also has a direct impact on recreation use within the planning area because many local residents and their families and friends recreate on public lands near their homes. Fremont County population increased by approximately 47% from 1990-2005. For the same period, Chaffee County and Custer County populations increased by 33% and 92%, respectively.

Colorado Travel Year 2005 Longwoods International report 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 lakes/ivers as important elements of their vacation experience. Royal Gorge Bridge and Park, Salida, and Buena Vista are among the most popular destinations for overnight pleasure trips within Colorado's South Central Travel Region. The Arkansas River is a regional and national recreation destination – primarily because of the popularity and variety of the whitewater boating opportunities. In recent years, the river has also become widely known as a destination for fly fishing.

There are 37 developed recreation sites within the planning area; 21 of these sites are primarily river access for boating, fishing and/or recreational placer mining. While visitor data for river recreation and the use of developed recreation sites along the river is readily available, visitor data for the majority of the public lands in the TMP area is very limited. Traffic counter data is available only from one location within the planning area (Texas Creek). BLM does estimate visitor use on annual basis. In 2006, BLM estimated 351,396 visits to public lands in the planning area that were not related to river recreation/access. Areas of concentrated visitor use (non-river related) are the Texas Creek subunit, DeWeese Reservoir in the Custer County subunit, Castle Gardens, Methodist Mountain and S Mountain in the Salida subunit, Temple Canyon/Ecology Park and Grand Canyon Hills in the Grand Canyon Hills subunit, Bear Gulch in the Grape Creek subunit, and Kerr Gulch in the Sangres Foothills subunit.

The increase in recreation use of the public lands throughout the TMP area has had a direct effect on the condition of the roads and trails. Many roads and trails were constructed for or developed for specific uses such as timber cutting, mining, range improvements, utility corridors, and access to residential subdivisions. 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 led to an increase in user created routes. Without a designated system of roads and trails, visitors are uncertain about what routes are open and available for their use and are more likely to develop user created routes as well as use routes created by others. The substantial increase in OHV use on public lands has impacted both resources and recreation settings. Statewide, OHV registrations have increased an average of 18% annually since 1995. In the local area, businesses selling OHVs actively market the public lands to their customers. Mountain bike use has also increased in the TMP area, particularly around Salida. The increase in recreation use has also been accompanied by an extension in the season of use – many of the public lands in the planning area are snow free for most of the year increasing year round recreation use.

Recreation Settings, Activities, Experiences, and Benefits in the Planning Area

The planning area 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 Recreation Opportunity Spectrum (ROS) defines recreation settings, activities, and experience opportunities. It classifies recreation environments along a continuum ranging from primitive, low use to urban, high use. The ROS classes for the planning area were updated recently to improve accuracy and consistency with RMP management objectives. The ROS classes in the planning area (public, state, and private lands) include: Semi-Primitive Non-Motorized (129,783 acres), Semi-Primitive Motorized (70,878 acres), Roded Natural (246,948 acres), Rural (81,293 acres), and Urban (2,834 acres). The city of Salida and the town of Poncha Springs are in the Urban class. There are no public lands in the Urban class. The only class not represented in the TMP area is Primitive. Refer to [Map 33](#) depicting the ROS classes in the planning area.

The Browns Canyon, Big Hole, McIntyre Hills, and Grape Creek subunits are primarily classified as Semi-Primitive Non-Motorized (SPNM). Badger Creek subunit also has a large area in the SPNM class. Texas Creek, Crampton Mountain, and Grand Canyon Hills subunits have smaller but substantial areas in the Semi-Primitive Non-Motorized class. Salida, Sangres Foothills, West McCoy Gulch, and Red Gulch subunits have much smaller areas in this setting but some of these areas connect with the larger SPNM areas in other subunits. The Road Gulch and Custer County subunits have very small areas in the SPNM class, and these areas connect with larger SPNM areas in McIntyre Hills and Grape Creek, respectively. SPNM areas have predominantly naturally appearing landscapes. SPNM areas provide visitors with opportunities for non-motorized activities in a backcountry setting – hiking, backpacking, hunting, fishing, boating (non-motorized), and wildlife observation. Mountain biking is permitted outside of WSA boundaries. Contacts with other people tend to be infrequent and group sizes small. Evidence of use such as fire rings and dispersed campsites may be common but developed facilities are few. Experiences that these areas provide 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 and self confidence, stress relief, greater self-reliance, enhanced environmental awareness, and improved outdoor knowledge and skills. SPNM areas in Browns Canyon and Grand Canyon Hills (the Royal Gorge) provide direct and substantial economic benefits to local communities because of their importance to river-based recreation tourism. Big game hunting in SPNM areas also provides economic benefits to local communities.

Public lands in the Semi-Primitive Motorized (SPM) class are scattered throughout the planning area. The Badger Creek, Sangres Foothills, and Texas Creek subunits have more lands in the SPM class than the other subunits. Areas in the SPM class have a naturally-appearing landscape except for primitive roads. Recreation opportunities are based on both motorized and non-motorized activities in a middle country setting. Contacts with other people are more frequent and group size may be larger than in SPNM. 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, knowledge and self-confidence, and enhanced environmental awareness. SPM areas in the Browns Canyon and Salida subunits provide direct and substantial economic benefits to local communities because of their importance to river-based recreation tourism. The SPM areas in Texas Creek and Grand Canyon Hills subunits provide economic benefits locally related to motorized recreation tourism – some of these benefits derive from special events like Motorcycle Trials competitions. Big game hunting in SPM areas also provides economic benefits to local businesses and communities.

Areas in the Roaded Natural (RN) class dominate the planning area – this includes most of the private land in the planning area. The public lands in the Roaded Natural class are often adjacent to communities, rural residential subdivisions and along improved roads. Areas in the RN class have natural landscapes that are partially modified by roads 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 travel routes, campsites, 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, knowledge and self-confidence, and enhanced environmental awareness. Public lands in the RN class provide benefits to local communities because they are easily accessible to residents for recreation. These are often areas with highest levels of user conflict and resource damage.

Areas in the Rural class are located along the primary highways in the planning area. These areas are natural landscapes substantially modified by agricultural or industrial development. Recreation opportunities are based on motorized access from primary highways but they include significant motorized and non-motorized opportunities. Much of the Arkansas River (except for Browns Canyon and the Royal Gorge) is included in the Rural class because of proximity to US 50; the recreation opportunities available there are primarily non-motorized such as rafting, kayaking, fly fishing, picnicking, and camping. People seem to be generally everywhere and groups can be quite large (26-50 people). Facilities are modern and include boat ramps, campgrounds, group shelters, and interpretive exhibits. Experiences that these areas provide include enjoying diverse recreation opportunities, developing skills and abilities, enjoying nature, learning about the environment, spending time with family and friends, and participating in group outdoor events. Personal benefits to visitors include physical fitness, stress relief, improved outdoor skills, knowledge and self-confidence, and enhanced environmental awareness. Rural settings along the Arkansas River provide direct and substantial economic benefits to local communities because of their importance to river-based recreation tourism. The three scenic byways in the TMP planning area (Gold Belt Tour, Collegiate Peaks, and Frontier Pathways) are also included in the Rural class, providing additional recreation benefits to visitors and economic benefits to communities.

Commercial and Special Recreation Uses

BLM issues Special Recreation Permits (SRPs) to authorize and manage commercial and competitive recreation uses and organized group events on public lands and waters. In FY2006, approximately 27 BLM Special Recreation Permits were active in the TMP area. These permits were issued for a variety of activities and events including camping, rock climbing, ATV tours, hunting (big game and mountain lion), trials motorcycle competitions, a mountain bike race, and a running event. The benefits and impacts of these activities are evaluated by BLM through the NEPA process when permit applications are received.

Colorado State Parks (Arkansas Headwaters Recreation Area) authorizes and manages all commercial recreation and special uses directly related to the Arkansas River. There were 86 active commercial permits in 2006: 55 Boating, 15 Walk and Wade Fishing, 11 Photo/Imaging, and 5 Shuttle Services.

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. Specific alternatives would offer benefits to specific activities authorized by SRP, and this is discussed under each alternative. In all cases, new SRP applications would be evaluated through the NEPA process to determine conformance with travel management decisions.

Relevant Planning and Guidance

Travel management planning is closely linked to recreation planning and management. Below is a brief description of the existing policies and recreation management decisions relevant to this planning effort.

Royal Gorge Resource Management Plan (RMP)—The Arkansas River Travel Management Plan affects two Recreation Management Areas identified in the RMP – the Arkansas River Special Recreation Management Area (SRMA) and the Royal Gorge Extensive Recreation Management Area (ERMA). The RMP directs that the Arkansas River SRMA be managed to provide upland recreational opportunities that complement the water-based opportunities. The RMP directs that the Royal Gorge ERMA be managed for a variety of dispersed recreation opportunities. By BLM policy, SRMAs are managed to provide specific, structured recreation opportunities, experiences, and benefits geared to an identified primary market (destination, community or undeveloped). In ERMAs, management is custodial in nature and addresses activity opportunities, visitor safety, user conflicts, and resource protection – ERMAs are *not* managed for *structured* recreation opportunities.

Arkansas River Recreation Management Plan—This plan focuses on recreation management on the river and public lands immediately adjacent to the Arkansas River between Leadville and Pueblo Reservoir. The vision statement for the plan states that the area “...shall be managed to emphasize its natural resources, resource sustainability and the standards for public land health, recognizing and respecting private property, while embracing numerous recreational, educational, and commercial activities.” There are many actions in this plan targeted at river-related recreation; none of the actions have a direct impact to the upland recreation that is the focus of this travel management plan. Some of the actions within the plan do indirectly affect upland recreation – in particular, increasing visitor education on land use ethics and visitor information regarding upland recreation opportunities; developing new facilities and acquiring new access along the river corridor that would link to upland areas.

Recreation Management Guidelines to Meet Public Land Health Standards on BLM Lands in Colorado—Recreation planning and implementation must also conform to the Standards for Public Land Health. These guidelines outline methods that can be used by managers to meet the Standards for Public Land Health. Refer to [Appendix 11](#) for the text of the guidelines.

Other—The development of this travel plan should follow the strategy set forth in BLM’s *National Management Strategy for Motorized Off-highway Vehicle Use on Public Lands* (January 2001) and *The BLM’s Priorities for Recreation and Visitor Services* (May 2003).

Environmental Consequences/Mitigation:

No Action Alternative (Current Use): Under this alternative, OHV use would be limited to existing roads and trails. To manage recreation use under this alternative, BLM would implement and maintain closures on all existing user created and closed routes. This would involve a variety of actions including posting closure signs and installing physical barriers. Travel management signs would not be installed on existing routes indicating what types of travel are permitted although maps of existing routes would be made available to visitors. Every existing route would be open to any type of travel that the route could accommodate except in WSAs where signs would indicate prohibitions on motorized and mechanized uses. Cross-country (off trail) mountain bike, horse, and foot travel would be permitted. This approach to recreation and travel management would be difficult for BLM to implement and confusing for visitors. It would require constant monitoring to ensure that closures are maintained, new user created routes are eliminated, and resource damage and user conflicts are adequately assessed. This system would be confusing to visitors because of the ambiguity regarding which routes are existing, and therefore open to use, especially when closures are breached and signs are vandalized.

Under the No Action Alternative, OHV Open Areas in the Badger Creek, Texas Creek, and Grand Canyon Hills subunits would be maintained. Recreation management would be further complicated in OHV Open Areas because travel off of existing routes is permitted as long as it does not result in resource damage. This would require a level of management and monitoring that would be difficult to achieve, particularly as use continues to increase.

For recreation uses authorized by Special Recreation Permit, this alternative would allow the activities and events currently authorized to continue. It 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 offering non-motorized activities (hunting, mountain biking, horseback riding, and hiking).

The No Action Alternative would be compatible with the recreation settings, provide targeted recreation activity opportunities, experiences, and benefits, and help to achieve recreation related Desired Future Conditions (DFCs) in the **Browns Canyon, Red Gulch, Crampton Mountain and Custer County subunits**. However, in several other subunits, it would be difficult for BLM to achieve or sustain recreation settings, provide targeted activity opportunities, experiences, and benefits to visitors, communities, and the environment, and achieve recreation related DFCs. Details for these subunits are provided below.

In the **Salida subunit**, this alternative would be compatible with the recreation settings but it would not provide targeted recreation opportunities, experiences and benefits. This alternative would be unresponsive to the desire of many local residents because it would

reduce recreation opportunities on public lands that are adjacent to Salida and Poncha Springs. The proposal brought forward by the Salida Mountain Trails Park Committee would not be considered. User conflicts would likely intensify as all users have fewer routes available and the quality of recreation experiences would decrease. Because of the increased amount of mountain bike use in this subunit, allowing mountain bike use to continue off of existing routes is likely to result in resource damage and user conflicts. Intensive recreation management of public lands around Castle Gardens, Methodist Mountain, and S Mountain would be necessary to enforce closures and prevent the proliferation of user created routes and other illegal activities (trash dumping, underage drinking parties, etc.). The No Action Alternative also does not address the impact of target shooting. Concentrated target shooting in certain areas of the subunit is incompatible with the other recreation uses occurring there. It is a safety concern and contributes to trash dumping and littering. This alternative would not help achieve DFCs to reduce impacts from target shooting, littering, and trash dumping and to provide a well-managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses.

In the **Badger Creek subunit**, the No Action Alternative is compatible with the recreation settings but the targeted recreation opportunities, experiences and benefits would not be provided. Management of the existing OHV Open Area, especially in light of increasing motorized use, would require intensive management and monitoring by BLM. User conflicts are likely to increase and the quality of the recreation experience decrease. This alternative also does not address the impact of target shooting. Target shooting in this area is incompatible with the other recreation uses occurring here. It is a safety concern and contributes to trash dumping and littering. The proposal endorsed by the Rocky Mountain Trials Association to establish an area at Turkey Rock for year round use by trials motorcycle riders would not be considered. This alternative would not help achieve DFCs to reduce impacts from target shooting, littering, and trash dumping and to provide a well-managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses.

In the **Sangres Foothills subunit**, the No Action Alternative is generally compatible with the recreation settings. However, maintaining these settings would be better achieved with a system of designated routes because of the heavy use of certain areas (Kerr Gulch) and the growing use of the entire area by local residents. The proliferation of spur routes and user created routes in Wellsville, Kerr Gulch and Falls Gulch adversely affect certain recreation opportunities such as big game hunting. This alternative would not assist in achieving the DFC to provide a well-managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses.

In the **Texas Creek subunit**, the OHV Open designation in the majority of this subunit is not compatible with sustaining the recreation settings, providing targeted recreation opportunities, experiences, and benefits, and achieving recreation related DFCs. The Open designation prompted BLM to take action in 2000 to reduce unacceptable resource damage and user conflicts. The OHV Open area also includes some areas in the SPNM class which are incompatible with this non-motorized recreation setting. Although there

are no existing routes (except for those closed under previous NEPA actions) in the SPNM areas, the OHV Open designation would allow for motorized use off of existing routes. In addition to these conflicts, changing the current management of this area where routes are signed and designated for specific types of travel to a system where only closed routes are signed would confuse visitors and lead to an increase in resource damage and user conflicts. Under this alternative, the proposal brought forward by the Colorado Motorcycle Trail Riders Association (CMTRA) for additional ATV and motorcycle trails would not be considered. The proposal endorsed by the Rocky Mountain Trials Association to establish an area in Reese Gulch for year round use by trials motorcycle riders would not be considered. This alternative would provide economic benefits to local businesses (restaurants, grocery stores) and motorized recreation service providers (motor sports stores, tour operators).

The southwest side of the **Big Hole subunit** is included in the OHV Open category (contiguous with the Open area in Texas Creek). Most of the OHV Open area in Big Hole is in the SPNM class, which is incompatible with this non-motorized recreation setting. Although there are no existing routes in the SPNM area and the terrain is extremely rugged, the OHV Open designation would allow for motorized use in this area. This is incompatible with the DFC to provide opportunities for non-motorized recreation uses in a quiet and remote backcountry setting. Other than the OHV Open designation in part of this subunit, this alternative would maintain the recreation settings, opportunities, experiences and benefits.

In the **West McCoy Gulch subunit**, Fremont County Road 37 is designated as open to ATVs by Fremont County. This designation encourages ATV use on this road and has resulted in more spur routes and extension of existing routes as ATV riders seek additional recreation opportunities. The continued proliferation of spur routes and user created routes would adversely affect certain recreation opportunities such as big game hunting and make it more difficult to maintain the SPNM setting in part of the subunit. This alternative would not help to achieve the recreation related DFC for this subunit because it would not provide visitors with a managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses.

In the **Grape Creek subunit**, the No Action Alternative would generally sustain the recreation settings, provide the targeted recreation opportunities, experiences and benefits, and help achieve the DFC to provide opportunities for recreation uses that are compatible with maintaining the quiet and pristine qualities of the WSA and ACEC. This alternative does not address the need to resolve access issues in the Temple Canyon Park area and eliminate unnecessary Administrative Access routes; both of these actions would enhance recreation settings and opportunities.

In the **Grand Canyon Hills subunit**, the OHV Open designation is not compatible with sustaining the recreation settings and providing targeted recreation opportunities, experiences, and benefits. Part of the OHV Open Area is in the SPNM setting that includes YMCA Mountain and the Temple Canyon portion of Grape Creek. Although there are no existing motorized routes in the SPNM area and the terrain is rugged, the

OHV Open designation would allow for motorized use in this area. Some of the existing routes are spur routes that provide minimal recreation opportunities and benefits but are an on-going management problem for BLM due to trash dumping and other illegal activities. The No Action Alternative would not help to achieve DFCs that visitors travel via a designated system of roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses and that impacts from dumping trash, target shooting, off-road vehicle play, unauthorized trail construction, and other illegal uses are no longer evident.

In the **McIntyre Hills and Road Gulch subunits**, the No Action Alternative would not be compatible with recreation settings, would not provide targeted recreation opportunities and benefits, and would not help achieve recreation related DFCs. The public lands in the Lookout Mountain and Poverty Mountain area border the McIntyre Hills WSA. A continual management issue for BLM is the extension of existing motorized routes into the WSA from Lookout Mountain and Poverty Mountain. Limiting OHVs to existing routes (rather than designated routes) in the Road Gulch subunit adversely affects the recreation setting, opportunities, and benefits in the McIntyre Hills subunit.

Cumulative impacts to Recreation (No Action Alternative): Under this alternative, it would be difficult for BLM to achieve or sustain recreation settings and provide targeted activity opportunities, experiences, and benefits to visitors, communities, and the environment in most of the TMP area.

Summary of Mitigation (No Action Alternative): Post signs to define the boundaries of OHV Open Areas in Badger Creek, Texas Creek, and Grand Canyon Hills subunits.

Alternative A: In general, a system of designated roads and trails is more favorable to sustaining recreation settings and providing targeted recreation opportunities and benefits than the No Action Alternative. This alternative would also restrict mechanized vehicles such as bicycles to designated roads and trails and restrict driving off roads to park, camp, and for other legitimate purposes to a maximum distance of 100 feet from a designated route. These actions would also help sustain recreation settings – particularly in areas with high levels of use. This alternative would provide two OHV Open areas at Turkey Rock and Reese Gulch but they would be small in size, and use would be restricted to trials motorcycles. They are also located in areas where motorcycle trials competitions (under BLM permit) have been held for many years. This would provide targeted recreation opportunities and benefits while sustaining the setting.

Alternative A is generally compatible with the recreation settings in the TMP area; however, there are specific areas where this is not the case and more detail is provided in the specific subunit discussions that follow. Most routes with legal public access would be open to motorized uses, and some user created routes would be designated for use by OHVs and mountain bikes. Some new routes would be conditionally approved for construction under this alternative. In several areas within the SPNM setting,

unnecessary Administrative Access routes would be closed which would help sustain the back country setting.

For recreation uses authorized by Special Recreation Permit, this alternative would allow the activities and events currently authorized to continue. It would enhance opportunities for commercial outfitters that provide ATV, mountain bike, and horseback tours because new ATV, mountain bike, and horse routes would be designated and developed over time. This would also offer benefits to individuals seeking opportunities for guided ATV, mountain bike, and horseback tours. This alternative would potentially benefit outfitters and their clients that hunt mountain lions because driving roads to track lions is a common practice so greater motorized access increases chances of success. This alternative would potentially impact opportunities for big game (elk and deer) hunting outfitters and their clients by increasing motorized access, overall recreation use, and disturbance to elk and deer thereby negatively affecting their clients hunting experience and success.

In the **Browns Canyon subunit**, Alternative A would be compatible with the recreation settings, provide targeted recreation opportunities, experiences and benefits, and help achieve recreation related DFCs. It would help maintain the SPNM setting on the west side of the Arkansas River better than the Current Use Alternative because short motorized spur routes that lead into this area would be closed. It would allow bicycle use on the trail that runs from Hecla Junction along the west side of the Arkansas River.

In the **Salida subunit**, Alternative A would be compatible with the recreation settings, provide targeted recreation opportunities, experiences and benefits, and help achieve recreation related DFCs. This alternative would respond to the desire of many local residents and community groups for enhanced non-motorized recreation opportunities adjacent to Salida and Poncha Springs. To mitigate resource concerns, new routes would be constructed to meet accepted standards, and user created routes that would become designated routes under this alternative would be reconstructed as necessary and maintained regularly. Intensive management of the trail system in partnership with local volunteers and community groups would be necessary to provide the targeted recreation opportunities, experiences and benefits and to address user conflicts. Illegal activities would decrease such as trash dumping, underage drinking parties, and the proliferation of user created routes would decrease. This alternative would produce benefits to the local economy by enhancing hiking and mountain biking opportunities close to local communities. These opportunities would be particularly attractive to residents and visitors during the winter and spring when hiking and mountain biking opportunities on the National Forest are limited due to snowpack.

In the **Badger Creek subunit**, Alternative A would be compatible with the recreation settings, provide targeted recreation opportunities, experiences and benefits, and help achieve recreation related DFCs. Reducing the size and restricting the use of the OHV Open Area to Turkey Rock would sustain the recreation setting and still provide recreation opportunities to the trials motorcycle riders who have traditionally used this area. An agreement with the Rocky Mountain Trials Association to assist with

monitoring and maintaining the area would assist in management. Target shooting would be prohibited in the Turkey Rock area under this alternative. This would address safety concerns, user conflicts, dumping and littering in this area. Dispersed target shooting would be allowed in the rest of the subunit.

In the **Sangres Foothills subunit**, Alternative A would be compatible with sustaining the recreation settings and help achieve recreation related DFCs. It reduces the number of spur routes and user created routes in Kerr Gulch and Falls Gulch that adversely affect certain recreation opportunities such as big game hunting. It would maintain motorized access for hunting and dispersed camping and would enhance ATV riding opportunities in Kerr Gulch.

In **Red Gulch subunit**, Alternative A would be compatible with the recreation settings, provide targeted recreation opportunities, experiences and benefits, and help achieve recreation related DFCs. Motorized recreation use would likely increase in this subunit with the expansion of opportunities for ATV and motorcycle riders on the west side of the Texas Creek subunit (see below).

In the **Texas Creek subunit**, reducing the size and restricting the OHV Open designation to Reese Gulch would help to sustain the recreation settings and provide targeted recreation opportunities, experiences, and benefits; however, maintaining any OHV Open area (even a restricted one) in the Texas Creek subunit with current and projected increases in visitor use would require intensive management and monitoring. In general, Alternative A would enhance motorized recreation opportunities by re-opening closed routes that provide longer rides, greater opportunities for loops, and more miles of single track. It would also re-open the route that connects Red Gulch with the entire Texas Creek trail system – increasing opportunities for ATVs and motorcycles. This alternative would help achieve the recreation related DFC for this subunit by providing numerous opportunities throughout the subunit for motorized recreation uses, including designated routes of varying levels of difficulty for users of 4WDs, ATVs, and motorcycles. This alternative would adversely affect the SPNM recreation setting in the Long Gulch and East Gulch areas by re-opening the routes on the north and west side of Table Mountain and in the East Gulch area. Intensive management of the Texas Creek trail system in partnership with volunteers and user groups would be necessary to sustain the recreation settings and provide the targeted recreation opportunities, experiences and benefits. This alternative would produce benefits to motor sports stores, restaurants, and other businesses in the local area and region that provide goods and services to motorized recreationists.

In the **Big Hole subunit**, closing the OHV Open area would sustain the recreation setting and provide backcountry recreation opportunities and benefits; however, the proposed motorcycle trail would adversely impact the SPNM setting and backcountry recreation opportunities and benefits. It would not help achieve the DFC to provide opportunities for non-motorized recreation uses in a quiet and remote backcountry setting.

In the **West McCoy Gulch subunit**, Alternative A would sustain the recreation setting and provide targeted recreation opportunities and benefits by expanding designated equestrian and foot trails in SPNM setting. It also closes short spur routes while maintaining longer routes for motorized recreation and access for hunting. It would help achieve the DFC for a managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses where some areas are managed for hiking, horseback riding, and mountain biking in quiet and remote settings and other areas provide opportunities for motorized recreation.

In the **McIntyre Hills and Road Gulch subunits**, Alternative A would sustain the recreation settings and provide targeted recreation opportunities and benefits by expanding recreation opportunities on designated trails for equestrians and hikers in McIntyre Hills WSA, Turkey Gulch and Heck Gulch. This alternative would also help maintain the backcountry setting in the McIntyre Hills WSA by reducing motorized access along the WSA boundary in the Lookout Mountain and Poverty Mountain areas. It would help achieve recreation related DFCs. Opportunities for big game and turkey hunting would be maintained because reasonable access would be available. The closure of spur routes would reduce illegal trash dumping along Road Gulch.

In the **Grape Creek subunit**, Alternative A would eliminate unnecessary Administrative Access routes and address the need to resolve access issues in the Temple Canyon Park area; both of these actions would enhance recreation settings and opportunities and help achieve the recreation related DFCs.

In the **Grand Canyon Hills subunit**, changing the OHV Open designation to limited to designated routes area would be compatible with sustaining the recreation settings, provide targeted recreation opportunities, experiences, and benefits, and help achieve recreation related DFCs. It would also close spur routes in Grand Canyon Hills and near Temple Canyon where illegal dumping is a problem. On the public lands adjacent to the Ecology Park, the designation of both existing and user created routes for mountain bike, equestrian and hiking uses would provide recreation opportunities that the public desires.

In the **Crampton Mountain subunit**, Alternative A would be compatible with recreation settings and would enhance recreation opportunities for equestrians and hikers by designating a trail in the Cottonwood Creek area. It would also enhance opportunities for all types of recreation in the area east of Crampton Mountain by providing motorized access to a large area that has been largely inaccessible to the public due to a locked gate near the boundary of a private land in-holding. It would also provide additional motorized access and recreation opportunities on Crampton Mountain itself by reopening a closed route. This helps achieve the DFC to provide opportunities for hiking, horseback riding, and mountain biking in quiet and remote settings in some parts of the subunit, and opportunities for motorized recreation uses in other parts of the subunit.

In the **Custer County subunit**, Alternative A would not affect recreation settings or opportunities because it would close only small segments of road on fragmented public land just north of Silver Cliff. These lands do not offer significant recreation

opportunities. It would help achieve the DFC to provide access for dispersed recreation activities on public land.

Cumulative impacts to Recreation (Alternative A): This alternative would achieve or sustain recreation settings and provide targeted activity opportunities, experiences, and benefits to visitors, communities, and the environment in the majority of the TMP area. It would not achieve or sustain recreation settings and provide targeted activity opportunities, experiences, and benefits to visitors, communities, and the environment in portions of the Texas Creek subunit. Over time, the areas in the SPNM (back country) setting in the Texas Creek subunit would change to the SPM (middle country) setting because of motorized recreation use. In the Big Hole subunit, if the proposed motorcycle trail is constructed, the SPNM (back country) setting would be changed to SPM (middle country) and this portion of the subunit would not provide backcountry recreation opportunities and benefits because of motorized recreation use. This alternative would require intensive management of public lands in the Salida, Badger Creek, and Texas Creek subunits to achieve or sustain recreation settings and provide targeted activity opportunities, experiences, and benefits to visitors, communities, and the environment.

Summary of Mitigation (Alternative A):

Work with Salida Mountain Trails Park Committee, other community groups, and individuals to manage the trail system in the Salida subunit.

Develop an agreement with the Rocky Mountain Trials Association to assist with monitoring and maintaining the OHV Open Areas at Turkey Rock and Reese Gulch.

Develop partnerships with user groups to assist with management of the Texas Creek trail system.

Alternative B: As in Alternative A, a system of designated roads and trails is more favorable to sustaining recreation settings and providing targeted recreation opportunities and benefits than the No Action Alternative. Alternative B would not designate any areas in the OHV Open category. More of the existing roads and trails and user created routes would be closed to OHVs and mountain bikes under this alternative as compared to the No Action Alternative and Alternative A. New OHV or mountain bike trails would not be constructed although some user created routes would become designated routes. Mechanized vehicles such as bicycles would be restricted to designated roads and trails, and driving off roads to park, camp, and for other legitimate purposes would be restricted to a maximum distance of 100 feet from a designated route. Target shooting would not be restricted within the TMP area – the impacts of this are addressed in the Badger Creek subunit discussion below.

For recreation uses authorized by Special Recreation Permit, Alternative B would allow the activities and events currently authorized to continue. It would benefit commercial big game (elk and deer) outfitters by reducing human contact with these species by closing many existing motorized routes. This would enhance the experience of their

clients and potentially increase success in tracking and hunting elk and deer. This alternative would potentially impact outfitters and their clients hunting mountain lions because it would reduce their opportunities to track and hunt lions from the roads.

Alternative B is generally compatible with the recreation settings in the TMP area; however, there are specific areas where this alternative would change the recreation setting and would not provide targeted recreation opportunities, experiences, and benefits. More detail is provided in the specific subunit discussions below. In the **Browns Canyon and Custer County subunits**, the impacts of this alternative are the same as Alternative A.

In the **Salida subunit**, Alternative B would be compatible with the recreation settings and it would provide targeted recreation opportunities, experiences and benefits; however, not to the extent of Alternative A. It would assist in achieving recreation-related DFCs. This alternative would be somewhat responsive to the desire of local residents and community groups for enhanced non-motorized recreation opportunities adjacent to Salida and Poncha Springs because it would provide some additional opportunities for bicycling, equestrian and hiking uses – mostly on user created routes. It would not provide for the construction of new trails. To mitigate resource concerns, user created routes that become designated routes under this alternative would be reconstructed as necessary and maintained regularly. Under this alternative, illegal activities would decrease such as trash dumping, underage drinking parties, and the proliferation of user created routes would decrease. Management of the trail system in partnership with local volunteers and community groups would be necessary to provide the targeted recreation opportunities, experiences and benefits and to address user conflicts. This alternative would produce some limited benefits to the local economy by enhancing hiking and mountain biking opportunities close to local communities.

In the **Badger Creek subunit**, Alternative B would be compatible with the recreation settings and provide some of targeted recreation opportunities, experiences and benefits. Removing the OHV Open designation would sustain the recreation settings; however, it would not provide the recreation opportunities and benefits to trials motorcycle riders who have traditionally used this area. This alternative would not prohibit target shooting in the Turkey Rock area. This would be incompatible with the other recreation uses and would not address concerns related to safety, trash dumping and littering. It would not help achieve the DFC to reduce impacts from target shooting, littering, and trash dumping.

In the **Red Gulch subunit**, Alternative B would be compatible with the recreation settings but would provide fewer motorized recreation opportunities than Alternatives A and C. It would not provide a connection for motorized recreation between Red Gulch and Texas Creek. It would help to achieve recreation related DFCs.

In the **Texas Creek subunit**, Alternative B would be compatible with the recreation settings but would provide fewer motorized recreation opportunities and associated benefits than Alternatives A and C. By reducing motorized recreation opportunities, it

would not assist in meeting the recreation related DFC for this subunit. Changing the OHV Open designation to designated routes would enhance the recreation settings although it would provide fewer opportunities and benefits to those seeking off route challenges. This alternative would sustain SPNM recreation setting in the Long Gulch and East Gulch areas by maintaining existing route closures. This alternative would produce more limited benefits to the businesses that serve motorized recreationists as compared to the other Alternatives.

In the **Big Hole subunit**, closing the OHV Open area would sustain the recreation setting and provide backcountry recreation opportunities and benefits. It would also help to achieve the DFC to provide opportunities for non-motorized recreation uses in a quiet and remote backcountry setting.

In the **Crampton Mountain subunit**, Alternative B would reduce motorized access in the Soapy Hill and Crampton Mountain areas. This would not provide targeted recreation opportunities and benefits to visitors such as big game hunters because of the reduction in motorized routes that provide access to a relatively large and otherwise inaccessible area of public land in the southern part of the subunit. Also, this would shift the recreation setting in this area from SPM to SPNM. This alternative would not enhance recreation opportunities for equestrians and hikers because a new trail would not be designated in the Cottonwood Creek area. This alternative would only minimally achieve the DFC to provide opportunities for hiking, horseback riding, and mountain biking in quiet and remote settings in some parts of the subunit, and opportunities for motorized recreation uses in other parts of the subunit.

In the **Sangres Foothills subunit**, Alternative B would be compatible with sustaining the recreation settings except in the Wellsville area. By eliminating most motorized recreation near Wellsville, the SPM setting would shift to SPNM. In Kerr Gulch, it would reduce the number of spur routes and user created routes – particularly along the lower part of the road. It would reduce opportunities for dispersed camping and motorized recreation in the upper part of Kerr Gulch near the National Forest boundary. In Falls Gulch, the only one designated motorized route would be the main road; this would reduce access for big game hunting. This alternative would assist in achieving the DFC to provide a well-managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses.

In the **West McCoy Gulch subunit**, all motorized routes (except for 3 short spurs) would be closed. This would change the setting on the west side of the subunit from SPM to SPNM. Alternative B would not enhance recreation opportunities for equestrian and hiking use on designated trails. Because it substantially limits motorized travel and new non-motorized routes, it would only partially assist in achieving the DFC for a managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses where some areas are managed for hiking, horseback riding, and mountain biking in quiet and remote settings and other areas provide opportunities for motorized recreation. Suggested mitigation for this alternative: Request Fremont

County to prohibit ATV use on the county road since no recreation motorized opportunities would be available on adjacent public lands.

In the **McIntyre Hills subunit**, the recreation setting would be sustained. Alternative B would slightly enhance recreation opportunities for equestrian and hiking use on designated trails. It would assist in achieving recreation related DFCs.

In the **Road Gulch subunit**, the closure of existing routes next to the McIntyre Hills WSA boundary in the Poverty Mountain area would help maintain the SPNM setting in the WSA. Recreation opportunities that require motorized access into Turkey Gulch and Likely Gulch would be reduced; however, recreation opportunities for equestrians and hikers would be enhanced in Turkey Gulch. This alternative would assist in achieving recreation related DFCs.

In the **Grand Canyon Hills subunit**, Alternative B would reduce motorized recreation opportunities in Grand Canyon Hills by leaving only the main route open to motorized use. It would not enhance recreation opportunities for equestrians and hikers on designated trails in Temple Canyon. This alternative would not help to achieve the DFC that visitors travel via a designated system of roads and trails that serves a variety of motorized, mechanized, and non-motorized travel uses.

In the **Grape Creek subunit**, Alternative B would sustain the recreation settings but it would not provide the targeted recreation opportunities and benefits. It would not provide for the designation of an equestrian and hiking trail in Grape Creek. This alternative would not address the need to resolve access issues in the Temple Canyon Park area that would help to achieve the DFC to maintain traditional access from Temple Canyon to the Grape Creek State Trust Lands and BLM public lands for non-motorized travel uses. The Bear Gulch Road would be closed to motorized access at the private subdivision/National Forest boundary (2.75 miles). This would significantly reduce recreation opportunities and benefits to visitors.

Cumulative impacts to Recreation (Alternative B): Under this alternative, it would be difficult for BLM to achieve or sustain recreation settings and provide targeted activity opportunities, experiences, and benefits to visitors, communities, and the environment in some subunits. Because this alternative would substantially reduce motorized recreation opportunities, it would change SPM (middle country) settings to SPNM (back country) in Crampton Mountain, Sangres Foothills, and West McCoy Gulch subunits. This also would change the recreation opportunities and benefits provided by these areas over time. In the Texas Creek subunit, this alternative would sustain the recreation settings but it produces limited benefits to the visitors and to businesses that serve motorized recreationists over time. Reducing the number of designated routes in the Texas Creek subunit would require strict controls to manage the impacts of increasing use of this area. In the Grand Canyon Hills and Grape Creek subunits, Alternative B would not address the access issues in the Temple Canyon area and the demand for additional recreation opportunities for equestrians and hikers close to Canon City. Over time, this would lead to increasing user conflicts, user created routes, and the need for stricter controls as use in

this area increases. The closure of the Bear Gulch Road to motorized use at the private subdivision/National Forest boundary would significantly alter the recreation opportunities and benefits provided to visitors by reducing access to Grape Creek. A substantial decrease in hiking, hunting, and fishing use would occur in this part of Grape Creek.

Summary of Mitigation (Alternative B):

Request Fremont County to prohibit ATV use on the county road since no recreation motorized opportunities would be available on adjacent public lands.

Work with Salida Mountain Trails Park Committee, other community groups, and individuals to manage the trail system in the Salida subunit.

Develop partnerships with user groups to assist with management of the Texas Creek trail system.

Alternative C (Proposed Action): As in Alternative A and B, a system of designated roads and trails is more favorable to sustaining recreation settings and providing targeted recreation opportunities and benefits than the No Action Alternative. A new **OHV Open** designation would be established at Turkey Rock where motorized travel off designated routes would be limited to users of trials motorcycles, only. There would no longer be any areas in the OHV Open category in the Texas Creek and Grand Canyon Hills subunits. BLM would prohibit target shooting at Turkey Rock and in areas near Salida to improve public safety and reduce conflicts with other uses. Mechanized vehicles such as bicycles would be restricted to designated roads and trails, and driving off roads to park, camp, and other legitimate purposes would be restricted to a maximum distance of 100 feet from a designated route. Some new route construction would be allowed under this alternative.

For recreation uses authorized by Special Recreation Permit, Alternative C would allow the activities and events currently authorized to continue. It would enhance opportunities for commercial outfitters that provide mountain bike and horseback tours because new mountain bike and horse routes would be designated and developed over time. It would slightly enhance opportunities for ATV tours in the Texas Creek area by providing some additional routes. 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.

This alternative is generally compatible with the recreation settings in the TMP area; however, there are specific areas where this alternative would change the recreation setting and would not provide targeted recreation opportunities, experiences, and benefits. More detail is provided in the specific subunit discussions below. In the **Browns Canyon, McIntyre Hills, Grape Creek, and Custer County subunits**, the

impacts are the same as Alternative A. For the **Big Hole subunit**, the impacts are the same as Alternative B.

In the **Salida subunit**, Alternative C would be compatible with the recreation settings and it would provide targeted recreation opportunities, experiences and benefits; however, not to the extent of Alternative A but it would provide more opportunities than Alternative B. It would assist in achieving recreation-related DFCs. This alternative would be somewhat responsive to the desire of local residents and community groups for enhanced non-motorized recreation opportunities adjacent to Salida and Poncha Springs because it would provide some additional opportunities for bicycling, equestrian and hiking uses on user created routes that would be designated and on some new routes that would be constructed. All of the non-motorized routes would be multi-use trails that would be shared by mountain bikers, hikers, and equestrians. To mitigate resource concerns, new routes would be constructed to meet accepted standards, and user created routes that would become designated routes under this alternative would be reconstructed as necessary and maintained regularly. Under this alternative, illegal activities would decrease such as trash dumping, underage drinking parties, and the proliferation of user created routes would decrease. Management of the trail system in partnership with local volunteers and community groups would be necessary to provide the targeted recreation opportunities, experiences and benefits and to address user conflicts. This alternative would produce benefits to the local economy by enhancing hiking and mountain biking opportunities close to local communities. Target shooting would be prohibited on certain public lands near Salida addressing safety, trash dumping and littering concerns.

In the **Badger Creek subunit**, Alternative C would be compatible with the recreation settings and would provide targeted recreation opportunities, experiences and benefits. Removing the OHV Open designation would sustain the recreation settings. A very limited OHV Open area would be designated around Turkey Rock to provide recreation opportunities and benefits to trials motorcycle riders who have traditionally used this area. This alternative also would prohibit target shooting in the Turkey Rock area addressing safety, trash dumping and littering concerns.

In the **Red Gulch subunit**, the impacts of Alternative C would be very similar to the Current Use Alternative except that it would shift some (about 3 miles) of the motorized recreation opportunities from full-size vehicles to ATVs and reduce motorized use of spur routes. This alternative would be compatible with the recreation settings, provide targeted recreation opportunities, experiences and benefits, and assist in achieving recreation related DFCs.

In the **Texas Creek subunit**, Alternative C somewhat enhances motorized recreation opportunities and associated benefits as compared to the Current Use Alternative but does not provide the opportunities and benefits of Alternative A. It would assist in achieving the recreation related DFC for this subunit. Changing the OHV Open designation to designated routes and closing spur routes would maintain the recreation settings and require less intensive management than Alternative A. This alternative would provide fewer opportunities to those seeking off route challenges and dispersed camping

opportunities. This alternative would not sustain SPNM recreation setting in the Long Gulch area because the closed route in this area would be re-opened for motorized recreation (ATVs, motorcycles). This alternative would produce benefits to the businesses similar to the Current Use Alternative.

In the **Crampton Mountain subunit**, the impacts would be similar to Alternative A except that this alternative would not re-open one of the route closures (2.3 miles) on Crampton Mountain.

In the **Sangres Foothills subunit**, Alternative C would be compatible with sustaining the recreation settings. This alternative would assist in achieving the DFC to provide a well-managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses. In Kerr Gulch, it reduces the number of spur routes and user created routes – particularly along the lower part of the road. It somewhat reduces opportunities for dispersed camping and motorized recreation in the upper part of Kerr Gulch near the National Forest boundary. It would not enhance ATV riding opportunities in Kerr Gulch. Motorized recreation opportunities would be available in the Wellsville area although a few spur routes would be closed.

In the **West McCoy Gulch subunit**, Alternative C would sustain the recreation setting and provide targeted recreation opportunities and benefits although not to the same extent as Alternative A because there would be fewer opportunities for equestrians and hikers on designated trails in SPNM setting, and fewer opportunities for ATV riders. It would assist in achieving the DFC for a managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses where some areas are managed for hiking, horseback riding, and mountain biking in quiet and remote settings and other areas provide opportunities for motorized recreation. Suggested mitigation for this alternative: Request Fremont County to prohibit ATV use on the county road since few recreation motorized opportunities would be available on adjacent public lands.

In the **Road Gulch subunit**, Alternative C would sustain the recreation settings and provide targeted recreation opportunities and benefits by expanding recreation opportunities on designated trails for equestrians and hikers. This alternative would also help maintain the backcountry setting in the McIntyre Hills WSA by reducing motorized access along the WSA boundary in the Lookout Mountain and Poverty Mountain areas. Opportunities for big game and turkey hunting would be maintained because reasonable access would be available. The closure of spur routes would reduce illegal trash dumping along Road Gulch. It would assist in achieving recreation related DFCs.

In the **Grand Canyon Hills subunit**, Alternative C would sustain the recreation settings, provide targeted recreation opportunities and benefits, and help achieve recreation related DFCs. It would enhance recreation opportunities for mountain bikers, equestrians and hikers on public lands near the Ecology Park, Temple Canyon, and Dawson Ranch. It would maintain motorized recreation opportunities in the Grand Canyon Hills area while closing spur routes that are problem areas for illegal dumping.

Cumulative impacts to Recreation (Alternative C): This alternative would be compatible with the recreation settings and provide targeted activity opportunities, experiences, and benefits to visitors, communities, and the environment in the majority of the TMP area over the long term. In the Texas Creek subunit, it would not sustain SPNM recreation setting in the Long Gulch area because the closed route in this area would be re-opened for ATV and motorcycle use. This would change the SPNM (back country) setting to SPM (middle country) and provide different recreation opportunities and benefits.

Summary of Mitigation (Alternative C):

Request Fremont County to prohibit ATV use on the county road since no recreation motorized opportunities would be available on adjacent public lands.

Develop an agreement with the Rocky Mountain Trials Association to assist with monitoring and maintaining the OHV Open Area at Turkey Rock.

Work with Salida Mountain Trails Park Committee, other community groups, and individuals to manage the trail system in the Salida subunit.

Develop partnerships with user groups to assist with management of the Texas Creek trail system.

Mitigation Common to All Alternatives:

1. Monitor and evaluate the levels and types of uses and visitor experiences on existing or designated routes to evaluate impacts on achieving or sustaining recreation settings and providing targeted opportunities, experiences, and benefits.
2. Develop visitor information about travel management and land use ethics, and distribute this information widely and in a variety of formats.
3. Provide accurate maps, signs, and other information relevant to travel management for public land visitors.
4. Develop staging and parking areas and trailheads at key access points.
5. Develop and maintain partnerships with key stakeholders to assist with travel management.
6. As necessary, implement temporary route closures to protect infrastructure, resources and public safety.
7. Contact visitors on-site by using BLM staff, volunteers, and partners.

8. To maintain dispersed camping opportunities along routes open to motorized and mechanized travel, identify short spur routes that provide access to appropriate campsites and incorporate them into the travel system.

VISUAL RESOURCES

Affected Environment: The Arkansas River Travel Management area offers a great diversity of landforms and vegetation. The area is highly valued by the public and local communities for its scenic quality. Browns Canyon ACEC, Arkansas Canyonlands ACEC, and Grape Creek ACEC were designated primarily or in part because of the outstanding scenic quality of these areas. Between Cañon City and Salida, US 50 follows a scenic route, closely following the Arkansas River for the majority of this distance; the highway passes through rugged canyons and opens into valleys that provide scenic vistas of the Sangre de Cristo and Sawatch mountain ranges. In 2005, the Colorado Department of Transportation designated the Collegiate Peaks Scenic Byway—that follows US 50 and US 24 through Salida, Poncha Springs, Buena Vista, and Granite. Colorado Highway 96 near Westcliffe is part of the Frontier Pathways National Scenic Byway. Colorado Highway 9 along the eastern boundary of the planning area is part of the Gold Belt Tour National Scenic Byway. Preserving scenic quality is important to local communities because they depend on tourism as a major component of their economy.

On public lands in the Arkansas River Travel Management area, the existing impacts to visual resources are related to roads, fences, communication sites, utility lines and rights-of-way, active mineral material (gravel) mining, land treatments (chaining, rollerchopping, etc.), and impacts related to abandoned mines (shafts, mine tailings, and structures). On private lands, many of the same impacts exist in addition to residential and commercial development and the railroad right-of-way along the Arkansas River.

Roads and trails are visual intrusions but they also provide a means for the public to experience and enjoy the outstanding scenery. Many of the roads within the planning area have been in existence for decades and were developed by miners, ranchers, and loggers. These roads were not designed to minimize impacts to visual resources. In many areas, the visual impact of these roads is decreased substantially because of screening provided by highly varied topography and vegetation.

Over the past ten years, the proliferation of user created routes in certain areas has impacted scenic quality. This is most evident in areas such as Castle Gardens and S Mountain (Salida subunit), Kerr Gulch and Howard area (Sangres Foothills subunit), and portions of the Texas Creek subunit.

Visual Resource Management (VRM) is a classification system for identifying and characterizing visual resource values. VRM classes (I through V) were assigned in the RMP for all BLM administered lands in the Royal Gorge Field Office. Any projects or on-going management on public lands should meet the applicable VRM class objectives. In the planning area, public lands were identified in three of the five VRM classes (II, III, and IV). There are no VRM Class I areas within the planning area; there are no VRM class V areas in the Royal Gorge Field Office.

The following is a brief description of the class, class objectives, and general locations of public lands in each class within the planning area. A detailed map showing the VRM classes for the planning area can be found in [Map 34](#).

Class II – Areas highly valued for visual resources. Management activities may be seen, but should not attract the attention of the casual observer. The general location of these public lands within the planning area is along the Arkansas River, along Grape Creek north of Temple Canyon Park, along Colorado Highway 9, and Colorado Highway 69 along Texas Creek.

Class III – Areas moderately valued for visual resources. Management activities may attract attention, but should not dominate the view of the casual observer. The general location of these public lands within the planning area is north of the Arkansas River corridor, Copper Gulch, Temple Canyon, West McCoy Gulch, and Custer County except for public lands along the base of the Sangre de Cristo Mountains (VRM Class II).

Class IV – Areas of least value for visual resources. Management activities may dominate the view and be the major focus of viewer attention. The general location of these public lands within the planning area is the DeWeese Plateau.

Environmental Consequences/Mitigation:

No Action Alternative (Current Use): This alternative provides the greatest amount of motorized public access (232 miles) and also the greatest amount of administrative access (125.7 miles). Generally, fewer routes and less mileage enhance scenic quality while more routes and mileage reduce scenic quality. Maintaining the OHV Open designations in Grand Canyon Hills, Texas Creek, and Sand Gulch areas would degrade scenic quality in these areas over time due to an increase in the number and density of roads and trails. The existing OHV Open designations do not meet VRM Class II objectives that were established for these areas in the RMP. The No Action Alternative would also close 66.9 miles of user created routes. With effective closures in place, these routes would become less noticeable over time. This would enhance scenic quality in areas where these routes have increased in recent years (Castle Gardens, S Mountain, Kerr Gulch, Howard area, and portions of the Texas Creek subunit). Effective closures of user created routes would be necessary to meet management objectives in VRM Class II areas.

Alternative A: This alternative would provide the greatest amount of new trails (both motorized and non-motorized). This includes designating several miles of trails for bicycle, horse and foot use in Salida subunit – some these trails would follow existing user created routes and some would require new construction. To meet VRM Class II objectives in the Salida subunit where these trails are proposed, new trail construction proposals would be required to incorporate design techniques that reduce visual impacts. Additionally, regular maintenance of and reconstruction of portions of the user created routes that would be designated under Alternative A would assist in maintaining scenic quality and reducing visual impact. The re-opening of closed routes in the Texas Creek subunit would increase the density of roads and trails. Generally, increasing the density of roads and trails reduces scenic quality; however, these routes are within a VRM Class III area and this would meet the VRM Class III objectives. The construction of a new

motorcycle route in the Big Hole subunit occurs primarily in a VRM Class III area; however, the lower segment of this proposed route is within the VRM Class II area. Additionally, portions of this route may be visible from US 50; therefore, careful consideration to location and design would be necessary for this route to meet VRM Class II objectives. New OHV Open designations at Turkey Rock and Reese Gulch (for trials bikes only) would not substantially affect scenic quality due to the limited extent of this use. The miles of routes designated for equestrian use would double as compared to the Current Use Alternative. Most of these routes would follow old roads that are currently closed. These designations would not affect visual resources. The reduction in administrative access and the closure of many user created routes would reduce visual impacts.

Alternative B: This alternative would reduce number of miles of designated routes by approximately one-third as compared to the Current Use Alternative. Most of this reduction would be in the mileage of motorized routes. The number of miles of designated bicycle routes would increase (in the Salida subunit) from 2.5 to 16.8 – these routes would follow existing user created trails. Regular maintenance of and reconstruction of portions of the user created routes that would be designated under this alternative would assist in maintaining scenic quality and reducing visual impact. The current OHV Open designations in the Grand Canyon Hills, Texas Creek, and Sand Gulch areas would be changed to OHV Limited to Designated Roads and Trails. Alternative B would enhance scenic quality and reduce impacts to visual resources throughout the planning area. It would meet all VRM objectives for the planning area.

Alternative C: Compared to the Current Use Alternative, this alternative would reduce motorized routes by approximately 51 miles and increase designated non-motorized routes by approximately 42 miles. Administrative access routes would decrease by 22.5 miles. The reduction in motorized routes, administrative access routes, and the closure of many user created routes would reduce visual impacts. The designated bicycle routes (in the Salida subunit) routes would follow existing user created trails. Regular maintenance of and reconstruction of portions of the user created routes that would be designated under this alternative would assist in maintaining scenic quality and reducing visual impact. Designated equestrian routes would follow old roads that are currently closed; thereby, having very little impact on visual resources. The current OHV Open designations in the Grand Canyon Hills, Texas Creek, and Sand Gulch areas would be changed to OHV Limited to Designated Roads and Trails. New OHV Open designation at Turkey Rock (for trials bikes only) would not substantially affect scenic quality due to the limited extent of this use. Alternative C would enhance scenic quality and reduce impacts to visual resources throughout the planning area. It would meet all VRM objectives for the planning area.

Mitigation Common to All Alternatives: Any new routes should meet VRM class objectives and incorporate design elements that reduce visual impacts. In VRM Class II areas, designated routes that follow user created routes should be evaluated for maintenance and reconstruction needs in order to meet VRM Class II objectives.

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 in the Arkansas River basin 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, the proposed *Over the River* art project on the Arkansas River, and commercial forest products harvesting. The cumulative effects to visual resources from these activities in addition to action alternatives will be long-term and most adverse and dispersed in the No Action and Alternative A, contained and long-term in Alternatives B and C.

TRANSPORTATION & ACCESS

Affected Environment: Within the Arkansas River TMP planning area the existing BLM road network consists primarily of low standard dirt roads that are linked to all-weather county, state, and Federal highways. Many of the BLM roads were developed fifty to sixty years ago to serve needs for temporary or intermittent access and were not designed to serve sustained high levels of use. Most of the roads were developed to provide access for specific activities, such as: mining, 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. Changes in ownership have also influenced the character of the existing roads, with BLM acquiring lands that had previously been under private ownership. As a result, some roads were developed when the lands were under private ownership, which were never intended to serve the access needs of the public.

In today's environment, BLM roads are needed to serve both functional and recreational needs. Over the years, some roads 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. Roads are still needed to access power lines, build and maintain fences for grazing, etc., but they are also needed for serving a wide variety of recreational uses as well.

In preparing for the TMP, one of the first tasks was to conduct an inventory of the existing roads and trails. Whenever possible, the inventory utilized global positioning satellite (GPS) and geographic information system (GIS) technologies to accurately locate and accumulate information about the roads and trails. 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. With few exceptions, all routes included in the inventory were ground-proofed and recorded using GPS.

The inventory identified a total of 661 miles of existing roads and trails that are just on the BLM public lands, and which does not include roads on surrounding private lands or other ownerships that lead onto BLM lands. The total mileage includes 112 miles of Non-BLM roads that are managed under county, state, or Federal highway jurisdictions, and which as a general rule* are not affected by decisions made in this plan and would remain open to the public under all of the alternatives. Subtracting the Non-BLM mileage from the total miles leaves a balance of 549

miles, which includes all of the BLM-managed routes that would be affected by the decisions made in the plan (see Table 8-1 for details).

** Exceptions to this general rule would occur under Alternatives A, B, and C, under which BLM would request Fremont and Chaffee County to vacate 4.3 miles of county roads that are currently not being maintained by the counties. Under all three alternatives, 3.7 miles of these roads would remain open to the public under BLM management and 0.6 miles would be closed.*

Table 8-1 - Existing Routes on Public Lands by Travel Classes and Managing Jurisdiction

BLM Travel Routes		
Travel Way Classes	Class Description	Mileage
Class 1	Primary Highway	None
Class 2	Secondary Highway	None
Class 3a	Lt. duty maintained - paved	None
Class 3b	Lt. duty maintained - graveled	15.9
Class 3c	Lt. duty maintained - dirt	38.6
Class 4	Primitive Road	112.0
Class 5	Primitive 4WD	191.3
Class 6a	ATV Trail	33.3
Class 6b	Single track - motorized	3.5
Class 6c	Single track - mechanized	2.5
Class 6d	Single track – horse	20.5
Class 6e	Single track - foot	7.5
Class 6f	Non-motorized road	3.5
Class 7	Closed Road	52.2
Subtotal	BLM Recognized Travel Routes	480.8
User Created Routes		
Class 4	Primitive Road	3.5
Class 5	Primitive 4WD	8.5
Class 6a	ATV Trail	38.4
Class 6b	Single track – motorized	4.0
Class 6c	Single track – mechanized	12.5
Class 6d	Single track – horse	0.2
Class 6e	Single track - foot	1.0
Subtotal	User Created Routes	68.1
Subtotal	All Routes Under BLM Jurisdiction	548.9
Non-BLM Travel Routes		
Class 1	Primary Highway	26.4
Class 2	Secondary Highway	20.9
Class 3a	Lt. duty maintained – paved	0.2
Class 3b	Lt. duty maintained – graveled	35.6
Class 3c	Lt. duty maintained – dirt	10.6
Class 4	Primitive Road	7.5
Class 5	Primitive 4WD	10.6
Subtotal	All Routes Under Other Jurisdiction	111.8
Grand Total	All Routes – BLM & Other Jurisdictions	660.7

The travel way classifications used in Table 8-1 describe the physical characteristics of the routes in terms of the widths, surfaces, and the types of traffic that they are intended to accommodate. For the purposes of the travel management plan, however, the roads were also classified to characterize them in terms of designated uses that identify the range of travel uses that are

available on the individual roads and trails. The travel uses classification system used in this plan conforms to the standards adopted by the Colorado Natural Resources Group, except for the User Created, Non-BLM, and Administrative Access classes. The latter three categories were developed specifically to address routes that do not fit within the standard Colorado Natural Resources Group classification system.

The mileages of existing routes by travel use categories are summarized in Table 8-2. The locations of the routes are displayed on [Map 12](#) for the No Action Alternative and the explanation of the travel use categories is located in [Appendix 4](#). When interpreting Table 8-2 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 General category are primarily intended for use with full-size motor 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 roads with motor vehicles does not offer the type of recreational experience that they would normally seek.

Table 8-2 Arkansas River TMP Travel Use Categories – Current Existing Routes

Class Abbreviation	Primary Use – Secondary Uses	Mileage
F	Foot	5.4
E	<i>Foot, horse</i>	27.2
B	<i>Foot, horse, bicycle</i>	2.5
M	<i>Foot, horse, bicycle, motorcycle</i>	2.8
A	<i>Foot, horse, bicycle, motorcycle, ATV</i>	26.4
O	General - all motorized, mechanized, non-motorized uses	203.1
Non-BLM	County, state, Federal highways	111.8
AA*	Available for administrative use only	125.7
CL*	Closed to all motorized and mechanized uses	87.6
UC	User Created – routes created by recreational uses after 1996	68.1
Total		660.7

* Routes included in the AA category are not available to the general public for motorized or mechanized uses. However, some are needed to provide administrative access for BLM personnel and authorized permit and right-of-way holders. The routes included in the AA 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 horse travel. Routes included in the CL category are also not available to the general public for motorized or mechanized uses. In some cases the CL routes may be identified for mechanical reclamation while others may be closed and allowed to reclaim naturally.

Roads and trails impact soils, vegetation, water, air quality, wildlife habitat, and facilitate the dispersal of noxious weeds. Poorly designed and improperly maintained roads and trails promote erosion that degrades streams and wetlands with associated reductions in fish habitat and productivity. The construction of new roads and trails 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. All of these factors were considered in analyzing and comparing the environmental impacts and required maintenance needs for the alternatives that were addressed in this plan. A detailed analysis and comparison of the costs associated with implementing each alternative, including maintenance costs, are included in [Appendix 12 – Cost Analysis of Implementing TMP Alternatives](#).

Other Transportation Management Issues Addressed in the TMP: During the preparation of the Arkansas River TMP, the following issues surfaced that have a direct bearing on the management of the BLM transportation system.

BLM Maintenance of County Roads - During the inventory phase of the TMP, a number of county roads were identified in Fremont and Chaffee County that provide important public access to BLM lands but that are not being maintained by the counties (See [Map 35](#)). The roads in question include FCR 59A near Swissvale; FCR 101A (Kerr Gulch); FCR 40 (Big Cottonwood Creek); FCR 13 (Sand Gulch-Cotopaxi); FCR 217A (Texas Gulch); FCR 10X (Turkey Gulch); FCR 20X (Green Mountain Mine); FCR 293A (Poverty Mountain); FCR 307A (Cottonwood Ridge); FCR 309A (Sand Gulch-12 Mile Park); and CCR 103 (Cleora).

Because these roads provide important public access to high use areas on public lands, there is a need for the roads to be maintained. However, because BLM does not have legal authority to spend Federal dollars on maintaining county roads, it cannot maintain the roads in question. BLM proposes coordinating with both counties to resolve this issue by either including the roads in county maintenance schedules, vacating the county right-of-ways so that BLM can maintain them, or entering into agreements under which BLM and the counties would exchange maintenance work so that the roads would be maintained.

Environmental Consequences:

No Action Alternative: Under the No Action Alternative the existing BLM transportation system would be unaltered, with the exception of closing 68 miles of User Created routes. No other closures or restrictions on the uses of existing routes would be implemented as a result of the TMP. The OHV Open designations for Grand Canyon Hills, Texas Creek, and Sand Gulch would not be changed to OHV Limited. Full use and travel by motor vehicles would be allowed to continue in these areas and the use of motorized vehicles would be limited to existing roads and trails in all OHV Limited

areas. The current policies allowing the use of bicycles and other mechanized vehicles off existing routes, and driving motor vehicles 300 feet off existing roads to park, camp, or retrieve game, would be unchanged.

Under the No Action Alternative, the public would be allowed to drive motorized vehicles on any existing road except for those that are posted on the ground as closed to motor vehicles or restricted to certain uses. Current management and enforcement problems that result from the removal of closure signs would continue to occur and would likely increase in the future as more people use the public lands for motorized forms of recreation. The current travel management policy of limiting OHVs to existing routes would continue to be confusing for the public; contributing to the proliferation of new routes and conflicts with non-motorized users. Continuing under the current policy of allowing vehicles to be drive up to 300 feet off existing roads for parking, camping, and game retrieval would also contribute to additional route proliferation. Allowing cross-country use of mountain bikes would result in the creation of new trails in areas where mountain biking is popular.

Under this alternative the impacts on the planning area's transportation system would steadily grow over time. No immediate need for additional route construction or maintenance would result from this alternative; however, as recreation uses on public lands increase, the frequency and number of miles of routes requiring maintenance would gradually increase over time. Increased reconstruction and maintenance efforts would be needed to address the deterioration of routes that were not designed for sustained high levels of use. The closure and rehabilitation of some routes would also be needed where severe resource damage or conflicts with other uses occur.

Under this alternative, approximately 203 miles of roads would be available to the public to use with full-size vehicles (miles of routes included in [Table 2-1](#) in the General category). In addition, another 126 miles of roads would be managed for administrative access (see [Table 2-1](#) – AA category). Due to the high number of miles, the costs of maintaining roads under the No Action Alternative would be higher than the maintenance costs for any of the other alternatives (See [Appendix 12](#) – Cost Analysis of Implementing TMP Alternatives). Under the No Action Alternative the estimated average annual cost of maintaining roads in the planning area would be \$10,725; compared to \$8,425 for Alternative A, \$5,950 for Alternative B, and \$8,075 for Alternative C.

In addition to the General and Administrative Access roads, the No Action Alternative would also include maintaining 28 miles of motorized trails and 35 miles of non-motorized trails (see [Table 2-1](#)). The estimated annual costs of maintaining these trails would be \$8,112; compared to \$14,388 for Alternative A, \$7,172 for Alternative B, and \$9,922 for Alternative C (See [Appendix 12](#)).

The total costs of implementing the No Action Alternative are estimated to be \$18,837; compared to \$514,957 for Alternative A, \$163,064 for Alternative B, and \$274,507 for Alternative C. The large difference in the comparative costs is due to the fact that the No Action Alternative would not require initial implementation costs for constructing and

reconstructing roads and trails, closing and reclaiming routes, and installing travel management signs and kiosks that would occur under the other alternatives. Many of these actions, however, would probably still occur under the No Action Alternative but the costs of implementing them would be deferred into the future.

Besides the maintenance and operational costs that are directly associated with administering the transportation system, there are also environmental costs that should be considered. Under the No Action Alternative, achieving public land health standards and Desired Future Conditions throughout the planning area would be difficult. The environmental costs to vegetation, water, wildlife, and other resources resulting from the increased use of poorly located and designed roads and trails would steadily grow over time. Conflicts resulting from the incompatible uses of roads and trails would also steadily increase. Existing routes that currently have low levels of use would experience growing levels of motorized activity, resulting in greater impacts to riparian, vegetation, water, and wildlife resources.

Mitigation:

1. Provide scheduled maintenance of existing roads and trails, commensurate with increases in recreation use.
2. Focus the use of BLM maintenance funds on those routes providing primary access to public lands and where the amount of use is heaviest.
3. Continue to utilize alternative funding sources (grants, holders of right-of-ways and permits, partners, etc.) to augment road/trail maintenance and improvements.
4. Continue to develop volunteer partnerships for constructing, improving, and maintaining travel routes.
5. Manage, as needed, those routes that are severely deteriorated and that cannot be adequately maintained by closing, restricting travel uses, or relocating and reconstructing them.
6. Coordinate with Fremont and Chaffee Counties for maintaining county roads that are being maintained by the respective counties.

Alternative A: Under Alternative A, the existing BLM transportation system would be modified with additional travel routes and the use of motor vehicles would be limited to designated roads and trails. Of the action alternatives, this alternative would provide most opportunities for motorized, mechanized, and non-motorized recreation uses. A large number of additional ATV and motorcycle trails would be conditionally approved for the Texas Creek OHV area, and a large number of non-motorized trails would be conditionally approved near Salida.

The OHV Open designations for Grand Canyon Hills, Texas Creek, and Sand Gulch would be changed to OHV Limited and a new OHV Open area would be designated at Turkey Rock for riding trials bikes. The use of bicycles and other mechanized vehicles would be limited to designated routes, and the distance that vehicles can be taken off designated routes for parking and camping would be limited to 100 feet. Under this alternative BLM would coordinate with Fremont and Chaffee counties to resolve maintenance issues with county roads that are currently not being maintained, including requesting the counties to vacate FCR59A, FCR13, and CCR103 so that these roads could be managed by BLM.

Under Alternative A, the public would only be allowed to drive motor vehicles (OHVs) on routes that have been identified on official travel management maps as open to specified motorized uses. For the purpose of making it easier for the public to understand which routes are open to OHVs and which are closed, the designated routes would also be identified on the ground with signs. Under this system of management, only routes that are signed as open to OHVs would be legally available for use with motor vehicles and users would be responsible for knowing and complying with the route designations depicted on the official travel management maps.

Under this alternative, current management and enforcement problems resulting from the removal of closure signs would be reduced. Implementing a travel management policy which limits OHVs to designated routes that are identified on maps and with signs would be easier for the public to understand and easier for BLM to enforce; reducing potential route proliferation and conflicts with non-motorized users. Reducing the distance motor vehicles can be driven off designated routes for parking and camping from 300 to 100 feet, and limiting the use mountain bikes to designated routes would also help to reduce potential route proliferation.

Implementation of Alternative A would establish a system of roads and trails with designated travel uses that would generally benefit the overall management of the transportation system for planning construction and maintenance needs. This alternative, however, includes the construction of many new travel routes and allows motorized travel uses on the most number of existing and additional routes. Consequently, of the three action alternatives, the Alternative A would have the greatest impact on the management of the transportation system. Alternative A 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 all BLM system routes. The installation of gates, barricades, and other closure devices would be needed to reinforce the travel restrictions. The construction of 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 A 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 travel routes and volunteer to adopt and maintain them, the need to utilize BLM funds for maintaining many of the routes could decline over time.

Under Alternative A, approximately 165 miles of roads would be available to the public to use with full-size vehicles (miles of routes included in [Table 2-2](#) in the General category). In addition, another 96 miles of roads would be managed for administrative access (see [Table 2-2 – AA](#) category). The costs of maintaining roads under Alternative A would be less than the maintenance costs for the No Action Alternatives but higher than Alternatives B or C (See [Appendix 12 – Cost Analysis of Implementing TMP Alternatives](#)). Under Alternative A the estimated average annual cost of maintaining roads in the planning area would be \$8,425; compared to \$10,725 for the No Action Alternative, \$5,950 for Alternative B, and \$8,075 for Alternative C.

In addition to the General and Administrative Access roads, Alternative A would also include maintaining 55 miles of motorized trails and 107 miles of non-motorized trails (see [Table 2-2](#)). The estimated annual costs of maintaining these trails would be \$14,388; compared to \$8,112 for the No Action Alternative, \$7,172 for Alternative B, and \$9,922 for Alternative C (See [Appendix 12](#)).

Alternative A would require initial implementation expenditures for constructing approximately 40 miles and reconstructing approximately 33 miles of roads and trails. The total costs of construction and reconstruction are estimated to be \$423,000; compared to no initial construction/reconstruction costs for the No Action Alternative, \$80,000 for Alternative B, and \$187,100 for Alternative C. Alternative A would also require initial implementation expenditures for closing and reclaiming routes, and installing travel management signs and kiosks that are estimated to cost \$69,144; compared to no initial costs for the No Action Alternative, \$69,942 for Alternative B, and \$69,410 for Alternative C (See [Appendix 12](#)). When all costs of implementation are considered, it is estimated that Alternative A would cost approximately \$512,957; compared to \$163,064 for Alternative B, and \$274,507 for Alternative C. Of the three action alternatives, Alternative A would provide the most additional opportunities for motorized, mechanized, and non-motorized recreation uses but would be the least effective in meeting public land health standards in the planning area and would require the greatest expense to implement.

Mitigation: In addition to the mitigation listed under the No Action Alternative, add the following:

1. Develop area-specific recreation travel maps and brochures for public distribution that clearly describe route designations and travel use opportunities.
2. Implement an aggressive sign maintenance program to replace stolen and vandalized travel management signs.

3. For new trail construction and reconstruction and maintenance of existing trails, utilize best management practices to provide stable travel facilities that will minimize impacts to soils and watersheds. Implement the recommendations outlined in [Appendix 6](#) and [Appendix 7](#), which establish conditions for guiding future management and development of the Texas Creek and Salida trail systems.
4. Coordinate with Fremont and Chaffee Counties for maintaining county roads that are being maintained by the respective counties.

Alternative B: Under Alternative B, the existing BLM transportation system would only be slightly modified with additional travel routes and the use of motor vehicles would be limited to designated roads and trails. Of the action alternatives, this alternative would provide most opportunities for motorized, mechanized, and non-motorized recreation uses. A few additional non-motorized trails would be conditionally approved near the city of Salida.

The OHV Open designations for Grand Canyon Hills, Texas Creek, and Sand Gulch would be changed to OHV Limited. The proposed OHV Open area for trials bikes at Turkey Rock would not be designated. The use of bicycles and other mechanized vehicles would be limited to designated routes, and the distance that vehicles can be taken off designated routes for parking and camping would be limited to 100 feet. Under this alternative BLM would coordinate with Fremont and Chaffee counties to resolve maintenance issues with county roads that are currently not being maintained, including requesting the counties to vacate FCR59A, FCR13, and CCR103 so that these roads could be managed by BLM.

Under Alternative B, the public would only be allowed to drive motor vehicles (OHVs) on routes that have been identified on official travel management maps as open to specified motorized uses. For the purpose of making it easier for the public to understand which routes are open to OHVs and which are closed, the designated routes would also be identified on the ground with signs. Under this system of management, only routes that are signed as open to OHVs would be legally available for use with motor vehicles and users would be responsible for knowing and complying with the route designations depicted on the official travel management maps.

Under this alternative, current management and enforcement problems resulting from the removal of closure signs would be reduced. Implementing a travel management policy which limits OHVs to designated routes that are identified on maps and with signs would be easier for the public to understand and easier for BLM to enforce; reducing potential route proliferation and conflicts with non-motorized users. Reducing the distance motor vehicles can be driven off designated routes for parking and camping from 300 to 100 feet, and limiting the use mountain bikes to designated routes would also help to reduce potential route proliferation.

Implementation of Alternative B would establish a system of roads and trails with designated travel uses that would generally benefit the overall management of the transportation system for planning construction and maintenance needs. This alternative would only include the construction of a few additional travel routes and allows motorized travel uses on the least number of existing and additional routes. Consequently, of the three action alternatives, the Alternative B would have the lowest impact on the management of the transportation system. Alternative B 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 all BLM system routes. The installation of gates, barricades, and other closure devices would be needed to reinforce the travel restrictions. The construction of 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 B 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 travel routes and volunteer to adopt and maintain them, the need to utilize BLM funds for maintaining many of the routes could decline over time.

Under Alternative B, approximately 113 miles of roads would be available to the public to use with full-size vehicles (miles of routes included in [Table 2-3](#) in the General category). In addition, another 116 miles of roads would be managed for administrative access (see [Table 2-3](#)). The costs of maintaining roads under Alternative B would be the lowest of all the alternatives (See [Appendix 12](#) – Cost Analysis of Implementing TMP Alternatives). Under Alternative B the estimated average annual cost of maintaining roads in the planning area would be \$5,950; compared to \$10,725 for the No Action Alternative, \$8,425 for Alternative A, and \$8,075 for Alternative C.

In addition to the General and Administrative Access roads, Alternative B would also include maintaining 22 miles of motorized trails and 43 miles of non-motorized trails (see [Table 2-3](#)). The estimated annual costs of maintaining these trails would be \$7,172; compared to \$8,112 for the No Action Alternative, \$14,388 for Alternative A, and \$9,922 for Alternative C (See [Appendix 12](#)).

Alternative B would require initial implementation expenditures for constructing approximately 4 miles and reconstructing approximately 7 miles of trails. The total costs of construction and reconstruction are estimated to be \$80,000; compared to no initial construction/reconstruction costs for the No Action Alternative, \$423,000 for Alternative A, and \$187,100 for Alternative C. Alternative B would also require initial implementation expenditures for closing and reclaiming routes, and installing travel management signs and kiosks that are estimated to cost \$69,942; compared to no initial costs for the No Action Alternative, \$69,144 for Alternative A, and \$69,410 for

Alternative C (See [Appendix 12](#)). When all costs of implementation are considered, it is estimated that Alternative B would cost approximately \$163,064; compared to \$514,957 for Alternative A, and \$274,507 for Alternative C. Of the three action alternatives, Alternative B would provide the fewest additional opportunities for motorized, mechanized, and non-motorized recreation uses but would be the most effective in meeting public land health standards in the planning area and would require the least expense to implement.

Mitigation: In addition to the mitigation listed under the No Action Alternative, add the following:

1. Develop area-specific recreation travel maps and brochures for public distribution that clearly describe route designations and travel use opportunities.
2. Implement an aggressive sign maintenance program to replace stolen and vandalized travel management signs.
3. For new trail construction and reconstruction and maintenance of existing trails, utilize best management practices to provide stable travel facilities that will minimize impacts to soils and watersheds. Implement the recommendations outlined in [Appendix 6](#) and [Appendix 7](#), which establish conditions for guiding future management and development of the Texas Creek and Salida trail systems.
4. Coordinate with Fremont and Chaffee Counties for maintaining county roads that are being maintained by the respective counties.

Alternative C (Proposed Action): Under Alternative C, the existing BLM transportation system would only be modified with additional travel routes and the use of motor vehicles would be limited to designated roads and trails. Of the action alternatives, this alternative would provide considerably more opportunities for motorized, mechanized, and non-motorized recreation uses than Alternative B and fewer opportunities than Alternative A. Several additional ATV trails would be conditionally approved for the Texas Creek OHV Area and numerous non-motorized trails would be conditionally approved near the city of Salida.

The OHV Open designations for Grand Canyon Hills, Texas Creek, and Sand Gulch would be changed to OHV Limited and a new OHV Open area would be designated at Turkey Rock for riding trials bikes. The use of bicycles and other mechanized vehicles would be limited to designated routes, and the distance that vehicles can be taken off designated routes for parking and camping would be limited to 100 feet. Under this alternative BLM would coordinate with Fremont and Chaffee counties to resolve maintenance issues with county roads that are currently not being maintained, including requesting the counties to vacate FCR59A, FCR13, and CCR103 so that these roads could be managed by BLM.

Under Alternative C, the public would only be allowed to drive motor vehicles (OHVs) on routes that have been identified on official travel management maps as open to specified motorized uses. For the purpose of making it easier for the public to understand which routes are open to OHVs and which are closed, the designated routes would also be identified on the ground with signs. Under this system of management, only routes that are signed as open to OHVs would be legally available for use with motor vehicles and users would be responsible for knowing and complying with the route designations depicted on the official travel management maps.

Under this alternative, current management and enforcement problems resulting from the removal of closure signs would be reduced. Implementing a travel management policy which limits OHVs to designated routes that are identified on maps and with signs would be easier for the public to understand and easier for BLM to enforce; reducing potential route proliferation and conflicts with non-motorized users. Reducing the distance motor vehicles can be driven off designated routes for parking and camping from 300 to 100 feet, and limiting the use mountain bikes to designated routes would also help to reduce potential route proliferation.

Implementation of Alternative C would establish a system of roads and trails with designated travel uses that would generally benefit the overall management of the transportation system for planning construction and maintenance needs. This alternative, however, includes the construction of many new travel routes and allows motorized travel uses many of the existing routes. Consequently, implementation of Alternative C would have a substantial impact on the management of the transportation system. Alternative C 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 all BLM system routes. The installation of gates, barricades, and other closure devices would be needed to reinforce the travel restrictions. The construction of 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 C 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 travel routes and volunteer to adopt and maintain them, the need to utilize BLM funds for maintaining many of the routes could decline over time.

Under Alternative C, approximately 153 miles of roads would be available to the public to use with full-size vehicles (miles of routes included in [Table 2-4](#) in the General category). In addition, another 103 miles of roads would be managed for administrative access (see [Table 2-4](#) – AA category). The costs of maintaining roads under Alternative C would be second highest of the alternatives (See [Appendix 12](#) – Cost Analysis of Implementing TMP Alternatives). Under Alternative C the estimated average annual cost

of maintaining roads in the planning area would be \$8,075; compared to \$10,725 for the No Action Alternative, \$8,425 for Alternative A, and \$5,950 for Alternative B.

In addition to the General and Administrative Access roads, Alternative C would also include maintaining 28 miles of motorized trails and 77 miles of non-motorized trails (see [Table 2-4](#)). The estimated annual costs of maintaining these trails would be \$9,922; compared to \$8,112 for the No Action Alternative, \$14,388 for Alternative A, and \$7,172 for Alternative B (See [Appendix 12](#)).

Alternative C would require initial implementation expenditures for constructing approximately 10 miles and reconstructing approximately 35 miles of roads and trails. The total costs of construction and reconstruction are estimated to be \$187,100; compared to no initial construction/reconstruction costs for the No Action Alternative, \$423,000 for Alternative A, and \$80,000 for Alternative B. Alternative C would also require initial implementation expenditures for closing and reclaiming routes, and installing travel management signs and kiosks that are estimated to cost \$69,410; compared to no initial costs for the No Action Alternative, \$69,144 for Alternative A, and \$69,942 for Alternative B (See [Appendix 12](#)). When all costs of implementation are considered, it is estimated that Alternative C would cost approximately \$274,507; compared to \$514,957 for Alternative A, and \$163,064 for Alternative B. Alternative C would provide additional opportunities for motorized, mechanized, and non-motorized uses while meeting public land health standards and achieving Desired Future Conditions in the planning area and could be implemented at moderate expense.

Mitigation: In addition to the mitigation listed under the No Action Alternative, add the following:

1. Develop area-specific recreation travel maps and brochures for public distribution that clearly describe route designations and travel use opportunities.
2. Implement an aggressive sign maintenance program to replace stolen and vandalized travel management signs.
3. For new trail construction and reconstruction and maintenance of existing trails, utilize best management practices to provide stable travel facilities that will minimize impacts to soils and watersheds. Implement the recommendations outlined in [Appendix 6](#) and [Appendix 7](#), which establish conditions for guiding future management and development of the Texas Creek and Salida trail systems.
7. Coordinate with Fremont and Chaffee Counties for maintaining county roads that are not being maintained by the respective counties.

SOCIO-ECONOMIC

Affected Environment: The TMP for the Arkansas River area includes parts of Fremont, Chaffee, and Custer counties.

Population:

Table 9-1: Population Growth between 1990 and 2005

Area	1990	2005	1990-2005 Percent Change
Colorado	3,297,394	4,665,177	41.5 %
Fremont County	32,273	47,766	48.0 %
Chaffee County	12,684	16,968	33.8 %
Custer County	1,926	3,860	100.0%

Source: US Census Bureau 1990c, 2005c

Between 2005 and 2025, the population within Fremont County is projected to grow 41%; 49% for Chaffee County, and 91% for Custer County. The state as a whole is projected to grow 45 % for the same period. (From State of Colorado Population Projections, State Demography Office)

Employment and Economy: Between 1991 and 2000, the total number of employed people increased by 53% in Fremont County, 53% in Chaffee County, and 104% in Custer County (See Table 9-2). The greatest increase in employment occurred under the construction sector in all three counties. The percentage of total employment growth for Fremont, Chaffee, and Custer Counties between 1991 and 2000 was greater than total employment growth for the state. Employment in Colorado between 1990 and 2025 is expected to increase 27 %.

Table 9-2: Sector Employment- Numbers of People Employed

Sector	Colorado		Fremont Co.		Chaffee Co.		Custer Co.	
	1991	2000	1991	2000	1991	2000	1991	2000
Agriculture	56,730	77,772	754	760	240	345	198	193
Mining	23,215	15,827	210	216	34	36	0	0
Construction	89,072	217,946	330	1,958	417	1,004	73	256
Manufacturing	192,836	214,560	1,018	1,145	331	286	13	25
Transportation, Communications and Utilities	109,129	160,878	448	552	201	199	42	48
Wholesale and Retail Trade	424,411	591,989	2,149	3,146	1,302	2,335	90	274
Finance, Insurance and Real Estate	144,911	204,577	534	917	275	777	77	170
Services	554,359	877,640	3,616	4,774	1,834	2,641	74	255
Government	338,302	382,311	3,098	5,169	1,436	1,663	146	232
Total Employment	1,932,966	2,743,500	12,159	18,607	6,070	9,286	713	1,454

Source: US BEA 2001

According to a 1999 model of the distribution of tourism employment, 9 % of employment was generated by tourism in Fremont County, 24 % of employment was generated by tourism in Chaffee County, and 15% was generated by tourism in Custer County (Tourism Jobs Gain Ground in Colorado, Center for Business and Economic Forecasting, Inc., April 27, 2001).

Income: Between 2000 and 2004, total per capita personal income for the state increased 8.2 %. During this same period, total per capita personal income increased 9.1% in Fremont County, 10.5% in Chaffee County, and 26.6% in Custer County (From US Department of Commerce, Bureau of Economic Analysis).

As shown in Table 9-3, the per capita personal income for Fremont County in 2004 was \$20,431, an increase of 65.9 % over the 1990 income but \$15,682 below the state average. For Chaffee County in 2004 the per capita personal income was \$23,930, an increase of 81.4% since 1990 but \$12,183 below the state average. For Custer County in 2004 the per capita personal income was \$26,451, an increase of 75.8% since 1990 but \$9,662 below the state average.

Table 9-3: Per Capita Personal Income for 1990 and 2004

	1990	2004
Colorado	\$ 19,575	\$ 36,113
Fremont County	\$ 12,317	\$ 20,431
Chaffee County	\$ 13,189	\$ 23,930
Custer County	\$15,049	\$26,451

Source: US BEA 2001

Recreation uses on public lands provide important economic benefits to local communities. Within the area covered by the Arkansas River TMP, recreation and tourism are major components of the area’s economy. Colorado Travel Year 2005 (Longwoods International), a report on overnight travel and tourism, illustrates the importance of the outdoors and public lands to the experience of Colorado visitors who cite mountains, wilderness, and lakes/streams as important elements of their vacation experience. Royal Gorge Bridge and Park, Salida, and Buena Vista are among the most popular destinations for overnight pleasure trips within Colorado’s South Central Travel Region. The Arkansas River is a regional and national recreation destination – primarily because of the popularity and variety of the whitewater boating opportunities. In recent years, the river has also become widely known as a destination for fly fishing.

In addition to these major tourist attractions, the roads and trails on the public lands also provide opportunities for various types of motorized, mechanized, and non-motorized recreation uses. Unlike the major attractions, however, which draw visitors from all over the US and from other countries, the roads and trails on public lands are utilized more by local and regional populations.

Environmental Consequences:

No Action Alternative: The No Action Alternative would basically maintain the status quo. No changes to the area’s population, employment, and income would result under this alternative. Recreation behaviors, however, would evolve under less intensive

management and travel restrictions; i.e., off-road use, trespass, creation of new routes, and uncontrolled motorized/mechanized play would increase in intensity and scale.

Alternatives A: Of the three action alternatives, Alternative A would provide the most number and miles of additional trails. Under Alternative A, the local economy in Chaffee County, and particularly the City of Salida, would benefit from additional trails for mountain biking and hiking. Alternative A would also benefit the local economy in Fremont County by adding trails in the Texas Creek Travel Management Area that would provide additional opportunities for motorized recreation users. For most of the other subunits in the planning area, however, the differences between the alternatives would not be great enough to generate 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 off-road use, trespass, creation of new routes, and uncontrolled motorized/mechanized play.

Alternative B: Of the three action alternatives, Alternative B would provide the least number and miles of designated OHV routes and no new additional routes would be developed. Alternative B would be similar to the No Action Alternative and would probably have a negligible affect on the area's population, employment, and income. Recreation behaviors, however, would evolve under more intensive management and travel restrictions that would mitigate increased off-road use, trespass, creation of new routes, and uncontrolled motorized/mechanized play.

Alternative C: Alternative C would provide fewer designated OHV routes than Alternative A but more than Alternative B. Alternative C would also allow development of some new additional trails but substantially fewer than Alternative A. Under Alternative C, the local economy in Chaffee County, and particularly the City of Salida, would benefit from additional trails for mountain biking and hiking. Alternative C would also benefit the local economy in Fremont County by adding trails in the Texas Creek Travel Management Area that would provide several additional trails for motorized recreation users. For most of the other subunits in the planning area, however, the differences between the alternatives would not be great enough to generate 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 off-road use, trespass, creation of new routes, and uncontrolled motorized/mechanized play.

PUBLIC PARTICIPATION

PERSONS/AGENCIES CONSULTED:

June 9, 2003: Notice of Intent to Prepare the Arkansas River Travel Management Plan and Amend the Royal Gorge Resource Management Plan published in the Federal Register.

September 15, 2004: Issued news releases and mailed letters to approximately 300 citizens announcing the beginning of the planning process and public meetings scheduled for October 5 and 6.

October 5, 2004: Conducted a public meeting in Canon City (attended by 76 people) explaining the purpose of the travel management plan and asking for public involvement and soliciting input for identifying issues and concerns that need to be addressed in the TMP.

October 6, 2004: Conducted a public meeting in Salida (attended by 59 people) explaining the purpose of the travel management plan and asking for public involvement and soliciting public input for identifying issues and concerns that need to be addressed in the TMP.

November-December, 2004: Analyzed public comments from 288 individuals and organizations in response to request for public input and identified major issues and concerns.

January 4, 2005: Published summary of identified issues and concerns on the Colorado BLM website.

January-March, 2005: Conducted personal interviews with 40 selected stakeholders to identify issues and concerns.

March 2, 2005: Presented a briefing of the travel management planning process at the Front Range Resource Advisory Council (RAC) meeting.

June 30, 2005: Issued news releases and mailed letters to approximately 300 citizens announcing the beginning of the planning process and public meetings scheduled for August 4 and 8.

July 6, 2005: Conducted a field trip of portions of the Arkansas River TMP planning area for the Front Range RAC.

August 4, 2005: Conducted a public meeting in Salida (attended by 41 people) to give stakeholders and opportunity to comment on the TMP DFCs and MOs.

August 8, 2005: Conducted a public meeting in Canon City (attended by 30 people) to give stakeholders and opportunity to comment on the TMP DFCs and MOs.

September 6, 2005: Presented a briefing to the Salida City Council on the Arkansas River TMP process.

September 29, 2005: Presented a briefing on the Arkansas River TMP to the Fremont County Commissioners.

October 15, 2005: Presented a briefing on the Arkansas River TMP to the Crestone Quiet Use Commotion Group.

October 2005: Presented a briefing on the Arkansas River TMP to the Custer County Commissioners.

November 2005: Presented a briefing on the Arkansas River TMP to the Chaffee County Commissioners.

January 25, 2006: Presented trials events issue to the Front Range RAC.

February 3, 2006: Published summary of the proposed TMP DFCs and MOs on the Colorado BLM website, including a summary of the comments received from the public.

March 15, 2006: Discussed alternatives for addressing trials events and year round trials practice areas at Front Range RAC meeting.

May 10-11, 2006: Conducted field trip to Texas Creek and Turkey Rock trials event areas for Front Range RAC and developed alternatives for addressing trials events and year round trials practice areas.

September 19, 2006: Presented the Arkansas River TMP Alternatives to the Front Range RAC.

November 15, 2006: Discussed Front Range RAC comments and recommendations pertaining to the alternatives for the Arkansas River TMP.

January 20, 2007: Presented an overview of the alternatives for the Arkansas River TMP to the Great Old Broads for Wilderness group in Westcliffe, Colorado.

February 1, 2007: Presented an overview of the process used for conducting the Arkansas River TMP to the Upper Arkansas Watershed Council in Salida, Colorado.

PERSONS/AGENCIES CONSULTED:

Front Range Resource Advisory Council
Division of Wildlife
U.S. Forest Service
Fremont, Chaffee, and Custer County Commissioners
Colorado State Parks

INTERDISCIPLINARY REVIEW:

<u>Name</u>	<u>Title</u>	<u>Area of Responsibility</u>
Erik Brekke	Wildlife Biologist	Wildlife, T&E, Migratory Birds
John Dow	Environmental Coordinator	National Environmental Policy Act
Mike Gaylord	Fire Mit./Educ. Spec.	Air, Hazardous Materials
Dave Gilbert	Fisheries Biologist	Aquatic Wildlife, Riparian/Wetlands
Lindell Greer	Realty Specialist	Realty
Tom Grette	Range Management Spec.	Range, Farmland, Weeds
Jack Hagan	Law Enforcement Ranger	Law Enforcement
Dave Hallock	Realty Specialist	Realty
John Nahomenuk	River Manager	Recreation, Wilderness, Visual, ACEC
Leah Quesenberry	Outdoor Recreation Planner	Recreation, Wilderness, Visual, ACEC
Ken Reed	Forester	Forestry
Ed Skerjanec	Fire Management Officer	Fire
John Smeins	Hydrologist	Hydrology, Water Quality/Rights
Melissa Smeins	Geologist	Minerals, Paleontology
Dave Toelle	Fire Ecologist	Air, Vegetation
Joseph Vieira	Natural Resource Specialist	Geographic Information System
Dave Walker	Transportation Planner	Transportation, Noise, Socio-Economic
Monica Weimer	Archaeologist	Cultural, Native American
Jeff Williams	Range Management Spec.	Vegetation

APPENDIX 1

Summary of the Public Comments

Issues and Concerns and Recommended Actions

Background

On September 15, 2004 notifications were issued via news releases and on the Colorado BLM website to inform the public that the Royal Gorge Field Office was planning to begin work on the Arkansas River Travel Management Plan (TMP) and to announce that public meetings had been scheduled to begin the scoping process. In addition to the newspaper and website notifications, letters were also mailed to approximately 150 known individuals and groups who had participated in the Gold Belt Travel Management Plan.

On October 5th and 6th, public meetings were held in Canon City and Salida, respectively. The purpose of the meetings was to provide the public with an opportunity in the early stages of the planning process to assist BLM in identifying the issues and concerns that need to be addressed in the TMP. According to the registration sheets for these meetings, 76 people attended the meeting in Canon City and 59 people attended the meeting in Salida, however, unofficial head counts at both meetings indicated that more people actually attended the meetings than had signed the registration sheets.

As of December 28, 2004, the Royal Gorge Field Office has received letters and email documents from 288 individuals and organizations in response to the request for public input. Because most of the respondents expressed concerns and opinions that were shared by others, it was easily possible to segregate the respondents into seven distinctive types or groups of stakeholders based on the primary interests and concerns contained in their letters. The seven groups of stakeholders include:

Environmental Stakeholders - Stakeholders who are primarily concerned with protecting the natural resources, minimizing impacts on wildlife, and managing public lands for primitive and quiet uses. There were 43 respondents included in this stakeholder category. Stakeholders represented by this group included: Friends of Fourmile, The Colorado Mountain Club, San Luis Valley Ecosystem Council, Upper Arkansas and South Platte Project, Center for Native Ecosystems, Arkansas Valley Audubon Society, Environmental Action Club of Colorado College, Greater Arkansas River Nature Association (GARNA), The Wilderness Society, Rocky Mountain Recreation Initiative, The Quiet Use Coalition, The Pikes Peak Group of the Sierra Club

Motorized Recreation Stakeholders – Stakeholders who are primarily concerned with expanding and enhancing opportunities on public lands for motorized recreation uses. There were 106 respondents included in this stakeholder category. Stakeholders represented by this group included: Colorado Motorcycle Trail Riders Association (CMTRA), Royal Gorge ATV Club, Colorado Off Highway Vehicle Coalition (COHVCO), Colorado Association of 4Wheel Drive Clubs, Inc., Rocky Mountain Trials Association, High Rocky Riders Off Road Club, Road Bike and Dirt Bike Colorado 500 Charity Invitational Motorcycle Rides

Non-motorized and Mechanized Recreation Stakeholders – Stakeholders who are primarily concerned with expanding and enhancing opportunities on public lands for hiking, horseback riding, and bicycle riding. There were 120 respondents included in this stakeholder category.

Stakeholders represented by this group included: Arkansas Valley Cycling Club, Chaffee County Visitors Bureau, Salida Area Parks Open Space and Trails (SPOT), Backcountry Horsemen of America, Chaffee County Running Club

Non-Recreation Uses Stakeholders – Stakeholders who are primarily concerned with facilitating uses that occur on public lands other than recreation uses, such as grazing, irrigation, and utility operations. There were 9 respondents included in this stakeholder category. Stakeholders represented by this group included: The Fremont County Cattlemen's Association, Upper Arkansas Water Conservancy District.

Affected Landowners – Stakeholders who identified themselves as owners of lands adjoining BLM lands and who are affected by activities occurring on the public lands. There were only 3 respondents who identified themselves as affected landowners.

Government Agencies - Stakeholders who identified themselves as representing various federal, state, county, and city agencies that are affected by activities occurring on the public lands. Only 3 letters were received from representatives of other government agencies. Stakeholders represented by this group included: City of Salida, Chaffee County Board of Commissioners, USDI, Fish and Wildlife Service

Neutral Stakeholders - Letters were also received from 4 respondents whose comments did not reflect a strong connection with any of the above groups of stakeholders.

Summary of Comments

The following is a summary of the public comments for each of the stakeholder groups. The group summaries are also divided into two parts. The first part is a list of the **Issues and Concerns** that were expressed by the individual respondents within the stakeholder group, and the second part is a list of the group's **Recommended Actions**.

It should be noted that some of the comments were echoed by many of the other respondents within the same stakeholder group, whereas other comments may have only been expressed by one or two respondents within the group. In those instances where the same comment has been repeated by numerous respondents it will only appear one time. Also, in order to summarize the comments into short bullet statements to reduce the size of this document, many of the comments have either been edited or paraphrased, while other statements are presented verbatim.

Environmental Stakeholders

Issues and Concerns

1. Concerned about protecting all Wilderness Study Areas and Citizens Wilderness Proposal Areas from motorized incursions
2. Opposed to any expansion of motorized and mechanized uses into roadless areas identified by the Upper Arkansas and South Platte Project
3. Supportive of limiting motorized uses in ACECs, RNAs, Colorado Natural Heritage Program Conservation Areas, and other recognized sites of biological concern
4. Supportive of maintaining conditions of the lands and resources to meet BLM public land health standards
5. Supportive of limiting recreation uses to favor protecting wildlife and wildlife habitat

6. Supportive of limiting recreation uses to favor protecting vegetation, soils, and water resources
7. Supportive of limiting recreation uses to favor maintaining natural landscapes
8. Supportive of controlling motorized access from private lands
9. Concerned about the ability of BLM to enforce off-highway vehicle restrictions and to control the proliferation of illegal routes
10. Concerned about reducing conflicts between motorized and non-motorized users
11. Concerned about the negative impacts to birds and other wildlife resulting from motorized recreation activities, including noise and increased amounts of disturbing human activity
12. Concerned about the potential degradation of environmental qualities resulting from off-highway vehicle uses, including impacts to wildlife and plant habitats, soils and water quality, and solitude
13. Concerned that greater amounts of illegal and damaging use will occur if off-highway vehicle opportunities are expanded
14. Supportive of limiting recreation uses to favor protecting federally listed endangered and threatened species
15. Concerned that there are increasingly fewer areas available to experience solitude without noise and disturbance caused by motorized recreational vehicles
16. Concerned about the degrading impacts of off-highway vehicles on landscapes and soundscapes
17. Concerned that expanding off-highway vehicle opportunities outside of a few concentrated use areas will result in expanding the impacts associated with recreational uses to larger portions of the Arkansas River Travel Management Planning area
18. Supportive of limiting recreation uses to favor maintaining wildlife habitat and landscape connectivity to avoid fragmenting areas of core wildlife habitat
19. Concerned about the potential degrading impacts to fish resulting from sediment originating from roads and trails
20. Concerned about the effects of roads and trails on wildlife, including mortality from collisions, modification of animal behavior, disruption of physical environment, alteration of chemical environment, spread of exotic species, and changes in the human use of the lands and water
21. Concerned about the increased potential for vandalism, theft, and damage to archeological and cultural sites resulting from motorized

Environmental Stakeholders

Recommended Actions

1. Avoid and eliminate motorized and mechanized recreation uses in Badger Creek, Red Gulch (Bear Mountain), and Big Hole (Texas Creek/Table Mountain)
2. Install barriers to prevent motorized incursions into Grape Creek WSA
3. Install gate near top end of Bear Gulch access road to Grape Creek WSA and limit public access to foot and horse travel only
4. Install barriers to prevent motorized incursions into McIntyre Hills WSA (Five Points Gulch)
5. Install barriers to prevent motorized incursions into Browns Canyon
6. Allow foot and horse access only in Railroad Gulch and northward to the divide with Longs Gulch (coordinate with FS)
7. Relocate mountain bike and motorized trails in Castle Gardens and Kings Canyon to protect buckwheat
8. Control uses in Longfellow Gulch to protect bighorn sheep lambing area

9. Limit motor vehicles in the Badger Creek subunit to the Sand Gulch Road and Power Line Road
10. Continue motorized closure of Bloody Gulch to protect soils, water quality, fish, and riparian communities
11. Limit motorized uses in the Texas Creek OHV area to existing boundaries
12. Increase the levels of road and trail maintenance and law enforcement in Texas Creek OHV area to limit resource damage
13. Allow no public motorized uses in the Table Mountain Roadless Area (as described in the roadless area inventory conducted by the Upper Arkansas and South Platte Project) to protect livestock, wildlife, vegetation, primitive recreation, and scientific resources
14. Disallow any proposal for a long-distance motorized trail through the Big Hole or other subunits in the planning area
15. Limit off-highway vehicles to designated routes
16. Limit mountain bikes to designated routes
17. Construct and maintain trails only with personnel who are trained in sustainable trail building techniques
18. Restrict off-highway vehicles to major existing routes only
19. Close all damaging and unnecessary routes; close duplicative, parallel and spur off-highway vehicle routes
20. Close some areas altogether to off-highway vehicles
21. Protect big horn sheep lambing areas in Longfellow Gulch by closing it to off-highway vehicles and other recreation uses during lambing season
22. Find an alternative to high school kids playing on dirt bikes on BLM lands near Salida
23. Protect bat populations in Longfellow Gulch from recreational disturbances with educational signing and protective barriers
24. Disallow motorized access to BLM from adjoining private lands
25. Protect the wildlife corridor crossing Hwy 285 south of Poncha Springs
26. Disallow off-highway vehicles in Fernleaf Gulch
27. Restrict motorcycle trials events to reduce resource damage caused by these events
28. Utilize citizen and special use volunteer groups to assist in managing off-highway vehicles, mountain biking, and non-motorized uses
29. Avoid designating any off-highway vehicle routes in a future Browns Canyon Wilderness proposal
30. Coordinate with the Forest Service in designating any routes leading to and from National Forest lands, especially at the upper end of Railroad Gulch and from Turret
31. Stop illegal motorized access from Forest Road 184 into Browns Canyon WSA
32. Do not legitimize user created routes by designating them in the travel management plan
33. Limit the distance that motorized users may travel from designated routes for purposes of camping and retrieving game
34. Protect the potential wilderness areas identified by the Central Colorado Wilderness Coalition in the Badger Creek, Browns Canyon, and Table Mountain areas
35. Clean up illegal dump sites
36. Change the OHV Open areas in Sand Gulch, Texas Creek, and Grand Canyon Hills to OHV Limited
37. Implement a monitoring program to evaluate the effectiveness of the travel management plan
38. Avoid creating "cherry stem" trails that often encourage the development of user created branches
39. Protect the eastern half of West McCoy Gulch subunit for maintaining elk habitat and migration routes
40. On travel maps, show routes that have no legal public access as being unavailable for motorized travel
41. Require the town of Salida to find motorcycle play areas off BLM lands
42. Provide adequate signage and other route information to effectively inform and educate users

43. Designate routes for off-highway vehicles only to the extent that they can be effectively monitored, maintained, and enforced within available and foreseeable levels of funding
44. Manage all forms of recreation in such a way that maintains the fundamental ecological nature and health of the land
45. Consciously plan for quiet, remoteness, and wildness to ensure that the experiential character of the landscape is maintained
46. Develop transportation plans as both travel management and recreation management plans, not just as motorized vehicle plans
47. Establish written trail objectives and desired future conditions for every designated route to assure resource protection and user satisfaction while retaining the current levels of quiet and numbers of users
48. Plan for increased numbers of users that can be expected to result from population growth
49. Base travel route designations on the spatial patterns of roads and road densities instead of basing it solely on mileage
50. Include a plan in the travel management plan for obliterating and restoring closed/excess roads
51. Only allow off-highway vehicle uses in a manner that protects natural resources, environmental values, public safety and the experience of the users
52. The travel management planning process should prescribe travel on routes that are environmentally sound, free of user conflicts, and that are manageable. Thus, in areas where designated travel routes do not exist, the analysis should begin with a blank map that does not consider existing user created routes that do not meet these criteria
53. Separate motorized and non-motorized uses as much as possible
54. Emphasize providing recreational opportunities near communities (backyard opportunities) instead of developing opportunities that will attract high numbers of users from distant population centers
55. Include management of administrative minerals (aggregate) in the travel management plan to locate and manage sources of material for maintaining roads and trails
56. Avoid motorized spurs that end in sensitive areas, such as roadless area boundaries
57. In designating travel uses, utilize demographic studies to assist in predicting the types of recreational experiences that people will be seeking in the future instead of just considering the types of recreation and travel that people are engaging in today
58. Develop a resource and recreation capacity model that establishes indicators and standards that are linked to land function and user experience
59. Consider limiting motorized access to street legal, four-wheel drive vehicles in areas where a quiet experience is the desired condition
60. Disallow exclusive private land access by signing boundaries and blocking and obliterating roads that lead from private lands
61. Do not allow any buffer off designated roads for allowing parking, camping, and game retrieval
62. Develop a program to reduce the spread of noxious weeds by recreation users
63. Ensure that the wilderness suitability of wilderness quality lands are not impaired
64. Disallow the use of any new types of recreation uses until the BLM has had the opportunity to study the effects of such uses to determine if they should be allowed or prohibited on the public lands
65. Limit off-road vehicle use and other forms of intense recreation uses in confined areas within established boundaries
66. Design and locate travel routes to minimize erosion and avoid critical ecological areas
67. Analyze the potential impacts from noncompliant (illegal) off-road vehicle use that can be expected to occur after the travel management plan is implemented
68. Consider the importance of maintaining landscape linkages for wildlife species to move between for feeding, resting, and hiding
69. Adequately consider the economic impacts of the alternatives including the costs of law enforcement, maintenance, trash removal, and monitoring resource impacts
70. Permit off-highway vehicle use only to the extent that the use is manageable

71. Analyze impacts to aquatic resources (riparian), soils, noise and air pollution, special status plants and animals, plant communities and animal habitat, and to archaeological, paleontological, and cultural resources
72. BLM should distinguish legal roads from illegal user created routes by defining a road as, "A travel route that has been improved and maintained by mechanical means to insure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road."
73. Develop a larger more visible ATV license, increase ATV license fees, and allocate a larger portion of the license fees to enforcement.
74. Convert existing two-track roads into single-track trails by placing rocks and dead trees and tree limbs to establish narrow travel ways that will eventually re-vegetate

Motorized Recreation Stakeholders

Issues and Concerns

1. Supportive of expanding and enhancing motorized recreation opportunities
2. Supportive of improving safer motorized recreation experiences
3. Supportive of expanding single-track opportunities for motorcycles
4. Concerned about the potential loss of existing motorized recreation opportunities that might result from the travel management plan
5. Supportive of conducting a complete inventory of all "existing" roads and trails
6. Concerned that the travel management plan be in compliance with the provisions contained in the Multiple Use and Sustained Yield Act and the Federal Land Policy Management Act
7. Concerned about the importance of the Arkansas River travel management planning area to motorized recreation users
8. Concerned that the closures of existing motorized trails and areas will displace all users to fewer areas that will result in overcrowding and increased conflicts between various types of motorized users (4X4, ATV, motorcycle), thus increasing risks of accidents, and decreasing user satisfaction.
9. Concerned that the potential closures of existing motorized routes will reduce recreation opportunities for users with physical limitations due to age or disabilities

Motorized Recreation Stakeholders

Recommended Actions

1. Expand and enhance Texas Creek OHV Area by reopening previously closed trails and constructing new single-track motorcycle and ATV trails as described in the proposal submitted by the Colorado Motorcycle Trail Riders Association
2. Preserve existing and new single-track motorcycle trails by physically barricading entry points so that they cannot be accessed by ATVs
3. Relocate trail segments out of riparian areas instead of closing trails entirely
4. Retain and develop more motorized roads and trails throughout the entire travel management planning area
5. Construct new motorized connector trails to provide loops between existing motorized roads and trails

6. Initiate meetings between private landowners and motorized recreation users to help reduce conflicts between them
7. Re-route existing trails and roads around private lands
8. Allocate more money and resources into maintaining roads and trails
9. Protect the natural resources
10. Establish small practice areas for "trials-type" motorcycle riders at Volcano Gulch, Texas Creek, and Sand Gulch
11. Allocate more funds and place higher emphasis on catching and prosecuting violators instead of taking away opportunities from legitimate users
12. Utilize existing route segments and construct some new segments to establish a long-distance multiple use trail between Parkdale and Salida for hikers, horses, bicycles, motorcycles, and ATVs (proposed Big Horn Trail)
13. Manage the area to provide as much access as possible for both motorized and non-motorized users

Non-Motorized Recreation Stakeholders

Issues and Concerns

1. Concerned about reducing conflicts (noise and safety concerns) between motorized, mechanized, and non-motorized users
2. Supportive of managing recreation uses to protect wildlife and wildlife habitat
3. Supportive of managing recreation uses to protect vegetation, soils, and water resources
4. Concerned about maintaining opportunities for horseback riding
5. Supportive of limiting recreation uses to favor protecting federally listed endangered and threatened species
6. Supportive of preserving and expanding non-motorized trail systems around and near the town of Salida
7. Supportive of enhancing economic and social benefits (tourism) around Salida and Chaffee County
8. Concerned about ineffective enforcement of off-road use of OHVs
9. Supportive of enhancing current available trails
10. Concerned about the proliferation of user created trails
11. Concerned about trash dumping on public lands
12. Concerned about legal access to trails from downtown Salida (will users have to cross railroad tracks to access trails?)
13. Concerned about liability to the City of Salida for trails located on city-owned property near S mountain
14. Concerned about who will maintain trail systems proposed by Arkansas Valley Cycling Club

Non-Motorized Recreation Stakeholders

Recommended Actions

1. Limit off-highway vehicles to designated routes
2. Disallow mountain bike use in Railroad Gulch
3. Limit mountain bikes to designated routes
4. Continue to allow horseback riding in Texas Creek, Bear Gulch, Grape Creek, McIntyre Hills, Sangre Foothills, and Sunset City (Copper Gulch)

5. Close Table Mountain to off-highway vehicles and allow hiking and horseback riding only
6. Manage Badger Creek primarily as a non-motorized area
7. Develop a horse and hiking trail in East Gulch from Texas Creek to the Big Hole
8. Install BLM boundary signs on the south side of the Sunset City area (Grape Creek subunit)
9. Provide some trails for foot traffic only near Salida to eliminate potential accidents with motorized and mountain bike users
10. Develop a bicycle and hiking trail between Salida and Wellsville
11. Relocate motorized and non-motorized trails in Castle Gardens
12. Develop a non-motorized, non-fee mountain trails park for bicyclists, runners, and walkers north of Salida, near the S-Mountain area, and stretching from Dead Goat Gulch to Longfellow Gulch
13. Develop hiking and bicycle single-track loops connecting from the Power Line trail south of Salida
14. Restrict off-highway vehicles in Texas Creek to the current system of designated routes
15. Separate motorized and non-motorized users
16. Allocate the acres of land and miles of routes in proportion to the numbers of users of particular types of use
17. Comply with Public Land Health Standards
18. Provide some separate trails for mountain biking and some for horseback riding to reduce safety conflicts between bikers and horse users
19. Provide additional bicycle trails for beginner and moderately skilled riders
20. Close Castle Gardens to all motorized and mechanized uses to eliminate damage to vegetation (buckwheat)
21. Close Railroad Gulch to motorized and mechanized uses
22. Close Longs Gulch to motorized use
23. Allow mountain biking in Longfellow Gulch with seasonal closures during bighorn sheep lambing seasons
24. Protect bat populations in Longfellow Gulch by barricading abandoned mines where they reside
25. Allow the creation of single-track non-motorized trails north of Pinion Hills and County Road 175 (Ute Trail) in the Salida subunit

Non-Recreation Uses Stakeholders

Issues and Concerns

1. Concerned about protecting access to irrigation facilities for maintenance and construction of ditches and related irrigation structures
2. Concerned about maintaining access to grazing allotments for managing livestock and maintaining improvements
3. Concerned about maintaining quality big game hunting opportunities on public lands
4. Concerned about maintaining access for fire fighting and search and rescue
5. Concerned about the lack of enforcement of existing regulations to control damage by off road travel
6. Concerned about the proliferation of user created roads
7. Concerned about the lack of public education to reduce damage caused by off road travel

Non-Recreation Uses Stakeholders

Recommended Actions

1. Include specific language in the travel management plan that will protect the rights of ditch owners to construct, operate, maintain, or enlarge any irrigation ditch as provided by law
2. Provide alternate routes where roads have been closed to protect riparian areas so that grazing permittees can still access their grazing allotments
3. Close more roads to public motorized access
4. Address damage from motorized use by enforcement of existing rules and educating public, not by closing more roads
5. Employ more and better public education programs to reduce damage caused by off road travel

Affected Landowners

Issues and Concerns

1. Concerned about avoiding conflicts between recreation users and private landowners
2. Supportive of providing multiple use opportunities for both motorized and non-motorized recreation users

Affected Landowners

Recommended Actions

1. BLM should help with preventing trespass on private property in Sand Gulch resulting from motorized recreation uses on public lands

Government Agencies

Issues and Concerns

1. Supportive of providing multiple use opportunities for both motorized and non-motorized recreation users
2. Concerned about enhancing economic and social benefits (tourism)
3. Concerned about protecting Federally listed endangered and threatened species

Government Agencies

Recommended Actions

1. Leave current routes open to current use patterns and continued multiple use of motorized and non-motorized activities and add new routes for the use of mountain bikers and hikers
2. Develop mountain bike trails north of Salida stretching from Dead Goat Gulch to Longfellow Gulch
3. Develop a mountain bike trail from Salida to Wellsville
4. Develop a mountain bike trail along the powerline road on the south side of the Arkansas River
5. Protect federally listed endangered and threatened species

Neutral Stakeholders

Issues and Concerns

1. Concerned that public lands should be managed to benefit all users
2. Concerned that the travel management plan should be an integrated process that takes into consideration both the users and the natural resources
3. Concerned with how BLM will make decisions on trails that are not solely on BLM lands but cross onto private lands or lands administered by other agencies
4. Concerned with how BLM will complete the road and trail inventory and determine when it is completed
5. Concerned with how BLM will fund the construction, improvement, and maintenance of the trails that are included in the approved transportation system

Neutral Stakeholders

Recommended Actions

1. Create connector routes where possible to enhance the trail systems
2. Implement adequate signing and enforcement to keep travel on trails
3. Involve local clubs, groups, and interested individuals to assist in monitoring use and in maintaining the trail systems
4. Prevent motorcycles, ATVs, and 4X4 vehicles from encroaching on trails that have been traditionally used by non-motorized users
5. Implement educational signs, workshops, and brochures to gain compliance with travel restrictions
6. Involve individual users and user groups in designing trail systems

APPENDIX 2

ARKANSAS RIVER TMP SUBUNITS Issues and Concerns, Desired Future Conditions, and Management Objectives

BROWNS CANYON (Subunit A)

General Setting - The Browns Canyon subunit contains a total of 6,757 acres, all of which are BLM public lands. The subunit consists of a narrow corridor of BLM lands that straddles a 5 mile-long section of the Arkansas River. The Arkansas River is a national destination area for whitewater boating and this is the most heavily used section of the river. The BLM lands in the subunit adjoin the San Isabel National Forest along the eastern border of the subunit.

The landscape in the subunit is extremely rugged and dominated by massive granite rock formations. Because of its ruggedness, most of the subunit has remained unroaded. The only access road into the subunit is Chaffee County Road 194. CR 194 enters the subunit from Highway 285 and ends at the Arkansas River at the Hecla Junction Recreation Site. The recreation site is a major ingress and egress point for rafters. During the rafting season, the recreation site and the river itself are used daily by hundreds of visitors. Off-river access beyond the recreation site is limited to foot travel, where visitors have developed a myriad of user created foot trails extending from the recreation site along the west bank of the river. The amount of recreation use on the east side of the river is comparatively low, however, due to the difficulty of crossing the river to access it. Access to BLM lands in the eastern portions of the subunit is also limited by the tracks for the Union Pacific Railroad that runs along the east bank of the river. Users reach the narrow strip of BLM lands east of the river either by boat or by hiking down through National Forest lands that adjoin the eastern boundary of the subunit.

The entire subunit lies within the Browns Canyon Area of Critical Environmental Concern (ACEC). Approximately 3,400 acres of the northeastern portion of the subunit and east of the Arkansas River is within the Browns Canyon Wilderness Study Area (WSA). A congressional bill is currently being developed for establishing the Browns Canyon Wilderness that includes the current WSA and additional BLM lands in the subunit east of the Arkansas River.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. **ACEC and WSA Values** – The special management area designations for the Browns Canyon ACEC and WSA recognize the area’s outstanding scenic and recreational values, as well as the occurrences of rare plants and animals.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

The values and qualities for which the Browns Canyon ACEC and Browns Canyon WSA were designated are maintained and undiminished. Opportunities are available for recreation uses that are compatible with maintaining the quiet and pristine qualities of these areas.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting ACEC and WSA values
- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Protecting uncommon plant communities and occurrences of sensitive plants and animals

- Securing the WSA from encroachments by motorized and mechanized vehicles

SALIDA (Subunit B)

General Setting - The Salida subunit contains a total area of 41,071 acres, including 13,481 acres of BLM public lands. It includes the community of Salida and is affected by all the associated pressures and issues that come from its proximity to public lands. Buena Vista is located nearby but is outside the boundary of this subunit. Most of the BLM lands are heavily utilized areas that provide easy-to-access recreation opportunities. Mild winter conditions allow year-round access for a variety of motorized and non-motorized recreation uses. The sights and sounds of human activity from towns, airports, highways, railroads, residential subdivisions, power lines, and motorized recreation uses are evident throughout most areas of the subunit.

The Rainbow Trail is a major recreation attraction located on National Forest lands near the southern edge of the subunit. This portion of the Rainbow Trail is open to foot, horse, bicycle, and motorcycle uses but is closed to ATV use.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. **Watershed Conditions** – The subunit includes important watersheds. Current levels of soil erosion from BLM lands are contributing to the declining quality of water and fish habitat in the Arkansas River.
2. **Wildlife Habitat** - The BLM lands in the subunit include important elk, deer, bighorn sheep, and black bear habitat that are gradually diminishing in both size and quality.
3. **Unique Geologic Resources** - Geologically significant sites are located on BLM lands in Castle Gardens and King Gulch that are being degraded by human uses. The Castle Gardens and King Gulch areas contain significant occurrences of fossils.
4. **Rare Plants and Animals** – The occurrences of sensitive plants and animals are being diminished by human uses. The Castle Gardens and King Gulch areas contain significant occurrences of sensitive plants. Castle Gardens contains one of the three largest and highest quality known occurrences of Brandegee wild buckwheat (*Eriogonum brandegei*). Another sensitive plant species, rock-loving neoparrya (*Aletes lithophilus*), occurs in King Gulch. A rare subspecies of bat, Townsend’s big-eared bat (*Plecotus townsendii pallescens*), is found in Longfellow Gulch.
5. **Proliferation of New Trails** - The proliferation of user created trails is resulting in increasing amounts of resource damage. Users have created many of the trails and cut-offs surrounding the town of Salida without authorization. Motorized “play” and hill-climbing activities occurring in and around Castle Gardens, King Gulch, and S-mountain have denuded parts of these areas and are sources of severe erosion.
6. **User Conflicts and Unsafe Conditions** - BLM lands are currently used for a variety of recreation activities, including hiking, horseback riding, mountain biking, jeeping, ATV and motorcycle riding. User conflicts and unsafe conditions are occurring where motorized, mechanized, and non-motorized users share the same trails.
7. **Demand for Expanded and Enhanced Recreation Opportunities** – The level of demand for mountain biking opportunities is extremely high in this subunit. The Salida Mountain Trails Park Committee, with the support of several other community-based organizations, is promoting a proposal for expanding and improving the available network of community trails that extend from the city of Salida onto nearby BLM and Forest Service lands.
8. **Exclusive Access and Uses from Private Lands** - Some of the BLM lands in the subunit abut subdivisions and other parcels of private lands that affect access and travel uses on public lands. In some cases private lands limit public access to BLM lands and have resulted in the development of multiple

private access points that are only accessible to the private landowners. Many of these access points are being used for motorized access that are creating new travel routes and adversely impacting vegetation, soils, and other natural resources.

9. Rainbow Trail – Several user created trails branch off the Rainbow Trail that affect both BLM and National Forest lands.

10. Illegal Uses - The incidence of illegal uses of BLM lands is unusually high in this subunit. Activities of particular concern include: trash dumping; abandonment of automobiles and household appliances; target shooting; paint ball shooting; long-term occupancy of dispersed camping areas; gatherings involving underage drinking and/or use of illegal drugs; unattended campfires; driving off existing roads; and constructing unauthorized trails.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in the Arkansas River are improving.

Available areas of wildlife habitat are expanding and improving throughout the subunit, supporting sustainable numbers of deer, elk, bighorn sheep, and black bear.

Occurrences of Brandegee wild buckwheat and rock-loving neoparrya are stable or increasing. The population of Townsend's big-eared bat is stable or increasing.

Previous impacts to unique geologic features from off-trail recreation uses are no longer evident in Castle Gardens and King Gulch.

Impacts from dumping trash, target shooting, off-road vehicle play, unauthorized trail construction, and other illegal uses are no longer evident in areas where these activities had previously occurred.

Visitors travel via a well-managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses and that are being maintained to limit adverse impacts to vegetation, soils, and water.

Designated travel routes between BLM and National Forest lands are cooperatively established to accommodate the same types of uses.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting and improving watershed conditions
- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Protecting uncommon plant communities and occurrences of sensitive plants and animals
- Protecting unique geologic features
- Protecting BLM lands from illegal uses
- Ensuring consistency with National Forest travel management designations
- Minimizing conflicts between recreation uses

BADGER CREEK (Subunit C)

General Setting - The Badger Creek subunit contains a total of 42,734 acres, including 34,114 acres of BLM public lands. Nearby population centers include Salida, Swissvale, Howard, and Coaldale. Non-motorized recreation uses of hiking, horseback riding, and mountain biking are comparatively low, whereas the opportunities for jeeping and riding ATVs and motorcycles are more widely known to users outside of the local area and are moderately high. The subunit includes a designated OHV OPEN area at Sand Gulch. A portion of the area, known as Turkey Rock, is used for motorcycle trials events that are held under special recreation permits issued by BLM. The Rocky Mountain Trials Association (RMTA) has requested that Turkey Rock be designated as an open area for riding trials bikes. Additionally, a state school section adjoins the OHV OPEN area that is being heavily utilized by OHVs. Several existing roads in the subunit, including the WAPA power line road, are also popular attractions for OHV users.

Badger Creek is a major tributary of the Arkansas River and is the key landscape feature in this subunit. Severe storm events in the Badger Creek watershed are noted for affecting Arkansas River turbidity conditions for many days following a storm. Badger Creek has been and continues to be the object of extensive efforts to reduce erosion and improve water quality. In 1999 the Royal Gorge Field Office completed an extensive ecosystem management analysis of the Badger Creek watershed to identify the management actions that were needed to improve watershed conditions in the area. As a result of this analysis and in response to a sudden and dramatic increase in extreme 4WD activity, several existing and user created routes were closed to motorized uses to protect riparian, fisheries, and wildlife values in the Badger Creek, Little Badger Creek, and Bloody Gulch drainages. This action effectively limited access in Badger Creek to foot and horse travel until the summer of 2004, when a catastrophic flood drastically altered the stream course and destroyed some vehicle barriers.

No special status management areas such as Wilderness Study Areas (WSA) or Areas of Critical Environmental Concern (ACEC) are located in this subunit; however, several environmental groups, including the Central Colorado Wilderness Coalition and Upper Arkansas and South Platte Project, are actively promoting that portions of the subunit should be designated as wilderness.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. **Watershed Conditions** - The subunit includes important watersheds. Current levels of soil erosion from BLM lands are contributing to the declining quality of water and fish habitat in Badger Creek and the Arkansas River.
2. **Riparian Habitat and Fisheries** - The subunit contains valuable riparian habitat that is being adversely impacted by human uses. A nearly continuous ribbon of riparian habitat occurs along Badger Creek from its source in South Park to where it joins the Arkansas River. This stream serves as an important spawning area for brown trout that ultimately contribute to the Arkansas River population and offers excellent remote, backcountry fishing opportunities.
3. **Wildlife Habitat** - The BLM lands in the subunit include important elk, deer, bighorn sheep, and black bear habitat that are gradually diminishing in both size and quality.
4. **Noxious Weeds** - The spread of knapweed and other noxious weeds is severely diminishing the health of the vegetation in this subunit and is the object of on-going eradication and control projects. Substantial portions of the riparian habitat in Badger Creek and its tributaries have been invaded by tamarisk (salt cedar).
5. **User Conflicts** - Conflicts between motorized and non-motorized recreation users are occurring in Badger Creek and other portions of this subunit that were previously closed to motorized travel in 1999. Disturbance to livestock, damage to fences, and other conflicts resulting from off-road motorized recreation uses are also affecting grazing uses in this area. Target shooting in the Turkey Rock area poses safety concerns for other users and nearby residents.

6. Exclusive Access and Uses from Private Lands - Exclusive access from private in-holdings and from subdivisions bordering BLM lands is an issue here. Some existing BLM roads that are not accessible to the public because they are blocked by private lands are being accessed and used exclusively by private landowners; resulting in the creation of unauthorized travel routes that adversely impact vegetation, soils, and other natural resources. Trespass issues also exist in this subunit where motorized recreation users are crossing onto private lands to gain access to the public lands.

7. Road Right-of-way and Maintenance Issues - Several sections of the existing roads in this subunit cross private lands for which public easements or rights-of-way do not exist. Without such easements, held either by BLM or other public entity such as the county, continuous public access across these lands cannot be assured. BLM only performs regular maintenance on roads where it has jurisdiction of the right-of-way. BLM is prohibited from maintaining roads that are not under BLM jurisdiction, including county roads. Consequently, the lack of BLM easements affects the ability of BLM to perform maintenance and improvement work on roads for which the county has established a public right-of-way but does not maintain them.

8. State Lands – Several OHV routes are located on the state school section in the Sand Gulch area that lead onto and adjoining BLM lands. The location of portions of these routes on the state school section affects travel management decisions in this area because BLM does not have the authority to designate travel routes on non-BLM lands.

9. Special Recreation Uses - Motorcycle trials events have been authorized by BLM in this area for many years. These events could be allowed to continue in an OHV LIMITED area, however, motorcycle use for practice purposes could not be easily accommodated by a system of designated routes.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in Badger Creek and the Arkansas River are improving.

Riparian vegetation in the Badger Creek drainages is healthy and functioning and Badger Creek is a productive brown trout fishery. Badger Creek is free of tamarisk and other noxious weeds.

Available areas of wildlife habitat are expanding and improving throughout the subunit, supporting sustainable numbers of deer, elk, bighorn sheep, and black bear.

The condition of vegetation is improving throughout the subunit. The spread of knapweed and other noxious weeds is subsiding.

BLM and county roads that traditionally have been used and maintained continue to be available to the public for motorized, mechanized, and non-motorized travel uses.

Visitors travel on public lands via a designated system of roads and trails that serve a variety of motorized, mechanized, and non-motorized uses. Some areas in the subunit are managed where visitors can experience opportunities for hiking, horseback riding, and mountain biking in quiet and remote settings, while opportunities for motorized recreation uses are available in other parts of the subunit.

Opportunities for target shooting are available in areas where it does not pose serious conflicts with other uses.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting and improving watershed conditions

- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Protecting and improving riparian areas and fish habitat conditions
- Resolving road access and maintenance issues
- Resolving travel management issues involving State Lands
- Protecting uncommon plant communities and occurrences of sensitive plants and animals
- Minimizing conflicts between recreation uses
- Resolving issues related to motorcycle trials events and RMTA's request for establishing Turkey Rock as a trails bike practice area
- Resolving conflicts with target shooting in the Turkey Rock area.

RED GULCH (Subunit D)

General Setting - The Red Gulch subunit contains a total area of 28,072 acres, including 15,660 acres of BLM public lands. The subunit is remotely located midway between Canon City and Salida. The BLM lands in the subunit receive low amounts of recreation use and are known and used primarily by local residents from nearby subdivisions and the small communities of Coaldale and Cotopaxi. Recreation uses are primarily motorized and dispersed.

Access into substantial portions of the BLM lands in the subunit are blocked by private lands, including the Spruce Basin, Park Mountain, and Indian Springs subdivisions. The access roads to BLM from the Dirty Gulch State Trust Lands are closed to the public from June 1-August 30. Another State School Section located in the subunit (Section 16, Pasture Gulch) is accessed via existing roads from adjoining BLM lands. Previous travel management decisions that resulted from the Texas Creek Trail Construction and Maintenance Environmental Assessment (1997) also affected access in this subunit.

Bernard Creek is the only perennial tributary of the Arkansas River in this subunit. The major side-drainages into Bernard Creek include Sand Gulch and Falls Gulch. A large portion of the subunit, however, is drained by Red Gulch, an intermittent tributary of Fernleaf Gulch.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. **Watershed Conditions** - The subunit includes important watersheds. Current levels of soil erosion from BLM lands are contributing to the declining quality of water and fish habitat in the Arkansas River.
2. **Wildlife Habitat** - The BLM lands in the subunit include important elk, deer, bighorn sheep, and black bear habitat that are gradually diminishing in both size and quality. The subunit lies within a game management area that contains critical habitat for deer, turkey, bear, and lion and that is considered to be a key hunting area for mule deer.
3. **Demand for Expanded and Enhanced Recreation Opportunities** - The Colorado Motorcycle Trail Riders Association is promoting a proposal for expanding the available network of ATV and motorcycle trails in the Texas Creek subunit that would also affect travel uses in the Red Gulch subunit. CMTRA is requesting the re-opening of previously used ATV and motorcycle routes that were closed following the 1999 environmental assessment of the Texas Creek Trail Construction and Maintenance Project and the construction of a new single-track motorcycle trail. CMTRA's proposal would re-establish a motorized connection between the Texas Creek and Red Gulch subunits.
4. **Road Maintenance Issues** - The road accessing Sand Gulch is included in the Fremont County road system but is not maintained by the county. BLM is prohibited from maintaining roads that are not under BLM jurisdiction, including county roads, limiting the ability of BLM to perform needed maintenance and improvement work.

5. State Lands – A major access point into the western part of the subunit from County Road 12 enters through the Dirty Gulch State Trust Lands, leased by the CDOW for wildlife purposes and closed to the public from June 1-August 30. Existing OHV routes are also located on the state school section in the Pasture Gulch area that lead onto and from adjoining BLM lands. The location of portions of these routes on the State Trust and school lands affect travel management decisions in this area because BLM does not have the authority to designate travel routes on non-BLM lands.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in the Arkansas River are improving.

Available areas of wildlife habitat are expanding and improving throughout the subunit, supporting sustainable numbers of deer, elk, bighorn sheep, and black bear.

Visitors travel via a managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses and that are being maintained to limit impacts on vegetation, soils, and water.

Non-maintained county roads that traditionally have been used continue to be available to the public for motorized, mechanized, and non-motorized travel uses.

Designated travel routes between BLM and State lands are cooperatively managed to accommodate the same uses.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting and improving watershed conditions
- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Resolving road maintenance issues
- Resolving travel management issues involving State Lands

TEXAS CREEK (Subunit E)

General Setting - The Texas Creek subunit contains a total area of 28,191 acres, including 21,454 acres of BLM public lands. The subunit is remotely located midway between Canon City and Salida. The area is regionally known for its developed network of 4WD and ATV trails and receives heavy amounts of motorized recreation uses. Approximately 8,000 acres of the subunit occurs within the Texas Creek Gulch/Reese Gulch OHV OPEN areas. In 1999, an environmental assessment for the Texas Creek Trail Construction and Maintenance project was conducted for the purpose of constructing new trails and for realigning and maintaining existing trails in the area. As a result of this environmental assessment, some existing trails that extended outside of the OHV OPEN areas were closed to protect important vegetation, watershed, and wildlife resources.

No Wilderness Study Areas (WSA) are included in this subunit but a very small portion of the Arkansas Canyonlands Area of Critical Environmental Concern (ACEC) is affected. Several environmental groups, including the Central Colorado Wilderness Coalition and Upper Arkansas and South Platte Project, are actively promoting that portions of the subunit should be designated as wilderness. Environmental interests

are generally opposed to allowing the expansion of motorized trails outside of the area contained within the current OHV trail system.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. Watershed Conditions - The subunit includes important watersheds. Current levels of soil erosion from BLM lands are contributing to the declining quality of water and fish habitat in the Arkansas River.
2. Riparian Habitat - Important riparian habitat occurs in substantial portions of the subunit, including Long Gulch, Fernleaf Gulch, Maverick Gulch, Bull Gulch, and East Gulch. Areas of healthy riparian habitat are relatively scarce in the region and are gradually declining in size and quality.
3. Wildlife Habitat - The BLM lands in the subunit include important habitat for elk, deer, bighorn sheep, and black bear that is gradually diminishing in both size and quality. The subunit lies within a game management area that contains critical habitat for deer, elk, bighorn sheep, turkey, bear, and lion and that is considered to be a key hunting area for mule deer. The contiguous BLM lands included within the Texas Creek subunit and the adjoining Red Gulch and Big Hole subunits provide important habitat connectivity for wildlife movement.
4. Road Maintenance Issues - The main access roads into the Texas Creek subunit are included in the Fremont County road system but are not maintained by the county. BLM is prohibited from maintaining roads that are not under BLM jurisdiction, including county roads, which limits the ability of BLM to perform needed maintenance and improvement work.
5. Demand for Expanded and Enhanced Recreation Opportunities - The Colorado Motorcycle Trail Riders Association (CMTRA) is supporting a proposal for expanding the available network of ATV and motorcycle trails in the Texas Creek subunit that would reopen portions of Long Gulch, Fernleaf Gulch, Maverick Gulch, and East Gulch to motorized access. CMTRA is requesting the re-opening of previously used ATV and motorcycle routes that were closed following the 1999 environmental assessment of the Texas Creek Trail Construction and Maintenance Project. CMTRA's proposal would also re-establish a motorized connection between the Texas Creek and Red Gulch subunits. Portions of the area have been used for holding trails events that are conducted under special recreation permits issued by BLM. The Rocky Mountain Trials Association (RMTA) is requesting that the areas that have been used in the past for holding motorcycle trials events be designated as OHV Open areas so that they are available year-round for training and practice.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in the Arkansas River are improving.

Riparian habitat occurring along the various drainages in the subunit is healthy and functioning to stabilize stream courses.

Available areas of wildlife habitat are expanding and improving in the subunit, supporting sustainable numbers of deer, elk, bighorn sheep, and other wildlife. Viable wildlife corridors and habit connections are maintained within the subunit and with the adjoining Red Gulch and Big Hole subunits.

Visitors travel via a designated system of roads and trails that serve a variety of motorized, mechanized, and non-motorized uses and that are being maintained to limit impacts on vegetation, soils, wildlife and water. Numerous opportunities are available throughout the subunit for motorized recreation uses, including designated routes of varying levels of difficulty for users of 4WDs, ATVs, and motorcycles.

BLM and county roads that have been traditionally used and maintained continue to be available to the public for motorized, mechanized, and non-motorized travel uses.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting and improving watershed conditions
- Protecting and improving riparian areas
- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Protecting rare natural vegetative communities and occurrences of sensitive plants and animals
- Resolving road maintenance issues
- Resolving issues related to motorcycle trials events and RMTA's request to designate open areas for trials bike riding.

BIG HOLE (Subunit F)

General Setting - The Big Hole subunit contains a total area of 28,477 acres, including 23,408 acres of BLM public lands. The subunit is remotely located between Canon City and Salida. Access into the subunit is extremely limited due to extreme topography, the lack of a bridge-crossing on the Arkansas River, and the lack of public easements through adjoining private lands or along the right-of-way of the Union Pacific Railroad. Recreation usage in the subunit is very light and public access is limited to mostly foot and horse travel. Lesser amounts of motorized recreation uses occur that originates primarily from private lands bordering along the northern portions of the subunit. The subunit contains numerous primitive roads that were used for past ranching and mining operations. Many of these old roads have become overgrown with vegetation or have become impassible from lack of use and maintenance.

A substantial portion of the subunit is within the Arkansas Canyonlands Area of Critical Environmental Concern (ACEC) and contains an area of unique relict vegetation within the High Mesa Grasslands Research Natural Area (RNA). Buildings and artifacts remaining from historical ranching and mining activities are also located in the subunit. No Wilderness Study Areas (WSA) are included in this subunit, however, several environmental groups, including the Central Colorado Wilderness Coalition and Upper Arkansas and South Platte Project, are actively promoting that the subunit should be designated as wilderness.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. **Watershed Conditions** - The subunit includes important watersheds. Current levels of soil erosion from BLM lands are contributing to the declining quality of water and fish habitat in the Arkansas River.
2. **Riparian Habitat** - Important riparian habitat occurs along East Gulch. Areas with healthy riparian habitat are relatively scarce in the region and are gradually declining in size and quality.
3. **Wildlife Habitat** - The BLM lands in the subunit include important habitat for elk, deer, bighorn sheep, and black bear that is gradually diminishing in both size and quality. Bighorn sheep severe winter range and lambing grounds and elk severe winter range occur in the southern sections, and elk severe winter concentration areas occur along the northern sections of the subunit. The contiguous BLM lands included within the Big Hole subunit and the adjoining Texas Creek and Red Gulch subunits provide important habitat connectivity for wildlife movement.
4. **Vegetation** - Dense stands of pinon pine and juniper trees dominate most areas below 8,000 feet elevation; creating conditions for catastrophic wildfires and limiting the production of grasses and other plants that are valuable for wildlife. Noxious weeds, including knapweed and tamarisk, have also invaded portions of the subunit. The Big Hole subunit is the object of on-going fuels reduction treatments to reduce

the potential of catastrophic wildfires and to enhance forage production for wildlife. Treatments to eradicate and control the spread of noxious weeds are also on-going in this subunit.

5. ACEC and RNA Values – The special management area designation for the Arkansas Canyonlands ACEC recognizes the areas outstanding scenic and recreational values, as well as the occurrences of rare plants and animals that are found in this subunit, including Arkansas Canyon Stickleaf (*Mentzelia densa*) and peregrine falcon. The High Mesa Grasslands RNA contains an undisturbed relict plant community that is thought to have existed prior to changes in native rangelands caused by intensive cattle grazing and the introduction of exotic plants.

6. Exclusive Access and Uses from Private Lands - Exclusive access from private in-holdings and from subdivisions bordering BLM lands is an issue here. Some existing BLM roads that are not accessible to the public because they are blocked by private lands are being accessed and used exclusively by private landowners; resulting in the creation of unauthorized travel routes that adversely impact vegetation, soils, and other natural resources.

7. Safety Concerns and Motorized Encroachment into McIntyre Hills WSA at Five Points Gulch – The major public access point into the Big Hole Subunit is located where Five Points Gulch enters the Arkansas River. Visitors access the subunit via a short but steep primitive road that extends about 60 feet from the south side of US 50 into Five Points Gulch. Users then proceed north under the highway bridge and must ford the Arkansas River to reach the public lands on the other side.

The access road into Five Points Gulch is located at the east end of bridge and is situated at a place where the sight distance is severely restricted. Most visitors do not want to risk the hazards associated with entering and leaving Five Points Gulch via this access road, but instead park at a turnout located about 200 yards east of the bridge and access the gulch on foot. Some visitors, however, do chose to drive down into the gulch, which poses serious safety hazards for both the visitor and other highway users.

A second hazard that exists at this access point is the river crossing, which can only be safely done when the Arkansas River flows are less than 400 CFS. At high flows people and vehicles risk being swept downstream.

Another concern involves the McIntyre Hills WSA. The boundary for the WSA is located about 100 feet above where the access road enters Five Points Gulch. A substantial amount of ATV and motorcycle encroachment into the McIntyre Hills WSA is occurring via this access road.

8. Demand for Expanded and Enhanced Recreation Opportunities - Interest has been expressed from both motorized and non-motorized recreation users for improved access into the subunit.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in the Arkansas River are improving.

Riparian habitat in East Gulch and other areas is healthy and functioning to stabilize stream courses.

Available areas of wildlife habitat are expanding and improving in the subunit, supporting sustainable numbers of deer, elk, bighorn sheep, and other wildlife. Viable wildlife corridors and habit connections are maintained with the adjoining Texas Creek and Red Gulch subunits. Occurrences of noxious weeds are subsiding and the risk of catastrophic wildfire is maintained at minimal levels by on-going fuels reduction treatments

The values contained in the Arkansas Canyonlands ACEC and High Mesa Grasslands RNA are maintained and undiminished. Occurrences of Arkansas Canyon Stickleaf and populations of peregrine falcon are stable or increasing.

Opportunities are available for non-motorized recreation uses in a quiet and remote backcountry setting.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting and improving watershed conditions
- Protecting and improving riparian areas
- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Protecting rare natural vegetative communities and occurrences of sensitive plants and animals
- Protecting ACEC and RNA values
- Minimizing conflicts between recreation uses
- Resolving safety issues at Five Points Gulch access point
- Securing the McIntyre Hills WSA from encroachments by motorized and mechanized vehicles

CRAMPTON MOUNTAIN (Subunit G)

General Setting - The Crampton Mountain subunit contains a total area of 25,076 acres, including 12,794 acres of BLM public lands. The terrain is extremely steep and mountainous and includes rugged canyons in the Cottonwood Creek and Tallahassee Creek drainages.

Private lands and topographic barriers isolate the BLM lands in this subunit from those in the adjoining Big Hole and Grand Canyon Hills subunits. Many of the BLM lands in the subunit are bordered by subdivisions.

The area is not widely known for its recreational opportunities but is known and used mostly by local residents from nearby subdivisions and ranches. The creation of new motorized trails is occurring in portions of the subunit, including the area around Soapy Hill.

Big game hunting is the major recreation use in this subunit. The subunit includes the Cottonwood Ridge State Trust Lands, which is managed by the CDOW for wildlife and fishing purposes and is restricted to foot and horse access.

Only a small portion of the subunit is easily accessible via motor vehicle and attracts moderate amounts of recreation uses. Most of the area, however, is difficult to access and experiences low amounts of use. The BLM roads in the subunit are primitive 4WD roads that were constructed and used for past mining and logging operations and for the construction and maintenance of the WAPA power line. An environmental assessment was conducted in 1986 to address the impacts of off-road travel uses that were occurring in the area surrounding Crampton Mountain. As a result of this environmental assessment, some existing roads were closed to limit access in those portions of Crampton Mountain that were being adversely affected by off-road travel. A total of six roads were closed with BLM and Division of Wildlife habitat improvement money. The closures included five dead end roads and one loop road across the top of Crampton Mountain.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. **Watershed Conditions** - The subunit includes important watersheds. Current levels of soil erosion from BLM lands are contributing to the declining quality of water and fish habitat in Cottonwood Creek, Tallahassee Creek and the Arkansas River.

2. Riparian Habitat - Important riparian habitat occurs along the Cottonwood Creek and Tallahassee Creek drainages. Areas with healthy riparian habitat are relatively scarce in the region and are gradually declining in size and quality.

3. Wildlife Habitat - The BLM lands in the subunit include important habitat for elk, deer, bighorn sheep, turkey, and black bear that is gradually diminishing in both size and quality.

4. Road Maintenance Issues - The roads accessing Rough Gulch and Sand Gulch are included in the Fremont County road system but are not maintained by the county. BLM is prohibited from maintaining roads that are not under BLM jurisdiction, including county roads, which limits the ability of BLM to perform needed maintenance and improvement work.

5. State Lands – Visitors must cross through the Cottonwood Ridge State Trust Lands to access the BLM lands that are located above it. Because DOW restricts travel through the Trust Lands to foot and horse uses, designated travel uses for the BLM lands situated above the Trust Lands are limited.

6. Proliferation of New Trails - The proliferation of user created trails is resulting in increasing amounts of resource damage. Users have created ATV and motorcycle trails extending down Cottonwood Creek from Soapy Hill and trails have been created in other portions of the subunit, as well.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in the Arkansas River are improving.

Riparian habitat occurring along Cottonwood Creek and Tallahassee Creek is healthy and functioning to stabilize stream courses.

Available areas of wildlife habitat are expanding and improving in the subunit, supporting high numbers of deer, elk, turkey, bighorn sheep, and other wildlife.

Visitors travel via a designated system of roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses and that are being maintained to limit impacts on vegetation, soils, and water. Some areas in the subunit are managed where visitors can experience opportunities for hiking, horseback riding, and mountain biking in quiet and remote settings, while opportunities for motorized recreation uses are available in other parts of the subunit.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting and improving watershed conditions
- Protecting and improving riparian areas
- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Protecting rare natural vegetative communities and occurrences of sensitive plants and animals
- Resolving road maintenance issues
- Ensuring consistency with DOW travel management designations

Minimizing conflicts between recreation uses

SANGRES FOOTHILLS (Subunit H)

General Setting - The Sangres Foothills subunit contains a total area of 48,632 acres, including 21,686 acres of BLM public lands. This subunit includes lands in Fremont County located south of the Arkansas River and between the Chaffee and Custer County lines. The BLM land ownership patterns in this subunit are highly fragmented. Substantial blocks of BLM lands are separated by private lands that have been subdivided into residential properties. Many of the BLM lands also adjoin the San Isabel National Forest and include several public access points for the Rainbow Trail.

The Rainbow Trail is a major recreation feature located on National Forest lands that border along the southwestern boundary of the subunit, and that runs parallel to this boundary for the entire length of the subunit. A lot of the usage on BLM roads in this subunit is from people passing through to reach the Rainbow Trail. The entire Rainbow Trail is open to foot, horse, bicycle, and motorcycle uses. The operation of ATVs, however, is only permitted on that portion of the trail extending south of Big Cottonwood Creek.

Nearby population centers include the communities of Salida, Swissvale, Howard, and Coaldale. Motorized recreation uses such as jeeping, ATV riding, and motorcycle riding predominate on most BLM parcels. The BLM lands in the Kerr Gulch area are well-known and heavily used by people from outside of the local area for motorized recreation and for big game hunting opportunities. Other BLM parcels in the subunit are not widely known and attract low to moderate amounts of use, mostly from residents of the nearby subdivisions and communities. Public access is limited to many BLM parcels by extreme topography and by intervening private lands. The only public access to some BLM parcels is from existing and user created trails coming off adjoining National Forest lands from the Rainbow Trail.

Previous travel management decisions were made in the Kerr Gulch, Hamilton Creek, and Falls Gulch portions of the subunit. These decisions resulted in closures of some of the motorized routes in these areas.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. **Watershed Conditions** - The subunit includes important watersheds. Several important tributaries of the Arkansas River are affected by BLM lands in this subunit, including Bear Creek, Hayden Creek, and Big Cottonwood Creek. Current levels of soil erosion from BLM lands are contributing to the declining quality of water and fish habitat in the Arkansas River.
2. **Wildlife Habitat** - The BLM lands in the subunit include important habitat for elk, deer, and black bear that is gradually diminishing in both size and quality. The Kerr Gulch area is considered to be a key hunting area for elk and mule deer.
3. **Proliferation of New Trails** - The proliferation of user created trails is resulting in increasing amounts of resource damage on BLM lands near Wellsville and in the Kerr Gulch and Falls Gulch areas of the subunit.
4. **Exclusive Access and Uses from Private Lands** - Some of the BLM lands in the subunit abut subdivisions and other parcels of private lands that affect access and travel uses on public lands. In some cases private lands limit public access to BLM lands and have resulted in the development of multiple private access points that are only accessible to the private landowners. Many of these access points are being used for motorized access that are creating new travel routes and adversely impacting vegetation, soils, and other natural resources.
5. **Rainbow Trail** - Old mining roads and user created trails that stem off the Rainbow Trail are being used by the public to reach some BLM lands that are otherwise not legally accessible to the public. Some of these routes are adversely impacting vegetation, soils, and other natural resources on both BLM and National Forest lands. In some cases these routes pass through BLM lands onto adjacent private lands and are being used by the private landowners for exclusive access to the Rainbow Trail.

6. Road Maintenance Issues - The BLM access roads in the Taylor Gulch, Kerr Gulch, and Big Cottonwood Creek areas are included in the Fremont County road system but are not maintained by the county. BLM is prohibited from maintaining roads that are not under BLM jurisdiction, including county roads, which limits the ability of BLM to perform needed maintenance and improvement work.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in the Arkansas River are improving.

Available areas of wildlife habitat are expanding and improving throughout the subunit, supporting high numbers of deer, elk, bighorn sheep, and black bear.

Visitors travel via a designated system of roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses and that are being maintained to limit adverse impacts to vegetation, soils, and water.

Designated travel routes between BLM and National Forest lands are cooperatively managed to accommodate the same uses.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting and improving watershed conditions
- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Protecting rare natural vegetative communities and occurrences of sensitive plants and animals
- Resolving road maintenance issues
- Minimizing conflicts between recreation uses

WEST MCCOY GULCH (Subunit I)

General Setting - The West McCoy Gulch subunit contains a total of 17,904 acres, including 11,377 acres of BLM public lands. The subunit is situated south of the Arkansas River midway between Canon City and Salida and near the small communities of Coaldale and Cotopaxi. The subunit contains important wildlife habitat and includes the McCoy Gulch State Trust Lands. Hunting big game is a major use in this subunit.

The types and amounts of recreation uses occurring in the area vary greatly between the east and west halves of the subunit. The west half receives high amounts of OHV use along Fremont County Road 37, which the county has designated as open to ATV travel. The BLM lands west of FCR 37 are also accessible from numerous primitive roads that stem off the county road and lead to several inactive granite quarries that are located in the area.

Most of the BLM lands to the east of FCR 37, however, are virtually inaccessible to the public for OHV use because of intervening private lands and natural terrain barriers. Consequently, legal public access to the east half of the subunit is limited to foot and horse use from only a few places where the BLM lands can be reached without trespassing on private lands.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. Watershed Conditions - The soils in the area exhibit high potential for erosion. Current levels of soil erosion from BLM lands are contributing to the declining quality of water and fish habitat in the Arkansas River.

2. Wildlife Habitat - The BLM lands in the subunit include important habitat for elk, deer, bighorn sheep, and black bear that is gradually diminishing in both size and quality. The subunit is elk winter range and a key elk migration corridor and is good deer habitat.

3. Proliferation of New Trails - The proliferation of user created trails is resulting in increasing amounts of resource damage. Users have created many of the trails and cut-offs from the existing road network. ATV and motorcycle trails are being systematically extended across steep and unstable slopes beyond the ends of existing 4WD routes.

4. Exclusive Access and Uses from Private Lands - Exclusive access from private in-holdings and from subdivisions bordering BLM lands is an issue here. Some existing BLM roads that are not accessible to the public because they are blocked by private lands are being accessed and used exclusively by private landowners; resulting in the creation of unauthorized travel routes that adversely impact vegetation, soils, and other natural resources.

5. Access Trail to McCoy Gulch State Trust Lands - The foot and horse access trail from BLM lands to the McCoy Gulch State Trust Lands is partly located on private lands. To assure continued public access, the trail either needs to be moved entirely onto to BLM lands or an easement acquired for the portions of the trail crossing the private lands.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in the Arkansas River are improving.

Available areas of wildlife habitat are expanding and improving throughout the subunit, supporting sustainable numbers of deer, elk, bighorn sheep, and black bear.

Visitors travel via a managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses and that are being maintained to limit impacts on vegetation, soils, and water. Some areas in the subunit are managed where visitors can experience opportunities for hiking, horseback riding, and mountain biking in quiet and remote settings, while opportunities for motorized recreation uses are available in other parts of the subunit.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting and improving watershed conditions
- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Protecting rare natural vegetative communities and occurrences of sensitive plants and animals
- Resolving access issue with trail to McCoy Gulch State Trust Lands
- Minimizing conflicts between recreation uses

MCINTYRE HILLS (Subunit J)

General Setting - The McIntyre Hills subunit contains a total of 25,201 acres, including 22,162 acres of BLM public lands. This sub-unit is located south of the Arkansas River between Parkdale and Texas Creek. The BLM lands in this subunit lie almost entirely within the McIntyre Hills WSA and Arkansas Canyonlands ACEC. The special management area designations for the WSA and ACEC recognize the area's outstanding scenic and recreational values, as well as the occurrences of rare plants and animals that are found in this subunit. Only about 2,250 acres of the BLM lands occur outside of these special management areas.

The lands in this subunit are extremely steep and rugged. The north boundary of the subunit borders approximately 13 miles of the Arkansas River and US Highway 50. The Arkansas River and the narrow highway corridor include about 650 acres of the Arkansas River Headwaters Recreation Area (AHRA) and are heavily used for whitewater boating, fishing, picnicking, camping, and viewing wildlife. The amount of recreation use occurring outside of AHRA corridor is very limited, due to the extreme topography of the lands along the river canyon. The WSA and ACEC lands adjacent to the AHRA are mostly used by day-hikers who explore the lower portions the major gulches; however, encroachment into the WSA by users with ATVs and motorcycles is a recurring problem in Five Point Gulch.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. **WSA Management** – OHV encroachments are occurring in portions of the McIntyre Hills WSA that violate congressional direction for managing WSAs.
2. **ACEC Management** - OHV encroachments are occurring in portions of the Arkansas Canyonlands ACEC that are adversely affecting important wildlife habitat and watershed values.
3. **Exclusive Access and Uses from Private Lands** - Some of the BLM lands in the subunit abut subdivisions and other parcels of private lands that affect access and travel uses on public lands. In some cases private lands limit public access to BLM lands and have resulted in the development of multiple private access points that are only accessible to the private landowners. Many of these access points are being used for motorized access that are creating new travel routes and adversely impacting vegetation, soils, and other natural resources.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

The values and qualities for which the McIntyre Hills WSA and Arkansas Canyonlands ACEC were designated are maintained and undiminished. Opportunities are available for recreation uses that are compatible with maintaining the quiet and pristine qualities of these areas.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting ACEC and WSA values
- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Protecting rare natural vegetative communities and occurrences of sensitive plants and animals
- Securing the WSA from encroachments by motorized and mechanized vehicles

GRAND CANYON HILLS (Subunit K)

General Setting - The Grand Canyon Hills subunit contains a total area of 27,137 acres, including 8,618 acres of BLM public lands. This sub-unit is located immediately west of Canon City and is heavily influenced by the issues and pressures resulting from its proximity to an urban population. Many of the BLM parcels are heavily utilized areas that provide easy-to-access recreation opportunities. Mild winter conditions allow year-round access for a variety of motorized and non-motorized recreation uses. The sights and sounds of human activity from towns, airports, highways, railroads, residential subdivisions, and motorized recreation uses are evident throughout many areas of the subunit.

The subunit contains approximately 2,200 acres of the Grape Creek ACEC and 900 acres of the Arkansas Canyon Lands ACEC.

Portions of Grape Creek and the Arkansas River itself flow through BLM lands contained in this subunit. Both are key watershed features in this subunit.

The subunit attracts heavy amounts of recreation use from both local residents and tourists. The major recreation attractions include the Arkansas River, Royal Gorge Bridge, Royal Gorge Park, Temple Canyon Park, Tunnel Drive Trail, Rockefeller Ecology Park, and the BLM Fishing Access Trail at Parkdale. The Arkansas River through the Royal Gorge is a national destination area for whitewater boating and one of the most heavily used sections of the river. The BLM lands in the subunit adjoin the San Isabel National Forest along the south boundary of the subunit.

Most of the BLM lands in the sub-unit are located south of Royal Gorge Park and surround three sides of Temple Canyon Park. The BLM lands are accessible via Fremont County 3 and BLM Road 6100 (Grand Canyon Hills access road), and via a half dozen primitive 4-wheel drive roads that lead from these two major access roads.

Due to the fragmented patterns of land ownership and extreme topography, many BLM parcels are not easily accessible, and some are surrounded by private lands that provide no legal public access to the public lands. Legal public access is lacking into the Grape Creek WSA from Temple Canyon Park, although the public routinely crosses private lands upstream of the Park to hike and fish on the Grape Creek State Trust Lands and BLM lands above here.

Numerous short spurs and dispersed camping sites occur along FCR 3 between Canon City and Temple Canyon Park. The BLM lands along this section receive heavy amounts of recreation use from local residents including day-hiking, rock collecting, and motorcycle riding, and dispersed camping. Illegal trash dumping is a serious problem in this area. This section of FCR 3 is also used for an annual Hill Climb that attracts hundreds of spectators during the week end that the event is held.

The section of Grape Creek located between the Arkansas River and the Rockefeller Ecology Park is attracting high amounts recreation use for hiking, horseback riding, mountain biking, and fishing due to the good access provided by the trail that leads from the Ecology Park. Trespass issues exist in this area with private lands located between the Ecology Park and the Arkansas River.

BLM Road 6100 is open to year round traffic but is gated at the bottom for closing when conditions are wet and muddy. This road provides dead end access to the Grand Canyon Hills area and to the south rim of the Royal Gorge. Approximately 2,000 acres of Grand Canyon Hills is designated as an OHV OPEN area. Portions of the area are used for motorcycle trials events that are held under special recreation permit. Recreational uses in this area include driving 4WDs, ATVs, motorcycles and hiking, horseback riding, hunting, and dispersed camping.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. **Watershed Conditions** – The subunit includes important watersheds. Current levels of soil erosion from BLM lands are contributing to the declining quality of water and fish habitat in the Arkansas River.

2. Rare Plants and Animals – The occurrences of rare plants and animals are being diminished by human uses. The special management area designations for the Arkansas Canyonlands and Grape Creek ACECs recognize outstanding scenic and recreational values, as well as the occurrences of rare plants and animals that are found in this subunit, including peregrine falcon, Townsend’s big-eared bat, Arkansas canyon stickleaf (*Mentzelia densa*), Degener beardtongue (*Penstemon degeneri*), and golden blazing star (*Mentzelia chrysantha*).

3. Coordination with Municipal, County, and National Forest Lands and Trails – BLM lands in the subunit adjoin Royal Gorge Park, Temple Canyon Park, Rockefeller Ecology Park, Tunnel Drive Trail and the San Isabel National Forest. Travel use decisions made on BLM lands may also affect uses on lands managed by the Canon City Parks and Forestry Department, the Canon City Area Metropolitan Recreation and Park District, Fremont County, and the San Isabel National Forest.

4. Exclusive Access and Uses from Private Lands - Some of the BLM lands in the subunit abut subdivisions and other parcels of private lands that affect access and travel uses on public lands. In some cases private lands limit public access to BLM lands and have resulted in the development of multiple private access points that are only accessible to the private landowners. Many of these access points are being used for motorized access that are creating new travel routes and adversely impacting vegetation, soils, and other natural resources.

5. Illegal Uses - The incidence of illegal uses of BLM lands is unusually high in this subunit. Activities of particular concern include: trash dumping, abandonment and disposal of automobiles and household appliances, target shooting, paint ball shooting, long-term occupancy of dispersed camping areas, gatherings involving underage drinking and/or use of illegal drugs, unattended campfires, driving off existing roads, and constructing unauthorized trails.

6. Special Recreation Uses - Motorcycle trials events have been authorized by BLM in this area for many years. These events could be allowed to continue in an OHV LIMITED area, however, motorcycle use for practice purposes could not be easily accommodated by a system of designated routes

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in the Arkansas River are improving.

The values and qualities for which the Arkansas Canyonlands and Grape Creek ACECs were designated are maintained and undiminished. Populations or occurrences of peregrine falcon, Townsend’s big-eared bat, Arkansas canyon stickleaf, Degener beardtongue, and golden blazing star are stable or increasing. Opportunities are available for recreation uses that are compatible with maintaining the quiet and pristine qualities of these areas.

Visitors travel via a designated system of roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses and that are being maintained to limit adverse impacts to vegetation, soils, and water.

The public has legal public access from Temple Canyon Park to the Grape Creek WSA, and from the Ecology Park to the Arkansas River.

Designated travel routes between BLM, City, County, and National Forest lands are cooperatively managed to accommodate the same uses.

Impacts from dumping trash, target shooting, off-road vehicle play, unauthorized trail construction, and other illegal uses are no longer evident in areas where these activities had previously occurred.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting scenic and recreation values
- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Protecting rare natural vegetative communities and occurrences of sensitive plants and animals
- Protecting threatened and endangered and sensitive species
- Resolving access issues in Grape Creek
- Ensuring consistency with City, Recreation District, County, and National Forest travel management objectives
- Protecting BLM lands from illegal uses
- Resolving issues related to motorcycle trials events

ROAD GULCH (Subunit L)

General Setting - The Road Gulch subunit contains a total of 55,981 acres, including 12,709 acres of BLM public lands. The area is remotely situated away from major highways and communities, however, most of the private lands in the subunit have been subdivided into residential home sites, and many are occupied by year-round residents. The area is not widely known for its recreation opportunities, but receives substantial amounts of recreational use by local residents. The Turkey Gulch State Trust Lands are located in the subunit, and hunting is a major use in this area.

Most of the BLM lands are concentrated in two large blocks surrounding Lookout Mountain and Poverty Mountain that are contiguous to the public lands included in the McIntyre Hills and Grape Creek subunits. The remaining BLM lands consist of isolated fragmented parcels that are surrounded by private lands.

Access to BLM lands in the Lookout Mountain and Poverty Mountain areas is provided by Fremont County Roads 28 (Road Gulch/Copper Gulch Road) and by a number of primitive BLM roads that extend from FCR 28 and Highway 69. The BLM roads in these areas are heavily used for jeeping, ATV riding, and motorcycle riding. Some road closures have been implemented around the Turkey Gulch State Trust Lands to protect riparian habitat and to assist the Division of Wildlife in restricting motorized travel on the State property. Previous closures have also been implemented at the top of Five Point Gulch and on several roads in the Poverty Mountain area to prevent motorized encroachments into the McIntyre Hills WSA.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. **Watershed Conditions** - The soils in the area exhibit high potential for erosion. Current levels of soil erosion from BLM lands are contributing to the declining quality of water and fish habitat in the Arkansas River.

2. **Wildlife Habitat** - The BLM lands in the subunit include important habitat for elk, deer, turkey, and black bear that is gradually diminishing in both size and quality. The Turkey Gulch State Trust Lands and surrounding BLM lands provide high-quality turkey habitat and hunting opportunities.

3. **Proliferation of New Trails** - The proliferation of user created trails is resulting in increasing amounts of resource damage. Users have created many of the trails and cut-offs from the existing road network. ATV and motorcycle trails are being systematically extended across steep and unstable slopes beyond the ends of existing 4WD routes.

4. **Exclusive Access and Uses from Private Lands** - Exclusive access from private in-holdings and from subdivisions bordering BLM lands is an issue here. Some existing BLM roads that are not accessible to the

public because they are blocked by private lands are being accessed and used exclusively by private landowners; resulting in the creation of unauthorized travel routes that adversely impact vegetation, soils, and other natural resources.

5. WSA Management – OHV encroachments are occurring in portions of the McIntyre Hills WSA that violate congressional direction for managing WSAs.

6. County Road Issues - Several roads affecting BLM lands in this subunit are included in the Fremont County Road and Highway system but are not maintained by the county. The status of these roads under county jurisdiction raises several legal issues that limit the ability of the BLM to maintain or manage travel uses on these roads. In two of the cases the roads in question are not even being kept open to the public, but have been closed to public use where they cross private lands. The roads are being used exclusively, however, by the private landowners to access public lands. In both of these cases the uses originating from the private lands are adversely impacting vegetation, soils, and other resources on the public lands. BLM would like to limit access and uses on these roads but cannot legally impose restrictions on roads that are recognized and claimed by the county as public rights-of-way.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in the Arkansas River are improving.

Available areas of wildlife habitat are expanding and improving throughout the subunit, supporting high numbers of deer, elk, turkey, and black bear.

Visitors travel via a managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses and that are being maintained to limit impacts on vegetation, soils, and water.

The values and qualities for which the Grape Creek WSA and ACEC were designated are maintained and undiminished. Opportunities are available for recreation uses that are compatible with maintaining the quiet and pristine qualities of these areas.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting and improving watershed conditions
- Protecting and improving wildlife habitat conditions and maintaining core wildlife areas and movement corridors
- Protecting WSA values in adjoining McIntyre Hills and Grape Creek subunits
- Resolving county road issues with Fremont County

GRAPE CREEK (Subunit M)

General Setting - The Grape Creek subunit contains a total of 47,649 acres, including 32,534 acres of BLM public lands. This subunit is situated southwest of the Canon City and mostly in Fremont County, except for a small portion of the subunit that extends into Custer County. The BLM lands in this subunit are mostly contained within the Grape Creek WSA and Grape Creek ACEC. The special management area designations for the WSA and ACEC recognize the area's outstanding scenic and recreational values, as well as the occurrences of rare plants and animals. Approximately 6,000 acres of the BLM lands occur outside of these special management areas.

Grape Creek is an important perennial tributary of the Arkansas River and the key landscape feature in the subunit. The 15 mile-long section of Grape Creek that is included in the subunit is known for its beautiful scenery and offers outstanding opportunities for hiking and fishing in a primitive setting.

The majority of users access Grape Creek at the north end of the subunit by walking along the historic railroad grade from Temple Canyon Park. The only other public access route into Grape Creek is via BLM Road 6227; located approximately 7 miles upstream from Temple Canyon Park. Since the majority of visitors are forced to return to the point where they parked their vehicles, the heaviest amounts of recreation use occurs within a mile or two of Temple Canyon Park and the end of BLM 6227. The remaining sections of the canyon receive only moderate to light amounts of recreation use. Illegal encroachment into the WSA by users of motorized and mechanized vehicles is occurring in portions of Grape Creek.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. WSA Management – OHV encroachments are occurring in portions of the Grape Creek WSA that violate Congressional direction for managing WSAs.
2. ACEC Management - OHV encroachments are occurring in portions of the Grape Creek ACEC that adversely affect important wildlife habitat and watershed values.
3. Exclusive Access and Uses from Private Lands - Some of the BLM lands in the subunit abut subdivisions and other parcels of private lands that affect access and travel uses on public lands. In some cases private lands limit public access to BLM lands and have resulted in the development of multiple private access points that are only accessible to the private landowners. Many of these access points are being used for motorized access that are creating new travel routes and adversely impacting vegetation, soils, and other natural resources.
4. Legal Public Access Issues - The public has traditionally accessed Grape Creek from Temple Canyon Park via a trail that crosses private and state lands over which BLM does not have a public easement. Without a legal easement, continuous public access across these lands cannot be assured.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

The values and qualities for which the Grape Creek WSA and ACEC were designated are maintained and undiminished. Opportunities are available for recreation uses that are compatible with maintaining the quiet and pristine qualities of these areas.

Traditional access from Temple Canyon to the Grape Creek State Trust Lands and BLM public lands is available to the public for non-motorized travel uses.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting ACEC and WSA values
- Protecting uncommon plant communities and occurrences of sensitive plants and animals
- Protecting wildlife habitat and maintaining core wildlife areas and movement corridors
- Resolving legal public access issues
- Securing the WSA from encroachments by motorized and mechanized vehicles

CUSTER COUNTY (Subunit N)

General Setting - The Custer County subunit contains a total area of 108,807 acres, including 3,621 acres of BLM public lands. This large sub-unit includes all of the scattered BLM lands located within the

Arkansas River TMP in Custer County except for lands in the Grape Creek WSA and ACEC. The subunit encompasses the north end of the Wet Mountain Valley and includes DeWeese Reservoir and the towns of Westcliffe and Silver Cliff. The BLM lands consist of small, scattered parcels that are surrounded by private lands. Many of the BLM parcels have been identified for disposal. The largest parcels are concentrated in three areas; Bear Peak, the White Hills, and DeWeese Reservoir.

The BLM lands provide open space and benefits to wildlife; however, due to the small size of most parcels the benefits to wildlife are not substantial.

Nearly all of the BLM parcels are accessed from county roads. The parcels surrounding DeWeese Reservoir are managed under a recreation partnership with Colorado Division of Wildlife. Recreation uses on other parcels is low. Recreation use originates mostly from local residents of adjoining subdivisions and the nearby communities.

Identified Issues and Concerns (summary of the major resource management concerns and social issues)

1. **Exclusive Access and Uses from Private Lands** - Some of the BLM lands in the subunit abut subdivisions and other parcels of private lands that affect access and travel uses on public lands. In some cases private lands limit public access to BLM lands and have resulted in the development of multiple private access points that are only accessible to the private landowners. Many of these access points are being used for motorized access that are creating new travel routes and adversely impacting vegetation, soils, and other natural resources.

Desired Future Conditions (summary of desired outcomes that respond to the identified issues and concerns)

Recreation uses at DeWeese Reservoir are managed by DOW to provide access for fishing and dispersed camping opportunities along designated travel routes. In other areas, opportunities are available along county road corridors for dispersed hiking and horseback riding.

Visitors travel on public lands via a designated system of roads and trails that serve a variety of motorized, mechanized, and non-motorized uses. Some areas in the subunit are managed where visitors can experience opportunities for hiking, horseback riding, and mountain biking in quiet and remote settings, while opportunities for motorized recreation uses are available in other parts of the subunit.

Management Objectives (the following management objectives will receive primary consideration in evaluating and comparing travel management alternatives and for identifying the alternative that works best to achieve the desired future conditions)

- Protecting vegetation and soil conditions

APPENDIX 3

Royal Gorge Field Office - Guidelines for Managing Access between BLM and Private Lands

As the Royal Gorge Field Office (RGFO) implements its Resource Management Plan decision to conduct Travel Management Planning on public lands, guidelines are needed to clarify the conditions under which BLM may authorize access to public lands from adjoining private lands.

Background

Public land Travel Management Planning has the long term objective of providing reasonable access to the public for a variety of uses and enjoyment through a range of transportation uses that vary by area and circumstance. This objective is accomplished through the designation of a travel system providing for recreation and resource uses while also offering protection to important resource values.

Managing access between BLM public lands and adjoining private lands is a problematic issue for BLM, private landowners, and the public alike. Private landowners may experience increased trespass from users seeking access to adjacent BLM public lands or who cross onto private lands from adjacent public lands. This often arises because the public is unclear about the location of the public land boundaries. On the other hand, private landowners often want to access public lands but are prevented by fences or locked gates.

As large tracts of ranch lands have been subdivided and developed for mountain home properties, BLM has observed a substantial increase in the number of roads and trails leading from private lands onto the adjoining public lands. Fences have been breached or gates installed in government-owned fences without authorization. This often results in the proliferation of unauthorized travel routes, increased impacts on natural resources, increased user conflicts, and compromises BLM's management activities such as livestock grazing. Equity issues among public land users also arise when access for motorized travel uses is occurring on BLM lands from private lands that are not available to the general public.

Guidelines for accessing BLM public lands from private lands where no legal public access exists (i.e., no county, state, or federal right-of-way exists):

Other than for foot and horse uses, entry to public lands from private lands must comply with the designated transportation system and be limited to the same means of travel that the general public uses from public access points. **Access from private lands using any type of motorized or mechanized vehicle will only be allowed in cases where:**

1. The use is authorized by a Right-of-Way or permit issued by the BLM;
2. Special or unique BLM management objectives are best achieved by allowing limited motorized access from private lands.

Unless the public land is specifically designated otherwise, access for foot and horse travel is permitted from any adjacent private land via non-public access points.

However, **in circumstances where fencing separates private from public land**, the following guidelines apply for the installation of passageway gates and other devices to access public land: (Administrative access for BLM permitted activities may differ from that stated below)

1. When a separating fence is privately-owned - The installation of a gate or other passageway is at the discretion of the party who owns the fence, but access to the public land must be by the appropriate means as designated by the Travel Management Plan. The BLM encourages that the integrity of the fence be maintained to limit related problems such as livestock drift but BLM has no specific authority to control where and how gates are installed on privately-owned fences; however, any resource damage resulting from the repetitive use of trails or travel routes that originate or develop from private access points may require remedy from the parties using the travel-way.

2. When a separating fence is government property and the need for access is for foot travel, only – Only step-over access features are allowed for accommodating foot access. Such access devices are commonly used to reduce the risk of personal injury and to protect barbed-wire fences from damage resulting from people climbing through or over them. They are intended to facilitate foot access while also maintaining the strength and function of the fence for controlling livestock. Such step-over access features may be as simple as the placement of large rocks on both sides of the fence or they may be more elaborate fence steps or ladders, such as the examples shown in Exhibit 1. The costs of constructing and maintaining these devices are normally borne by the landowner.

Generally, BLM does not require landowners to obtain permission to install fence steps or ladders that have been properly constructed to maintain the integrity of the fence and that do not damage natural resources on BLM lands. Landowners are encouraged, however, to obtain approved plans from BLM before installing step-over access features to assure that the integrity of the affected fences are maintained and that BLM resources

are protected. BLM reserves the right to require the removal of structures that do not conform to these requirements. BLM authorization to construct step-over access stiles does not authorize construction or improvement of travel ways leading from the access point. Furthermore, any resource damage resulting from the repetitive use of trails or travel routes that originate or develop from private access points may require remedy from the parties using the travel-way.

3. When a separating fence is government property and the need for access is for means of travel other than for hiking – As a general rule, **existing gates through government-owned fences that have not been locked by BLM** may be used by private landowners for foot and horse access without requiring BLM authorization. However, where existing gates are locked by BLM or where no gates occur in a government-owned fence line, the construction of special access gates other than step-over fence stiles must be authorized by BLM. This includes gates for travel uses including but not limited to using horses, bicycles, or motor vehicles.

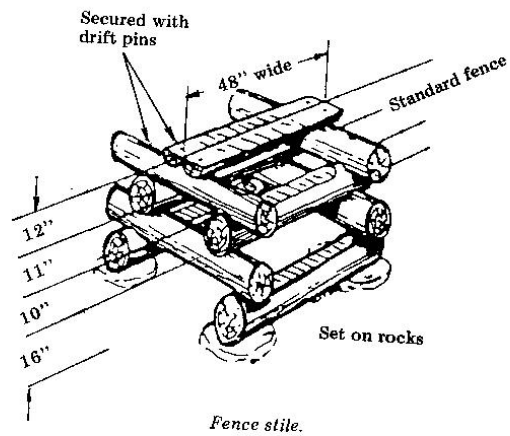
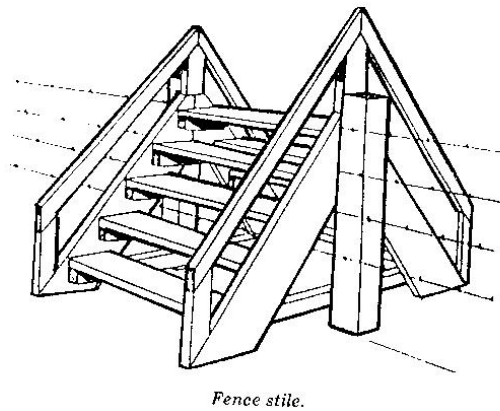
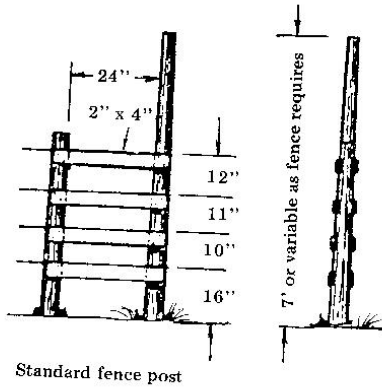
Requests for special access gates will be evaluated by BLM on a case-by-case basis and as BLM workload allows. Applicants must be able to demonstrate the need for special access gates. In cases where a single access point could serve more than one landowner, applicants must also show that they have coordinated with neighboring landowners for sharing the use of the access gate. The costs of constructing and maintaining such access gates are normally the responsibility of the applicant. BLM authorization to construct special access gates does not authorize construction or improvement of travel ways leading from the access gate. Furthermore, any resource damage resulting from the repetitive use of trails or travel routes that originate or develop from private access gates may require remedy from the parties using the travel-way.

4. If a wildfire or other life-threatening emergency occurs – In the event of a wildfire, flood, or other life-threatening events, the BLM will not hold persons liable for damaging government property or for violating travel management designations when emergency escape routes may be blocked by BLM fences or gates.

Exhibit 1 – Examples of Step Over Fence Stiles

People Access

Fences control livestock, wildlife, and people. Controlling people effectively requires planned access. Gates are, of course, the most common access, but stiles, ladders and walk-throughs exclude livestock and wildlife while allowing people to move safely from one side of a fence to the other. These structures must be strong and durable. They must be constructed with safety as a major consideration. Treated lumber will prolong the life of the structure. Controlling where people cross a fence will save a great deal in maintenance and replacement costs.



APPENDIX 4

Definitions of Travel Use Categories

The Travel Use Categories define the individual roads and trails in terms of the types of uses that are permitted on them. There are 10 categories, of which the first 6 represent the types of designated travel uses that apply to those roads and trails 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 last three categories are routes that are controlled by BLM but that are not available for public use with OHVs.

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.

The most inclusive travel uses class is the **General** category (abbreviation **O** and shown by blue lines on the maps), including all of the various types of roads commonly found on public lands, ranging from maintained dirt and graveled roads to low standard primitive four-wheel drive roads. These roads are designed to accommodate conventional size motor vehicles but are also available for use by ATVs, motorcycles, bicycles, horses, and foot travel.

The **ATV** category (Class **A** and shown on maps by brown lines) includes routes that are intended for use by ATVs but are also available for motorcycles, bicycles, horses, and foot travel.

The **Motorcycle** category (Class **M** and shown on maps by olive-green lines) includes routes intended for single track motorcycle use but are also available for use by bicycles, horses, and foot travel.

The **Bicycle** category (Class **B** and shown on maps by apple-green lines) includes routes intended for use by mountain bikes but are also available for use by horses and foot travel.

The **Equestrian** category (Class **E** and shown on maps by hot pink colored lines) includes routes intended to accommodate horseback riding but are also available for foot travel.

The **Foot** category (Class **F** and shown on maps by dark green lines) includes routes that are intended for foot travel only.

The "**Non-BLM**" category includes county, state, and Federal highways and roads and is indicated on the maps by pink lines and the abbreviation **Non-BLM**. 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 motor vehicles. Most are paved or graveled roads designed to accommodate high-speed traffic. There are, however, are few county roads that are low standard dirt roads that have been designated by the controlling county for use with ATVs and unlicensed dirt bikes. The BLM does not have jurisdiction over these roads and is not proposing any travel management designations for them in this plan.

"User Created" routes are travel ways that were created after the approval of the Royal Gorge RMP on May 13, 1996. The RMP stipulates that OHVs will be limited to "existing" routes until route designations are implemented. Consequently, these routes did not exist at the time the plan was approved and thus do not comply with current management direction. User Created routes are indicated by the abbreviation **UC** and in red on the maps.

The **"Administrative Access"** category is shown on the maps with gold lines and the abbreviation **AA**. These routes 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 motor 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 are shown on the maps by black dashed lines and abbreviated **CL**. Closed routes are those that are neither available for use by the public nor needed for administrative uses.

APPENDIX 5

Standards for Public Land Health

PREAMBLE

Humans use and derive benefits from public lands administered by BLM in Colorado in many ways: to earn a livelihood, to recreate, for education, for science, and to enjoy and appreciate open spaces and irreplaceable cultural heritage resources. Healthy public lands and the uses of those lands contribute to the health and economic well-being of Colorado communities. In turn, healthy human communities create healthy public lands by conserving, protecting, and properly utilizing public land resources and by effectively resolving conservation issues. Healthy public lands and healthy human communities are interrelated; therefore, social, economic, and environmental considerations must be properly balanced.

The interdependent relationship between human communities and their public land brings together people of diverse backgrounds and interests. Open, honest, and sincere interactions, in a spirit of trust and respect, are essential to achieving and maintaining healthy public lands. While all individuals have a voice in public land management goals, the responsibility to maintain healthy public lands ultimate falls with the users of those lands.

To help determine what constitutes healthy public lands, Standards for Public Land Health, by which the health of the land is measured, were established. This document defines such standards for BLM lands in Colorado.

INTERPRETATION

Standards and guidelines can be an effective communication tool, providing a common understanding of expected resource conditions and acceptable management practices. Although the standards are the measures by which health of the land will be assessed, the results of these assessments are not well-suited for direct reporting of accomplishments. Any reporting of progress associated with application of these standards will need to consider and address the following factors:

- Standards and guidelines for each state will be different.
- To be meaningful, public land health assessment must be determined based upon all standards and not solely upon each individual standard.
- It will be many years before a full assessment of public land health is completed. Initially, statistics concerning public land health may be skewed due to the priority setting process which directs management attention to lands where problems exist.

Standards describe conditions needed to sustain public land health, and relate to all uses of the public lands. The standards are written in a two-part format. The standard is first described in a statement. Then indicators which relate to the standard are identified. The indicators help define the standard and describe features which are observable on the land. Additional indicators may also be applicable to some sites, and

some indicators may not apply to every specific site. While a site should match the indicators it is not necessary for each site to perfectly match all the indicators to comply with the standard.

The appropriate use of resources will be determined by the authorized officer on a case by case basis, in consultation, coordination and cooperation with local cooperators and the interested public and in accordance with law and regulation.

Standards are observed on a landscape scale. It is not possible for each acre to achieve every standard. For example, a mosaic of vegetation types and age classes may produce the diversity associated with a healthy landscape; however, some individual vegetation communities within the mosaic may lack diversity.

Standards always relate to the potential of the landscape. Climate, landform, geologic, and biologic characteristics are factors that affect potential. Each landscape has a specific ability to provide values important to humans such as timber, livestock forage, water, wildlife, and minerals. Therefore, the potential of a site can also be altered through a wide variety of human socio-economic factors. When this occurs, a new potential exists. The authorized officer, through the consultation process, will evaluate the site based on its new potential. Comparative analysis of nearby landscapes (that appear to have similar climate, geology, landform, biologic and socio-economic characteristics) is considered the most reliable means to identify the potential landscape.

It is common for landscapes with nearly identical potential to differ, in their appearance, and in the values they provide. Variability results from both natural plant succession patterns, and human uses. While the climax plant community is significant as an indicator of potential, the climax community does not automatically provide the comparative basis for evaluating the standard. In many circumstances local goals will identify a different plant community which provides the most optimum values. When this occurs, the plant community identified in the local goal replaces the climax community as the foundation for evaluating the standard.

Often, existing information will be sufficient to determine public land health. It is not always necessary to collect measurable baseline data for each standard on each site to determine public land health. However, baseline data is important to establish so that changes can be observed and measured. The BLM's authorized officer will determine the amount and type of data each situation requires in consultation, coordination and cooperation with local cooperators and the interested public. In areas where the standards are not being achieved, current uses and management actions will be reviewed and modified if necessary to assure significant progress toward achieving a healthy ecosystem.

APPROVAL

The Standards for Public Land Health were evaluated through an Environmental Assessment in 1996. The BLM State Director issued a Decision Record and a Finding of No Significant Impact on November 8, 1996, with Approval for Implementation coming from the Secretary of the Interior in February 12, 1997. The decision amended the Royal Gorge Resource Management Plan. The standards supplement the existing decisions in the RMP.

STANDARD 1: *Upland soils* exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.

Indicators:

- Expression of rills and soil pedestals is minimal.
- Evidence of actively-eroding gullies (incised channels) is minimal.
- Canopy and ground cover are appropriate.
- There is litter accumulating in place and is not sorted by normal overland water flow.
- There is a diversity of plant species with a variety of root depths.
- Upland swales have vegetation cover or density greater than that of adjacent uplands.
- There are vigorous, desirable plants.

STANDARD 2: *Riparian systems* associated with both running and standing water, function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.

Indicators:

- Vegetation is dominated by an appropriate mix of native or desirable introduced species.
- Vigorous, desirable plants are present.
- There is vegetation with diverse age class structure, appropriate vertical structure, and adequate composition, cover, and density.
- Streambank vegetation is present and is comprised of species and communities that have root systems capable of withstanding high streamflow events.
- Plant species present indicate maintenance of riparian moisture characteristics.
- Stream is in balance with the water and sediment being supplied by the watershed (e.g., no headcutting, no excessive erosion or deposition).
- Vegetation and free water indicate high water tables.
- Vegetation colonizes point bars with a range of age classes and successional stages.
- An active floodplain is present.
- Residual floodplain vegetation is available to capture and retain sediment and dissipate flood energies.
- Stream channels have appropriate size and meander patterns for the streams' position in the landscape, and parent materials.
- Woody debris contributes to the character of the stream channel morphology.

STANDARD 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants

and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes.

Indicators:

- Noxious weeds and undesirable species are minimal in the overall plant community.
- Native plant and animal communities are spatially distributed across the landscape with a density, composition, and frequency of species suitable to ensure reproductive capability and sustainability.
- Plants and animals are present in mixed age classes sufficient to sustain recruitment and mortality fluctuations.
- Landscapes exhibit connectivity of habitat or presence of corridors to prevent habitat fragmentation.
- Photosynthetic activity is evident throughout the growing season.
- Diversity and density of plant and animal species are in balance with habitat/landscape potential and exhibit resilience to human activities.
- Appropriate plant litter accumulates and is evenly distributed across the landscape.
- Landscapes are composed of several plant communities that may be in a variety of successional stages and patterns.

STANDARD 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Indicators:

- All the indicators associated with the plant and animal communities standard apply.
- Suitable habitat is available for recovery of endemic and protected species.

STANDARD 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and antidegradation requirements set forth under State law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.

Indicators:

- Appropriate populations of macroinvertebrates, vertebrates, and algae are present.
- Surface and ground waters only contain substances (e.g., sediment, scum, floating debris, odor, heavy metal precipitates on channel substrate) attributable to humans within the amounts, concentrations, or combinations as directed by the Water Quality Standards established by the State of Colorado (5 CCR 1002-8).

Appendix 6

Requests for New Trails -Texas Creek

Texas Creek Travel Management Area – Background

The Texas Creek subunit is unique in the Arkansas River TMP in that it is an area where a concerted effort has already been made to limit motorized uses to a network of identified travel routes. The current network of identified travel routes, however, does not meet the legal definition of a travel management system that limits OHVs to designated routes, because many of the roads and trails are within the Texas Creek OHV OPEN area. Under the OHV OPEN designation, travel is permitted off existing roads and trails. Under the pending Arkansas River TMP, the OHV OPEN area would be changed to OHV LIMITED, and OHVs would be limited to designated routes.

The current network of identified routes was the outcome of an EA that was initiated in 1998 (CO-057-98-127 EA). The 1998 EA analyzed the environmental effects of maintaining the existing trails in the area for specific types of uses, as well as constructing several new trails in the area for use by ATVs and motorcycles. As a result of this EA, many of the existing trails that extended outside of the Texas Creek OHV OPEN area were closed to protect sensitive watershed, vegetation, and wildlife resources. In 2002, the routes that were approved for maintenance and new construction were identified on the ground with travel management signs.

Identified Current Management Needs

The BLM ID team members spent many hours in the field observing the current road and trail conditions. The team observed that some of the existing routes are not being properly maintained, resulting in excessive erosion. Water bars that are needed to control run-off were either lacking altogether or were not functioning due to insufficient repair and maintenance. Portions of existing trails were found that are too steep to establish permanent water bars. As a result, sections of trails are experiencing excessive erosion and channeling that can only be corrected by re-routing the trails onto gentler grades where run-off can be more effectively controlled. The general lack of recurring trail maintenance and the failure to re-route unsustainable sections of trails are contributing to the high levels of soil erosion that are occurring throughout the area.

The lack of trail maintenance also raised concerns about ATV users who may lack the skills and experience to safely ride some of the trails. The steep grades and obstacles that exist on sections of some trails are not suitable for average ATV riders. Recurring maintenance is necessary to correct difficult conditions to provide trails that are more suitable for riders of average abilities.

It was also observed that some users are not complying with the current travel management signage and are not staying on the identified travel routes and that some of the routes that were closed in the 1998 EA are being used. Numerous “user created” trails were discovered that did not exist a few years ago. Most of this activity is

occurring in the lower or southern portions of the subunit, but is also occurring in the northern portion on Table Mountain, where the open terrain allows easy travel off the established roads and trails. The most visible example of the damage to soils and vegetation, however, is concentrated around the main parking lot. The intensive ATV and motorcycle play that occurs around the parking lot has created a braided network of trails and large areas of bare ground that cover an estimated 15 acres. In addition, several “user created” ATV trails have been developed between the parking lot and the Texas Creek store that have only become established in the last year.

A considerable amount of off-road play by ATVs was also found west of the parking lot along routes 6020 and 6024. Several “unauthorized” short-cut ATV trails connecting 6020 and 6024 have become well established by users. A recently created ATV play area was also discovered near the mouth of Reese Gulch that includes a spur trail extending onto the Santa Fe Rail Road.

The team members discovered a high amount of off-route non-trails, dirt bike use occurring along the west side of Reese Gulch within the area that is used for holding motorcycle trials events. A high amount of motorcycle use was also found on an existing trail extending between Reese Gulch and Fernleaf Gulch that was closed in the 1998 EA. This trail is one of several closed routes that the Colorado Motorcycle Trail Riders Association is requesting to be reopened under the Arkansas River TMP, and is shown as trail S-2 on the map accompanying their request. This trail showed signs of recent use west from Reese Gulch to the crest of the separating ridge, but no use was evident from the crest to the bottom of Fernleaf Gulch or west of Fernleaf to the trail terminus near Garell Peak. An extensive network of recently created “motocross” trails located near the ridge top between Reese Gulch and Fernleaf Gulch was also discovered along this trail. In the course of evaluating user compliance the team uncovered many examples where users are not staying on the established network of roads and trails and are concerned that such non-compliance is contributing to the overall impacts on soils, vegetation, and wildlife.

Recommendations for Addressing Current Management Needs

Early in the planning process the BLM ID team identified the major issues and concerns that needed to be addressed in the Texas Creek subunit. The goals, or Desired Future Conditions (DFCs), that were developed to respond to these issues and concerns include:

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in the Arkansas River are improving.

Riparian habitat occurring along the various drainages in the subunit is healthy and functioning to stabilize stream courses.

Available areas of wildlife habitat are expanding and improving in the subunit, supporting sustainable numbers of deer, elk, bighorn sheep, and other wildlife.

Viable wildlife corridors and habit connections are maintained within the subunit and with the adjoining Red Gulch and Big Hole subunits.

Visitors travel via a designated system of roads and trails that serve a variety of motorized, mechanized, and non-motorized uses and that are being maintained to limit impacts on vegetation, soils, wildlife and water. Numerous opportunities are available throughout the subunit for motorized recreation uses, including designated routes of varying levels of difficulty for users of 4WDs, ATVs, and motorcycles.

BLM and county roads that have been traditionally used and maintained continue to be available to the public for motorized, mechanized, and non-motorized travel uses.

To accomplish these DFCs will require a high level of involvement by the various motorized user groups. By itself, BLM does not have enough personnel or money to maintain the existing network of roads and trails, fund the construction of new trails, build and maintain support facilities, and enforce user compliance. BLM has received State OHV grants to construct new trails and perform trail maintenance in Texas Creek. One of these grants funds the interagency Upper Arkansas Motorized Trail Crew which is scheduled to work in Texas Creek in 2006 and 2007. The long term goal of BLM and its partners is to permanently establish this crew to provide annual trail maintenance and user education in Texas Creek and other areas of the Upper Arkansas Valley.

To provide for continued motorized uses, while also protecting the area's resources, the ID team offers the following recommendations for guiding future management and development of the Texas Creek OHV Area:

1. Continue and strengthen long-term partnerships with motorized user groups (COHVCO, CMTRA, RMTA, etc.) for the purposes of maintaining existing trail networks and for constructing new trails.
2. A significant factor in approving new trails depends on the ability to maintain existing trails to agreed standards. With the participation of cooperating partners, develop accepted standards and guidelines for constructing and maintaining new and existing trails.
3. With the participation of cooperating partners, establish a system and procedures for monitoring trail conditions and performing necessary maintenance work.
4. Approve construction of new or additional trails only when the following conditions have been met:
 - a. The proposal would further the goals (DFCs) identified on page 2.
 - b. The proposal is sponsored under a partnership agreement that includes a plan for securing the necessary funds and/or volunteer commitments to construct and maintain the trail to accepted standards.
 - c. The specific location(s) of the proposed trail(s) has been flagged on the ground and mapped using GPS.

- d. The decision to approve the trail(s) has been authorized under a site specific EA that analyzes the environmental effects of the proposal.

CMTRA Proposals

During the scoping phase of the Arkansas River TMP the Colorado Motorcycle Trail Riders Association (CMTRA) submitted a request for seven additional trails in the Texas Creek area. Five of the proposed trails would be for ATVs and motorcycles and two would be just for motorcycles. Six of the trails, including five ATV trails and one single-track motorcycle trail, would involve re-opening trails that were closed in the 1998 EA. The seventh trail would be a single track motorcycle trail that would require new construction in an area that currently contains no trails.

The Finding of No Significant Impact (FONSI) for the 1998 EA included a decision that precludes consideration of any additional trails outside of the OHV OPEN area but that allows application for additional trails within the OHV OPEN area, subject to approval through additional NEPA analysis. As stated in the FONSI, the rationale for decisions pertaining to the retention or closure of individual routes was guided by the overall objective of identifying, "...areas where OHV use is the predominant use and other areas where protection of vegetation, wildlife habitat, soils, and wildlife is the predominant use."

In analyzing the Texas Creek subunit for the Arkansas River TMP, the BLM ID team considered the previous analyses and decisions that were made in the 1998 EA. The ID team recognized that the closures of those specific route segments that were supported by the need to protect identified resources were valid decisions at the time the EA was conducted. The ID team also recognized that, in most cases, these decisions would still be valid today because the conditions under which the decisions were made had not changed.

In regard to the decision in the 1998 EA to not allow additional routes outside of the OHV OPEN area, the majority of the ID team members felt that the rationale for this decision was not supported by any identified needs to protect specific areas and resources. Instead, the rationale appeared to be based on a general presumption that all of the areas outside of OHV OPEN area had been identified as areas, "...where the protection of vegetation, wildlife habitat, soils, and wildlife is the predominant use." The FONSI also failed to define how far the decision would be applied outside the OHV OPEN area; therefore, there is no way to tell the extent of the area that the decision was intended to cover.

After considering the previous decisions in the 1998 EA, the ID team decided that the decision that limited additional routes to the OHV OPEN area was not a sufficient reason for not analyzing the requested routes that extended outside of the OHV OPEN area. The ID team also determined that it would be appropriate to include and re-analyze all of the requested trails under the High Use Alternative (Alternative A); as this would provide a

way to compare the environmental effects of these routes to the other alternatives that do not include them, and to perform the analysis using GIS technology that was not available when the 1998 EA was done. Furthermore, it was determined that some of the requested routes could be included in the Proposed Action (Alternative C), but limited to those routes where the resource impacts could be satisfactorily mitigated at low to moderate cost and where the routes would not result in substantially expanding OHV uses outside of the current Texas Creek TMA.

The requested additional trails are identified by the trail numbers that were included in CMTRA's proposal ([See Map 5](#)). The route segment numbers referenced in the 1998 EA are depicted in [Map 16](#).

A-1 – The proposed ATV/motorcycle trail would be approximately 3.2 miles in length. The trail would involve re-opening an existing route that was closed in the 1998 EA. Approximately 1.5 miles would be located in the East Gulch drainage and would either follow along the bottom or be located a short distance above the bottom of the gulch. Creating an ATV trail through the gulch would require new construction for most of its length.

The analysis conducted in the 1998 EA resulted in the closure of trail A-1, which was identified in the 1998 EA as Segment 20. The 1998 EA identified that the route was located outside of the OHV OPEN area and that impacts from OHV uses of the route were adversely impacting wildlife and vegetation. In reviewing this route under the Arkansas River TMP, the ID team determined that re-opening the route to OHVs would result in impacts to riparian habitat, water quality, and wildlife that would require extensive and costly mitigation measures to avoid adversely affecting these resources. The ID team also determined that re-opening this route would result in substantially expanding OHV uses outside of the current Texas Creek TMA that could adversely affect wildlife. For these reasons, the analysis of route A-1 is not included in the Proposed Action (Alternative C) but is included in the High Use Alternative (Alternative A).

A-2 - The proposed ATV/motorcycle trail would be approximately 2.6 miles in length and would involve re-opening an existing route that was closed in the 1998 EA. Approximately 0.5 miles of new construction would be needed to re-route the upper section of the existing trail that is excessively steep and that could not be sustained on its current location.

Trail A-2 was analyzed in the 1998 EA as Segments 16 and 17. The 1998 EA identified that the route was located outside of the OHV OPEN area and that OHV uses of the segments were adversely impacting wildlife. The EA also cited excessive erosion due to improper location of the segments on steep and erosive slopes. In reviewing the route under the Arkansas River TMP, the ID team determined that the impacts to soils could be satisfactorily mitigated at moderate cost by re-routing and reconstructing sections of the trail to avoid excessively steep and erosive slopes. The ID team also determined that re-opening this route

would not result in substantially expanding OHV uses outside of the current Texas Creek TMA that could adversely affect wildlife. Analysis of route A-2 is included in the Proposed Action (Alternative C) and in the High Use Alternative (Alternative A).

A-3 - The proposed ATV/motorcycle trail would be approximately 1.2 miles in length and would involve re-opening a route that was closed in the 1998 EA. Portions of the existing trail would need to be re-routed to remove it from the drainage bottom to reduce impacts on riparian habitat.

Under the 1999 EA, trail A-3 was identified as Segment 14. The 1998 EA identified that the route was located outside of the OHV OPEN area and that OHV uses of the segments were adversely impacting wildlife and riparian vegetation. In reviewing this route under the Arkansas River TMP, the ID team determined that re-opening the route to OHVs would result in substantially expanding the amounts of OHV activity outside of the existing Texas Creek TMA which would adversely affect wildlife and riparian vegetation. The analysis of route A-3 is not included in the Proposed Action (Alternative C) but is included in the High Use Alternative (Alternative A).

A-4 - The proposed ATV/motorcycle trail would be approximately 0.6 miles in length and would involve re-opening the trail to the waterfalls on Fernleaf Gulch that was closed in the 1998 EA.

Trail A-4 does not appear as a separate segment on the map of the trails that were analyzed in the 1998 EA but because it could only be reached from Segment 14 (A-3), which was closed under the 1998 EA, then route A-4 was closed, as well. In reviewing the route under the Arkansas River TMP, the ID team determined that re-opening the route to OHVs would adversely impact riparian vegetation in Fernleaf Gulch and that analysis of route should not be included in the Proposed Action (Alternative C) but is analyzed under the High Use Alternative (Alternative A).

A-5 - The proposed ATV/motorcycle trail would be approximately 0.2 miles in length and would involve re-opening a closed trail that leads to a scenic vista point.

Trail A-5 is not specifically identified for closure in the 1998 EA. Presumably, it was closed because it extends barely outside of the OHV OPEN area and to prevent soil erosion that was occurring on the steeper sections of the trail. It is, however, located within the current Texas Creek TMA. The trail extends from an existing route that is open to ATVs and motorcycles, which is identified as Trail #6035 in the Texas Creek TMA brochure. Because it is within proximity of existing OHV activity, re-opening the trail would not substantially expand OHV activity outside of the existing TMA and would have little impact on wildlife.

Consequently, in reviewing the route under the Arkansas River TMP, it was determined that the erosion problems could be satisfactorily mitigated at moderate cost by re-routing and reconstructing sections of the trail to avoid excessively steep and erosive slopes; by installing water bars and establishing routine maintenance of the trail. Analysis of route A-5 is included in both the Proposed Action (Alternative C) and the High Use Alternative (Alternative A).

S-1 - The proposed single-track motorcycle trail would be approximately 7.6 miles in length. The entire trail would require new construction. The original route indicated on Maps 5 and 6 show an approximate location that was submitted by the proponent before any ground reconnaissance had been done. Since submitting the proposal the proponent has accomplished some work to flag a route that could be constructed to acceptable gradients but the exact location of the middle section of the trail has not been established. The portions of the trail that have been flagged are also indicated on Map 5. As is apparent from viewing the map, there are considerable differences between the locations of the original submission and the flagged routes.

In reviewing this proposal, several members of the ID team spent a considerable amount of time reconnoitering the proposed route and the two sections that had been flagged by the proponent. In their efforts to follow the originally proposed route, BLM personnel encountered steep side slopes and extensive outcroppings of large rocks that would make construction of a trail extremely difficult and costly. Attempts to hike through the middle section of the proposed route were abandoned all together due to the massive formations of rock and cliffs that were encountered. On the other hand, reconnaissance of the two sections of the route that had been flagged by the proponent appeared to follow terrain where a trail could be constructed to acceptable standards and at moderate cost.

Because it has yet to be demonstrated that an acceptable route could be located across the general area that the trail would cross, a proper analysis of the environmental impacts that would result from its construction cannot be conducted at this time. Consequently, the ID team has determined that the analysis of the trail should be addressed under Alternative A (High Use Alternative) and limited to identifying the impacts to the resources located along the originally proposed route. Furthermore, unless the analysis finds resource issues in the general area that cannot be avoided regardless of where it would be located, the proponent may reapply for the trail in the future. This will allow additional time for the proponent to find a connecting route between the two segments that have already been flagged, and to present a proposal to BLM that can be analyzed in a site-specific EA.

S-2 - The proposed trail would be approximately 3.3 miles in length and would involve re-opening a trail that was closed in the 1998 EA. The trail would provide a connection between Reese Gulch and Red Gulch that would only be suitable for use by expert motorcycle riders. Approximately 0.8 mile of this trail

is currently being used by motorcyclists where it leaves Reese Gulch and climbs to the crest of the ridge separating Fernleaf Gulch, but no use is occurring from the crest to the bottom of Fernleaf Gulch because portions of the original trail have eroded away due to excessively steep terrain.

The analysis conducted in the 1998 EA resulted in the closure of trail S-2, which was identified in the 1998 EA as Segment 23. Re-opening this route would also require opening route A-3 (Segment 14), which intersects it on the west end of S-2 near Garell Peak. The 1998 EA identified that the route was located outside of the OHV OPEN area and that impacts from OHV uses of the route were adversely impacting wildlife and vegetation. In reviewing this route under the Arkansas River TMP, the ID team determined that re-opening the route to OHVs would result in impacts to riparian habitat, water quality, and wildlife that would require extensive and costly mitigation measures to avoid adversely affecting these resources. The ID team also determined that re-opening this route would result in substantially expanding OHV uses outside of the current Texas Creek TMA that could adversely affect wildlife. For these reasons, the analysis of route S-2 is not included in the Proposed Action (Alternative C) but is included in the High Use Alternative (Alternative A).

Appendix 7

Requests for New Trails –Salida

Background

The Salida subunit contains some of the most heavily utilized lands in the Arkansas River TMP for a variety of year-round recreation uses. An extensive network of roads and trails radiate from the town of Salida, providing recreational opportunities for all types of motorized, mechanized, and non-motorized uses. The major challenge in this subunit is to establish management that will protect the lands and resources while also meeting high demands of the local community for a variety of recreation uses.

In addressing the complex issues in this subunit, the BLM interdisciplinary team (ID team) found themselves confronting a dilemma very similar to that which they faced in the Texas Creek subunit. Unlike Texas Creek, however, the demand is not focused as much on improving and expanding opportunities for motorized uses. Instead, the largest demand in the Salida area is for more hiking and bicycle trails, which is largely an effect of demographic makeup of the town's population. The population of Salida includes a large segment of young and active residents who use the surrounding BLM and National Forest lands year round for hiking, jogging, and mountain biking. In addition to these uses, the roads and trails around Salida also receive substantial amounts of motorized uses (4WD, ATV, motorcycle) that often result in conflicts between the different types of users.

Current Situation

The Salida subunit includes a little over 49 miles of existing roads and trails on BLM lands alone that are located within a few miles from the center of town. Additional trails are also available on nearby city, private, and National Forest lands. To hike or ride some of the trails actually involves starting from downtown and crossing private land and then progressively crossing lands managed by the City of Salida, BLM, and the Forest Service. Many of the trails are not constructed but have simply been developed by use; that is, by users repeatedly hiking or riding along the same path. Also, in many cases the use of trails crossing private lands is occurring without permission from the affected landowners.

The proliferation of new trails is one of the biggest problems in this subunit. While inventorying the existing travel routes on BLM lands, a high percentage of the trails were classified as "User Created". The definition of "User Created Routes" includes trails that are created or constructed by recreational users within the past 10 years without authorization from the BLM. Of the 49 miles of existing routes that occur near the town, approximately 20 miles, or 41%, were classified as "User Created". The ID team members who recorded the inventory also observed that a few of the more recently

developed mountain bike trails were actually constructed and being maintained by users. One of the ID team members encountered a freshly made mountain bike trail that had been constructed only a day or two before it was inventoried; an example lending credence to the idea that trails are being created faster than they can be mapped. For the most part, however, only a few miles of the existing roads and trails around the town of Salida are constructed to acceptable standards and that are being adequately maintained. In many cases the trails are located on the fall lines of the slopes and are excessively steep, and water bars that are needed to divert runoff and reduce erosion are either lacking or not functioning.

A significant number of “extreme” mountain bikers ride the trails that surround the town. Several user created trails have been developed that are used almost exclusively used by expert riders. Trails of this nature are especially concerning because they are intentionally located to follow the fall line down steep slopes, which makes them highly susceptible to erosion. Two such trails, aptly named Blood and Guts, extend from the Rainbow Trail and are mostly on National Forest before emerging onto BLM lands.

The BLM ID team also observed several areas, Castle Garden and King Gulch where both motorized and mechanized uses are damaging sensitive plants. Both of these areas are composed of highly eroded clay formations that are mostly devoid of trees. The steep terrain and lack of trees provide ideal conditions for those “extreme” users of motorized and mechanized vehicles to practice riding and driving up and down steep hills. Outside of Castle Garden and King Gulch, several additional “play areas” were found on the town’s edge that are being utilized primarily by users of ATVs, motorcycles, and 4WDs. The intensive amount of motorized play that is occurring in these areas has created a braided network of trails and extensive areas of bare ground.

Finally, the ID team also observed several areas where trash dumping is a persistent and recurring problem.

Early in the TMP planning process the BLM interdisciplinary team identified the major issues and concerns that needed to be addressed in the Salida subunit. The goals, or Desired Future Conditions (DFCs), that were developed to respond to these issues and concerns included:

Watershed conditions are improving throughout the subunit; rates of soil erosion are decreasing and water quality and fish habitat in the Arkansas River are improving.

Available areas of wildlife habitat are expanding and improving throughout the subunit, supporting sustainable numbers of deer, elk, bighorn sheep, and black bear.

Occurrences of Brandegeee wild buckwheat and rock-loving neoparrya are stable or increasing. The population of Townsend’s big-eared bat is stable or increasing.

Previous impacts to unique geologic features from off-trail recreation uses are no longer evident in Castle Gardens and King Gulch.

Impacts from dumping trash, target shooting, off-road vehicle play, unauthorized trail construction, and other illegal uses are no longer evident in areas where these activities had previously occurred.

Visitors travel via a well-managed system of designated roads and trails that serve a variety of motorized, mechanized, and non-motorized travel uses and that are being maintained to limit adverse impacts to vegetation, soils, and water.

Designated travel routes between BLM and National Forest lands are cooperatively established to accommodate the same types of uses.

In considering future management options for the Salida subunit, the ID team believes that the best hope for achieving all seven of the DFCs lies primarily in the hands of the users themselves. By itself, BLM does not have enough personnel or money to maintain the existing network of roads and trails, fund the construction of new trails, and enforce user compliance. To accomplish all of these things will require strong partnerships with the Salida community user groups.

Recommendations and Conditions for Improving Management

To provide for high levels of recreational uses while also protecting sensitive resource values, the ID team recommends adopting the following conditions for guiding future management and development in the Salida area:

1. Long-term partnerships with local user groups should be established for the purpose of maintaining existing trail networks and for constructing new trails.
2. A significant factor in approving new trails depends on the ability to maintain existing trails to agreed standards. With the participation of cooperating partners, develop accepted guidelines for constructing and maintaining new and existing trails.
3. The ability to provide regular and timely maintenance of the existing network of roads and trails to correct serious erosion problems and safety hazards is also an important factor in approving new trails in the area. With the participation of cooperating partners, establish a system and procedures for monitoring trail conditions and for prioritizing and scheduling necessary maintenance work.
4. Approve construction of new or additional trails only when the following conditions have been met:
 - a. The proposal would further the goals (DFCs) identified on pages 2 and 3.
 - b. The proposal is sponsored under a partnership agreement that includes a plan for securing the necessary funds and/or volunteer commitments to construct and maintain the trail to accepted standards. For trails involving

non-BLM lands, the proponent must also acquire the necessary rights-of-ways from the affected landowners.

c. The specific location(s) of the proposed trail(s) has been flagged on the ground and mapped using GPS.

d. The decision to approve the trail(s) has been authorized under a site specific EA that analyzes the environmental effect of the proposal.

SMTPC Proposals

Early in the TMP process large number of interested citizens in Salida formed a group known as the Salida Mountain Trails Park Committee (SMTPC). The stated mission of this group is to create an enhanced, sustainable system of hiking and mountain biking trails in the Salida area that addresses the current and future needs of the community as a recreation destination. To achieve their goal, SMTPC has submitted a comprehensive plan for constructing and maintaining trails in the Salida area. The proposal involves improving and maintaining approximately 18 miles of existing trails and constructing and maintaining an additional 27 miles of new trails.

The following is a summary of the interdisciplinary team's determinations regarding the suitability of each of the proposed routes for inclusion in Alternatives A, B, and C. The trails are identified by the names of the trails that were included in SMTPC's proposal and by letters that were assigned to the trails and depicted on [Map 6](#).

A-County 110 and Power Line Connector: This is existing user created mountain bike trail that is approximately 0.7 mile long. The trail provides a connection between County Road 110 and the north end of the road for the WAPA power line. Portions of the trail are eroding due to poor location and lack of adequate water bars for cross-drainage. In reviewing the route under the Arkansas River TMP, the ID team determined that the impacts to soils could be satisfactorily mitigated at moderate cost by re-routing and reconstructing sections of the trail to avoid excessively steep and erosive slopes. Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A, B, and C.

B-FS Road 173: This route is actually the lower end of Forest Service Road 173 that extends from County Road 176 and crosses property owned by the City of Salida before entering BLM lands. Because the segment is not located on BLM lands, the route is not subject to decisions resulting from the Arkansas River TMP and is not included in any of the alternatives.

C-King Gulch: This is an existing user created mountain bike trail, approximately 0.7 miles in length, which is located in the King Gulch area just below the radio tower site. The trail is located in an area containing highly erosive soils (Dry Union Formation), sensitive plants (Brandegee wild buckwheat and rock-loving neoparrya), and paleological

features. Due to the need to protect soils, sensitive plants, and paleo features, route C would be closed under all of the alternatives.

D-Lower Cottonwood to Cleora Connector: This is an existing user created mountain bike trail located east of downtown Salida. The trail provides a connection between Cottonwood Creek and Cleora. The entire trail is approximately 1.3 miles long but only 0.2 miles is on BLM land. Portions of the trail are eroding due to poor location and lack of adequate water bars for cross-drainage. In reviewing the route under the Arkansas River TMP, the ID team determined that the impacts to soils could be satisfactorily mitigated by re-routing and reconstructing sections of the trail and installing adequate erosion control cross-ditches (water bars). However, because BLM does not have authority to designate trails on non-BLM lands, approval of the sections of the trail that are located on BLM would be contingent on SMTPC obtaining a right-of-way for the remaining portions of the trail that cross private lands. Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A, B, and C.

E-Lower Cottonwood Gulch: This is an existing user created mountain bike trail located east of downtown Salida. The entire trail is approximately 0.7 miles long but only 0.3 miles is located on BLM. Portions of the trail are eroding due to poor location and lack of adequate water bars for cross-drainage. In reviewing the route under the Arkansas River TMP, the ID team determined that the impacts to soils could be satisfactorily mitigated by re-routing and reconstructing sections of the trail and installing adequate erosion control cross-ditches (water bars). However, because BLM does not have authority to designate trails on non-BLM lands, approval of the sections of the trail that are located on BLM would be contingent on SMTPC obtaining a right-of-way for the remaining portions of the trail from the affected landowner. Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A, B and C.

F-Middle Cottonwood Gulch: This is an existing user created mountain bike trail that extends northeast from the Mid Backbone trail up Cottonwood Gulch across BLM lands and into the San Isabel National Forest. The portion of the trail on BLM is 1.2 miles long. In reviewing the route under the Arkansas River TMP, the ID team determined that the impacts to soils could be satisfactorily mitigated by re-routing and reconstructing sections of the trail and installing adequate erosion control cross-ditches (water bars). Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A, B and C.

G-North Backbone: This is an existing user created route that is mostly used for mountain biking but with portions also used by ATVs and motorcycles. The trail extends from the north end of the Mid Backbone trail and connects to County Road 175 (Ute Trail). The entire route is located on BLM and is approximately 2.1 miles long. Portions of the existing route are eroding due to poor location and lack of adequate water bars for cross-drainage. In reviewing the route under the Arkansas River TMP, the ID team determined that the impacts to soils could be satisfactorily mitigated by re-routing and reconstructing sections of the trail and installing adequate erosion control cross-ditches

(water bars). Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A and C, and as a foot trail under Alternative B.

H-Mid Backbone: – The trail extends from the south end of the North Backbone trail and runs south to Sweetwater Gulch. The trail is approximately 2.1 miles long, most of which is on BLM but with two short segments that cross property owned by the City of Salida near S-Mountain. In reviewing the route under the Arkansas River TMP, the ID team determined that the impacts to soils could be satisfactorily mitigated by re-routing and reconstructing sections of the trail and installing adequate erosion control cross-ditches (water bars). However, because BLM does not have authority to designate trails on non-BLM lands, approval of the sections of the trail that are located on BLM would be contingent on SMTPC obtaining a right-of-way for those segments of the trail that cross City property. Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A, B and C.

I -South Backbone: This is a proposed new trail that would extend from the south end of the Mid Backbone trail and connect with County Road 177 north of Cleora. The entire trail would be 1.3 miles long. Of this, 1.2 miles would be on BLM and approximately 0.1 miles would cross private land before connecting with CR 177. Because BLM does not have authority to designate trails on non-BLM lands, approval of the sections of the trail that are located on BLM would be contingent on SMTPC obtaining a right-of-way for those segments of the trail that cross the private land. Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A, B and C.

J-North End Guts Trail: This is an existing user created mountain bike trail that extends east from the Rainbow Trail onto BLM and intersects with the access road for the WAPA power line and Trail V, Lost Trail. The entire segment is approximately 1.6 miles long. Approximately 0.4 miles is on BLM and 1.2 miles is on the San Isabel National Forest. The portion on National Forest is considered an expert mountain bike trail for use by highly skilled riders who use it to for downhill riding and included constructed ramps for jumping. The portion of the trail on BLM is on much gentler slopes and is more suited for mountain bike riders of average skill. Also, much of the trail was obliterated by the fuels reduction project that was performed in the area in 2005. Because use of the BLM portion of the trail originates from the Forest Service lands above it, the ID team determined that the trail should be left open until the Forest Service completes its own analysis of the upper portion of the trail to determine if should be retained or closed. Analysis of BLM portion of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A, B and C, but includes the condition that it could be closed in the future if the Forest Service decides not to retain it.

K-Puali: This is an existing user created mountain bike trail that extends from Forest Service 173 and connects with the upper end of Trail O, Uncle Nasty. The trail is approximately 0.3 miles long and includes some short segments trail that are eroding due to poor location and lack of adequate water bars for cross-drainage. Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A and C, and as a foot trail under Alternative B.

L-Sand Dunes: This is an existing user created mountain bike trail that extends from County Road 177 near S-Mountain and connects with Forest Service 173. The entire trail is 1.4 miles long. Of this, 1.2 miles is on BLM and approximately 0.2 miles crosses private lands before connecting to County Road 177. Portions of the trail are eroding due to poor location and lack of adequate water bars for cross-drainage. In reviewing the route under the Arkansas River TMP, the ID team determined that the impacts to soils could be satisfactorily mitigated by re-routing and reconstructing sections of the trail and installing adequate erosion control cross-ditches (water bars). However, because BLM does not have authority to designate trails on non-BLM lands, approval of the sections of the trail that are located on BLM would be contingent on SMTPC obtaining a right-of-way for the portion of the trail that crosses private land. Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A and C, and as a foot trail under Alternative B.

M-Sand Dunes to Uncle Nasty Connector: This is an existing user created mountain bike trail that connects Trail M (Sand Dunes) to Trail O (Uncle Nasty). The trail is approximately 0.5 miles long. Portions of the trail are eroding due to poor location and lack of adequate water bars for cross-drainage. The ID team determined that the impacts to soils could be satisfactorily mitigated by re-routing and reconstructing sections of the trail and installing adequate erosion control cross-ditches (water bars). Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A and C, and as a foot trail under Alternative B.

N-S Mountain: This route is actually located entirely on private and City property. Because the segment is not located on BLM lands, the route is not subject to decisions resulting from the Arkansas River TMP and is not included in any of the alternatives.

O-Uncle Nasty: This is an existing user created mountain bike trail, approximately 0.75 miles long, that connects Forest Service 173 with Trail F, Middle Cottonwood. Most of the trail is very steep and is considered an expert mountain bike trail for use by highly skilled riders who use it to for downhill riding. Portions are eroding due to poor location and lack of adequate water bars for cross-drainage. The ID team determined that the impacts to soils could be satisfactorily mitigated by re-routing and reconstructing sections of the trail and installing adequate erosion control cross-ditches (water bars). Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A and C, and as a foot trail under Alternative B.

P-West Ridge Castle Garden: – This is an existing user created mountain bike trail, approximately 1.7 miles long, that skirts along the west ridge above Castle Garden and provides a connection between Highway 50 and the WAPA power line road. The ID team determined that the impacts to soils could be satisfactorily mitigated by re-routing and reconstructing sections of the trail and installing adequate erosion control cross-ditches (water bars). Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A, B, and C.

R-Advanced Loop: This is a proposed new trail that would provide an alternate loop connection with another new proposed trail, Trail T (Little Rainbow). The entire trail is estimated to be 2.0 miles long. This trail, however, has not been flagged on the ground and the actual length for constructing it to accepted standards would probably require a much longer trail. Because it has not been demonstrated that an acceptable route could be located across the general area that the trail would cross, a proper analysis of the environmental impacts that would result from its construction cannot be conducted at this time. Consequently, the ID team has determined that the analysis of the trail should be addressed under Alternative A and limited to identifying the impacts to the resources located along the originally proposed route. Furthermore, unless the analysis finds resource issues in the general area that cannot be avoided regardless of where it would be located, the proponent may reapply for the trail in the future. This will allow additional time for the proponent to find a connecting route between the two segments that have already been flagged, and to present a proposal to BLM that can be analyzed in a site-specific EA.

S-Dead Goat Gulch Loop: This is a proposed new trail that would provide an extensive mountain bike route northwest of County Road 175 (Ute Trail). As submitted by SMTPC, the entire trail would be approximately 9.0 miles long. This trail, however, has not been flagged on the ground and the actual length for constructing it to accepted standards would probably require a much longer trail. Because it has not been demonstrated that an acceptable route could be located across the general area that the trail would cross, a proper analysis of the environmental impacts that would result from its construction cannot be conducted at this time. Consequently, the ID team has determined that the analysis of the trail should be addressed under Alternative A and limited to identifying the impacts to the resources located along the originally proposed route. Furthermore, unless the analysis finds resource issues in the general area that cannot be avoided regardless of where it would be located, the proponent may reapply for the trail in the future. This will allow additional time for the proponent to find a connecting route between the two segments that have already been flagged, and to present a proposal to BLM that can be analyzed in a site-specific EA.

T-Little Rainbow: This is a proposed new trail that would provide a mountain bike route paralleling the WAPA power line road. As submitted by SMTPC, the entire trail would be approximately 7.0 miles long. This trail, however, has not been flagged on the ground and the actual length for constructing it to accepted standards would probably require a much longer trail. The ID team has determined that the analysis of the trail should be addressed under Alternative A and C.

U-Sweetwater Gulch Loop: This is a proposed new trail that would provide an extensive mountain bike route east of Salida between Sweetwater Gulch and Cottonwood Gulch. As submitted by SMTPC, the entire trail would be approximately 8.8 miles long. This trail, however, has not been flagged on the ground and the actual length for constructing it to accepted standards would probably require a much longer trail. Because it has not been demonstrated that an acceptable route could be located across the general area that the trail would cross, a proper analysis of the environmental impacts that

would result from its construction cannot be conducted at this time. Consequently, the ID team has determined that the analysis of the trail should be addressed under Alternative A and limited to identifying the impacts to the resources located along the originally proposed route. Furthermore, unless the analysis finds resource issues in the general area that cannot be avoided regardless of where it would be located, the proponent may reapply for the trail in the future. This will allow additional time for the proponent to find a connecting route between the two segments that have already been flagged, and to present a proposal to BLM that can be analyzed in a site-specific EA.

V-Lost Trail: – This is an existing user created mountain bike trail, approximately 1.5 miles long, that provides a connection between Highway 50 and the WAPA power line road. The ID team determined that the impacts to soils could be satisfactorily mitigated by re-routing and reconstructing sections of the trail and installing adequate erosion control cross-ditches (water bars). Analysis of the trail as part of SMTPCs proposed mountain bike system is included under Alternatives A, B, and C.

Appendix 8: Route Densities within sub-drainages of 6th Level Watersheds

<u>Subwatershed</u>	Current Conditions			Alternative A			Alternative B			Alternative C		
	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>Min</u>	<u>Max</u>	<u>Mean</u>	<u>Min</u>	<u>Max</u>	<u>Mean</u>
Nathrop C	0.0	8.4	1.8	0.0	8.4	1.8	0.0	8.4	1.8	0.0	8.4	1.8
Browns Ck	0.0	4.0	1.5	0.0	4.0	1.5	0.0	2.3	1.0	0.0	4.0	1.5
Browns Canyon C	0.0	6.2	2.1	0.0	6.2	2.1	0.0	6.2	1.9	0.0	6.2	2.1
Salida C	1.1	8.4	3.0	1.4	8.4	3.0	0.1	8.4	2.5	1.1	8.4	2.9
East Salida Cks	0.3	9.7	3.1	0.5	9.5	2.9	0.4	8.8	2.0	0.4	9.3	2.6
Missouri Park C	1.1	3.9	2.6	1.1	3.9	2.6	0.3	2.8	1.9	1.1	3.9	2.6
Poncha Ck	1.4	5.3	2.6	1.4	5.3	2.6	0.2	5.3	2.4	1.4	5.3	2.6
Poncha Springs C	1.2	8.6	3.9	2.0	9.8	5.0	0.3	8.6	3.5	1.8	9.8	4.9
Howard C	0.3	9.1	2.6	0.3	9.1	2.5	0.2	9.1	2.4	0.3	9.1	2.4
Bear Ck	0.7	3.4	1.8	0.7	3.4	1.7	0.7	3.4	1.8	0.7	3.4	1.7
Coaldale C	0.0	8.5	2.5	0.0	7.4	2.1	0.0	8.5	2.2	0.0	7.4	1.9
Hayden Ck	0.0	2.5	1.1	0.0	2.5	1.1	0.0	1.6	0.9	0.0	2.4	1.1
Big Cottonwood Ck	0.0	6.0	1.8	0.0	6.0	1.7	0.0	6.0	1.8	0.0	6.0	1.7
Lower Badger C	0.0	1.8	0.6	0.0	1.8	0.6	0.0	1.5	0.6	0.0	1.8	0.6
Mouth Of Badger C	0.1	4.2	1.6	0.1	2.1	0.9	0.1	4.2	1.6	0.1	2.1	0.9
Falls Gulch C	0.0	4.0	2.1	0.0	3.2	1.8	0.0	4.0	1.7	0.0	3.2	1.8
Oak Ck	0.7	5.0	2.2	0.6	5.0	2.1	0.3	5.0	1.9	0.6	5.0	2.1
Fernleaf Gulch	0.1	3.9	1.7	0.1	3.9	1.6	0.1	3.9	1.7	0.1	3.9	1.5
Sand Gulch	1.4	5.0	2.7	1.4	3.8	2.3	0.2	5.0	2.4	0.8	3.8	2.0
Echo C	0.0	7.3	2.1	0.0	5.5	1.8	0.0	7.3	1.8	0.0	5.5	1.7
East Gulch	0.3	3.8	2.2	0.2	3.1	1.7	0.0	3.8	1.8	0.2	3.1	1.6
Copper Gulch	0.0	4.5	1.8	0.0	4.5	1.7	0.0	3.6	1.5	0.0	4.5	1.7
Royal Gorge C	0.0	5.8	1.8	0.0	5.1	1.8	0.0	5.8	1.8	0.0	5.1	1.8
Texas Ck Hdwaters	0.0	5.8	2.2	0.0	6.0	2.4	0.0	6.0	2.4	0.0	6.0	2.4
Brush Ck	0.4	5.4	2.6	1.0	4.1	1.8	1.0	4.1	1.8	1.0	4.1	1.8
Spruce Ck C	0.8	3.6	2.1	0.8	3.6	2.1	0.2	3.6	1.9	0.8	3.6	2.1
Lake Ck	1.4	3.0	2.1	0.0	3.0	1.7	0.0	3.0	1.7	0.0	3.0	1.7
Texas Ck C	0.0	6.0	2.0	0.0	6.0	1.9	0.0	6.0	1.7	0.0	6.0	1.9
Lowest Currant C	0.0	2.7	0.7	0.0	2.7	0.7	0.0	2.7	0.6	0.0	2.7	0.7
Lower Cottonwood C	0.0	2.0	1.3	0.0	1.9	1.2	0.0	2.0	1.0	0.0	1.9	1.2
Tallahassee Ck	0.0	4.1	1.6	0.0	3.9	1.5	0.0	4.1	1.5	0.0	3.7	1.5
Alverado Ck	0.0	5.9	2.3	0.0	4.8	1.7	0.0	4.8	1.7	0.0	4.8	1.7
Taylor Ck	0.1	7.1	2.9	0.9	2.7	1.7	0.3	2.6	1.4	0.9	2.7	1.7
Swift Ck	0.3	6.1	2.6	0.9	2.5	1.6	0.9	2.5	1.6	0.9	2.5	1.6
Westcliffe C	0.1	4.0	1.6	1.1	9.3	3.2	0.7	9.3	2.9	1.1	9.3	3.2
Deweese Res. C	1.1	3.5	2.2	1.4	3.5	2.4	1.4	3.5	2.5	1.4	3.5	2.4
Middle Grape Ck C	0.0	5.0	1.8	0.0	5.0	1.5	0.0	5.0	1.2	0.0	5.0	1.5
Querida Gulch C	0.0	5.2	2.0	0.0	4.0	1.9	0.0	4.0	1.9	0.0	4.0	1.9
Pine Gulch	0.1	3.3	1.6	0.0	3.3	1.5	0.1	3.3	1.5	0.0	3.3	1.5
Lowest Grape C	0.0	2.8	1.3	0.0	3.4	1.2	0.0	3.4	1.1	0.0	3.4	1.2
Upper Oak Ck	0.3	6.8	2.3	0.1	4.4	1.8	0.1	4.4	1.6	0.1	4.4	1.8
Oak Ck C	1.6	4.7	2.3	1.6	4.7	2.3	0.1	4.7	1.6	1.6	4.7	2.3
Sand Ck	1.0	3.6	2.3	1.0	3.6	2.2	1.0	3.6	2.3	1.0	3.6	2.2
Canon City C	1.0	8.9	4.5	1.0	8.9	4.5	0.3	7.7	2.5	1.0	8.9	4.5

APPENDIX 9 POLICY AND LEGISLATION RELATING TO AQUATIC HABITAT MANAGEMENT

There are at least 30 Legislative Acts, six Executive Orders and several Bureau manual sections that provide direction to BLM for the management of aquatic resources on public lands. The major impetus for hiring fisheries biologists within BLM was the National Environmental Policy Act of 1969, which required the agency to do environmental of land management plans and other actions. With the passage of the Federal Land Policy and Management Act of 1976 (FLPMA), BLM received for the first time permanent authority to retain and manage resources on public lands, including fisheries, for multiple uses. FLPMA provided a broad legal framework for management of the public lands and remains the basic guidance for management of fish and wildlife habitat on public lands. Specifically, FLPMA:

- Requires the development and maintenance of land use plans based on an inventory of all public lands and their resources.
- Places fish and wildlife management on an equal footing with other traditional land uses.
- Requires that part of grazing fees be spent for “range betterment,” including aquatic and terrestrial wildlife habitat enhancement protection, and maintenance where livestock use occurs.
- Requires consideration of fish and wildlife resources before approval of land exchanges.
- Authorizes the designation of Areas of Critical Environmental Concern to protect and prevent irreparable damage to fish and wildlife, and other resources.
- Neither enlarges nor diminishes the responsibilities and authorities of the state for management of fish and resident wildlife.
- Authorizes investigations, studies, and experiments involving the improvement management, use, and protection of the public lands and their resources.

Two other Acts have played major roles in BLM’s fisheries program. The first is the Sikes Act of 1974, which was a congressional mandate for BLM to “plan, develop, maintain, and coordinate programs for the conservation and rehabilitation of wildlife, fish, and game.” The Sikes Act is currently being implemented through the development of habitat management plans in cooperation with the states.

The second is the Endangered Species Act of 1973, which provides for the protection of listed and potentially listed species and theft habitats. Many of the listed fish species in the West are on lands managed by BLM.

Legislative Acts related to aquatic resources have been supplemented by a number of Executive Orders, the most pertinent of which are:

- EO 11514, Protection and Enhancement Environmental Quality, which states that federal agencies shall “monitor, evaluate, and control on a continuing basis their agencies’ activities so as to protect and enhance the quality of the environment.”
- EO11988, Floodplain Management, which directs federal agencies to “take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural beneficial values served by

floodplains....”

- EO 11990, Protection of Wetlands, directs each agency to “provide leadership and take actions to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands....”

The BLM uses its manual series to provide detailed policy and guidance for implementation of legal guidelines and policy documents. The 6500 to 6900 series cover’s the wildlife and fisheries portion of the manual. Pertinent guidelines for the fisheries habitat program based upon the various Legislative Acts. Policy Directives and manuals are summarized below:

- Resources are to be managed on a multiple-use and sustained-yield basis, using adequate inventory information to develop interdisciplinary and site-specific habitat plans.
- An inventory is to be made of all resources, considering present and fine uses. The inventory is to be kept current to reflect changing conditions.
- Alternative inventories, planning, and management are to be coordinated with other federal and state agencies and local governments and Indian tribes.
- The quality of the environment is to be protected and, where appropriate, to be preserved and protected in its natural condition. Priority is to be given to protecting critical habitat for Threatened and Endangered species and Areas of Critical Environmental Concern.
- Species listed as Threatened or Endangered, or designated as Candidate species, are to receive special protection. Any actions that may detrimentally impact these species will be reviewed by the U.S. Fish and Wildlife Service under a formal consultation process.
- Fish habitat and resources are to be protected from irreparable damage.
- Comply with appropriate state and federal pollution standards, and aid in the implementation of pollution-related plans
- Habitat management plans for site-specifications are to be prepared in partnership with state agencies. States have primary responsibility for management of species unless Congress directs otherwise. BLM is to coordinate multiple use with appropriate state fish and wildlife agencies and other concerned organizations.
- Activities are to be monitored, evaluated and controlled on a continuing basis in order to protect and enhance the quality of the environment.

In summary, Legislative Acts, Executive Orders, and Departmental and Bureau policies require that the BLM manage fisheries resources: 1) in close cooperation with other organizations, 2) under principles of multiple use, long-term sustained yield, and sound management practices, and 3) recognizing populations and habitats requiring special attention.

Appendix 10

Definitions of Colorado Natural Heritage Conservation Ranks

State conservation ranks are based on the status of a species in an individual state. State and Global ranks are denoted, respectively, with an "S" or a "G" followed by a character. These ranks should not be interpreted as legal designations. Global conservation ranks are based on the range-wide status of a species.

G/S1 Critically imperiled globally/state because of rarity (5 or fewer occurrences in the world/state; or very few remaining individuals), or because of some factor of its biology making it especially vulnerable to extinction.

G/S2 Imperiled globally/state because of rarity (6 to 20 occurrences), or because of other factors demonstrably making it very vulnerable to extinction throughout its range.

G/S3 Vulnerable through its range or found locally in a restricted range (21 to 100 occurrences).

G/S4 Apparently secure globally/state, though it might be quite rare in parts of its range, especially at the periphery.

G/S5 Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.

GX Presumed extinct.

G#? Indicates uncertainty about an assigned global rank.

G/SU Unable to assign rank due to lack of available information.

GQ Indicates uncertainty about taxonomic status.

G/SH Historically known, but not verified for an extended period, usually.

G#T# Trinomial rank (T) is used for subspecies or varieties. These species or subspecies are ranked on the same criteria as G1-G5.

S#B Refers to the breeding season imperilment of elements that are not permanent residents.

S#N Refers to the non-breeding season imperilment of elements that are not permanent residents. Where no consistent location can be discerned for migrants or non-breeding populations, a rank of SZN is used

SZ Migrant whose occurrences are too irregular, transitory, and/or dispersed to be

reliably identified, mapped, and protected.

SA Accidental in the state.

SR Reported to occur in the state, but unverified.

S? Unranked. Some evidence that species may be imperiled, but awaiting formal rarity ranking.

APPENDIX 11

RECREATION MANAGEMENT GUIDELINES TO MEET PUBLIC LAND HEALTH STANDARDS ON BUREAU OF LAND MANAGEMENT LANDS IN COLORADO December 11, 2000

INTRODUCTION

Colorado's population has grown significantly in the past ten years - the state's growth rate is among the highest in the nation. As the state becomes more crowded, an increasing number of people seek out undeveloped land to recreate. In addition, Colorado remains a popular destination for tourists, especially those seeking experiences in a backcountry or wildland setting. As a result, public lands administered by the Bureau of Land Management (BLM) are absorbing increasing recreational use. In many areas, the increased use has resulted in user conflicts and damage to vegetation, soils, wildlife habitat, and other natural resources.

In February 1997, Standards for Public Land Health in Colorado (Standards) were approved by the Secretary of Interior and adopted as decisions in all of BLM's land use plans, commonly referred to as Resource Management Plans (RMP). The Standards describe natural resource conditions that are needed to sustain public land health. The Standards encompass upland soils; riparian systems; plant and animal communities; special, threatened, and endangered species; and water quality. The Standards relate to all uses of the public lands. The full text of the Standards is found in Attachment 1.

Based on the increased awareness and understanding of the social and environmental impacts of outdoor recreation, the following establishes recreation management guidelines to help achieve and maintain healthy public lands as defined by the Standards. The guidelines are tools, methods, and techniques that can be used by managers to maintain or meet the standards.

It is the intent of these guidelines to encourage and permit a variety of recreational opportunities and enjoyable experiences that are managed to avoid conflicts and serve diverse recreational interests, while at the same time minimizing and preventing adverse impacts to land health, ecosystems, and cultural or natural resources, including historic and archaeological sites, soils, water, air, vegetation, scenery, wildlife habitats, riparian areas, endangered or threatened species, and wilderness areas. Recreational uses are a highly regarded social value of our society which impacts our public lands, and accordingly BLM in Colorado will plan, manage, and pursue funding sources so that various services, areas, and activities are environmentally sustainable for present and future populations.

RECREATION MANAGEMENT GUIDELINES

A. Standards I & 2: Upland Soils and Riparian Systems

1. Manage recreational activities to maintain sufficient vegetation on upland areas to protect the soil from wind and water erosion and to buffer temperature extremes.

2. Minimize disturbances and manage recreation use in riparian areas to protect vegetation, fragile soils, springs, and wetlands.
3. Plan and locate routes, trails, and developments away from riparian and wetland areas, and highly erosive soils.
4. Reduce stream crossings to the minimal number dictated by the topography. Reduce sedimentation and compaction associated with stream crossings.
5. Manage watercraft types and uses as appropriate to protect riparian systems and water quality from adverse impacts.

B. Standard 3: Healthy Plant and Animal Communities

1. Manage recreational use on public lands to promote the survival and health of native plants and animals.
2. Protect against the establishment or spread of noxious weeds.
3. Protect wildlife habitat by preserving connectivity and avoiding fragmentation.
4. Minimize wildlife disturbances and artificial attractions such as feeding wild animals or improper disposal of garbage.
5. Protect plant and animal communities by limiting recreational use by type, season, intensity, distribution, or duration.

C. Standard 4: Special Status and Threatened and Endangered Species

1. Protect habitat for federal and state Threatened and Endangered Species and other special status species.

D. Standard 5: Water Quality

1. Manage recreational uses in coordination with other uses on public lands to achieve or exceed applicable water quality standards.
2. Control water quality impacts resulting from recreational use, such as human waste, trash, and other elements.

E. Public Values and Education

1. Use information and interpretative services as major tools to protect public land health and significant natural, cultural, and recreational resources. As appropriate, improve public knowledge by locating kiosks, interpretive signs, and visitor information facilities at visitor contact points. Provide guidebooks and pamphlets for users.
2. Increase efforts to educate public lands visitors about an ethic of responsible use, through programs such as Tread Lightly, Leave No Trace, Project Archeology, the International Mountain Bike Association's "Rules of the Trail," and the Public Lands Watch program.
3. Communicate to the members of the public their individual rights and responsibilities in the use and preservation of public lands, including the recognition of the rights and responsibilities of others because public lands are our legacy for the future.

4. Initiate and maintain collaborative partnerships among government agencies, local governments, business communities, volunteers, user groups, stakeholders, educational institutions, individuals, and the private sector to achieve recreation management objectives and implement these guidelines.
5. Encourage the development of a concise educational program to be implemented at the initial point of contact with the public, to promote public land values, knowledge of rights and responsibilities, environmental awareness, communication between the BLM and the public, and changing management practices and policies.
6. In order to mitigate adverse impacts to the public lands, work with the private sector to integrate a responsible recreational use message with the goods or services they provide.

F. Recreation Management

1. Protect natural resources with a priority on management methods that effectively maintain healthy public lands. Utilize the least restrictive but appropriate limitations on public lands activities and users. Recognize that in some cases various levels of regulations and limits on users are necessary.
2. In the development of recreation plans, use the best current and sound recreation science practices to enhance public land health.
3. Develop and maintain updated inventory and monitoring information concerning both the resource and the recreational uses.
4. Use on-the-ground presence as a tool to protect public lands.
5. In order to prevent adverse impacts to the public land health, establish appropriate levels and types of recreational use. Utilize public participation in the development of these levels and types. Where long-term adverse impacts are created or anticipated by recreational uses, limit or control activities through specialized management tools including, but not limited to, designated campsites, permits, area closures, and limitations on stays and number of users.
6. Locate permanent facilities away from riparian areas, cultural sites, or other locations subject to adverse impacts, and relocate existing facilities away from areas that have been adversely impacted.
 - If it is determined that a facility must be located in these areas, it must be properly mitigated. For example, if it is determined that a path must cross a wetland area, appropriate mitigation such as a wooden boardwalk may be constructed to avoid water quality problems and other wetland disturbance.
7. Manage recreational uses to protect cultural, historical, and archeological resource sites, and areas where there are unique wilderness or environmental values. Where appropriate, set aside some areas for certain scientific, environmental, and archaeological activities, and limit or prohibit other recreational uses in these areas.
8. Allow and manage dispersed recreation activities so that the nature and the frequency of such activities does not create adverse impacts to public land health.
9. Set aside areas, limited in number and size, for certain high impact recreational uses, such as off- road vehicles, motorcycles, and target practice to be relatively unrestricted.

Establishment of such areas must be consistent with the Standards and other RMP decisions.

10. Manage activities associated with hunting and fishing to protect the resource from adverse impacts to public land health.

11. Often a land area is utilized by many users; implement feasible management methods to maintain the essential enjoyment elements of the various user groups.

12. Encourage public land recreational activities near population centers and highway corridors by placement of appropriate visitor use infrastructure. Provide restrooms and other facilities adequate for anticipated uses at designated campgrounds, trail heads, and other areas where there is a concentration of recreational users.

13. Build collaborative partnerships with local communities and the private sector to provide recreational support services on private land near public land access points where possible.

G. Routes, Trails, and Travel management

1. Work expeditiously toward the goal of a statewide inventory of routes and trails.

2. Place a high priority on developing local travel management plans with public participation. Travel management plans should consider all forms of travel in the affected area (i.e., motorized mechanized, and non-motorized). The plans should address travel management prescriptions (such as open, closed, and limited off-road vehicle designations), and identify appropriate actions to meet or maintain public land health standards and meet the needs of the visitor.

3. Until local travel management plans are prepared and implemented, BLM will take prompt action using existing authorities to prevent the proliferation of roads and trails that have caused or will lead to conditions whereby the Standards are not met. Existing authorities include, but are not limited to, restrictions under the specific rules section for off-road vehicle use amending land use plan decisions pertaining to off-road vehicles and closure and restriction orders for other uses

4. When developing travel management plans and/or implementing travel management decisions, managers should consider the following:

a. Where adverse impacts, user conflicts, damage to ecosystems, injury to the environment, or other conditions are anticipated or are occurring that would impair the health of the public lands and diminish recreational opportunities, restrict recreational travel to designated routes or take other appropriate action such as seasonal closures.

b. Cross-country travel (i.e., off of roads and trails) should only be permitted in areas that meet the designation criteria for “open” areas and the Standards.

c. Where conflicts among recreational users can be minimized, combine multiple uses on one route instead of establishing parallel or alternative routes.

d. Where and when appropriate, plan, develop, and designate in cooperation with user groups new routes and trails, as well as selected areas for open travel, that

enhance and expand recreational opportunities and encourage responsible use with little or no adverse impacts.

e. Relocate, abandon, or close routes and trails seasonally or temporarily that adversely impact riparian and wetland areas, wildlife, highly erosive soils, cultural sites, and sensitive ecological systems, and abandon routes that are duplicated or unneeded. Where routes, trails, or other facilities have been abandoned, provide for restoration and revegetation of the site.

5. Where adverse impacts or safety considerations warrant, limit or prohibit public access when authorizing specific routes to oil and gas locations, mines, timber sales, or other areas or sites under permit or lease.

6. Provide clear maps, signs, guidelines, descriptions, and other information for users of routes, trails, and other facilities or areas, including mileages and estimated hours of travel by type, limitations caused by travel surfaces and conditions, and availability of loop trails. Provide clear information to the public when closures, seasonal use, and other regulations or limits are placed on public lands.

RECREATION MANAGEMENT IMPLEMENTATION ISSUES

In addition to the implementation objectives included in the Standards, the following critical issues should be considered for successful implementation of the Recreation Guidelines:

1. The guidelines contained in this document are designed to provide direction, yet allow flexibility for local implementation of RMP decisions. Typically, decisions made in RMPs provide resource goals and objectives, allocate resources, identify land areas for limited, restrictive or exclusive use, and provide guidance for implementation. During the implementation process, additional planning may be needed to better define goals, make objectives more specific, and identify or add specific detail to implementing actions. Frequently, multiple guidelines may be used to maintain or achieve the land health standards. All implementing actions will be completed in consultation, cooperation, and coordination with local communities and the interested public.

2. Declining federal budgets challenge the ability of the BLM to provide services adequate to meet growing recreational demands, create difficult management concerns, and place the health of public lands at risk. Addressing current and future needs will require increased agency budgets as well as collaboration, partnerships, and shared responsibility among public land agencies and the various constituencies using public lands.

3. Increasing recreational uses of public lands create increased needs for funding, manpower, and other resources to simultaneously protect the environmental and ecological values of public lands consistent with multiple use and sustained yield principles. Management practices specifically tailored to recreational impacts are necessary to improve and expand recreational facilities and protect effective planning, maintenance, enforcement, monitoring, and programming of public recreational opportunities. Possible supplementary funding resources to meet these goals should be considered, including non-federal resources such as state, county, and local governments, non-profit entities, and private interests.

4. Important to implementing multiple use recreation management and environmental management objectives are: an achievable scientific approach to the inventory and analysis of biological and ecological data; gathering of accurate data on recreational needs, benefits, demands, carrying capacities, and trends; and developing consensus on difficult issues relating to economically sustainable programs, use controls, other limitations and resolution of user conflicts.

5. The involvement by the BLM of the public, other governmental entities, and various recreational constituencies is necessary throughout the planning, use, and evaluation cycle to establish appropriate management priorities. This involvement should encourage a high degree of public interaction, foster collaboration, educate and inform the public regarding important land use issues, and contribute to the successful implementation of the Standards for Public Land Health and Recreation Management Guidelines.

6. Not all RMP decisions require subsequent planning such as activity plans or transportation management plans. If the actions needed to implement RMP decisions are well defined, then only appropriate environmental assessment documentation may be needed. If, however, the decisions

and information in RMPs do not contain enough detail, additional planning may be needed to better define goals, make objectives more specific, and identify or add specific detail to implementing actions.

7. During the implementation process, it may be determined that existing RMP decisions are no longer valid or do not adequately meet the needs of the resource or the public. Therefore, it may be necessary to initiate a plan amendment to address the affected decisions in the RMP.

8. It is not possible for each acre to achieve every standard. It is important to assess and consider the overall health of a landscape when applying the recreation guidelines. For example, when determining how to manage vehicle parking in a landscape, it may be determined to concentrate vehicles in a small confined area, rather than having uncontrolled parking throughout the landscape. In this example, this approach would result in improved resource conditions overall although the site specific impacts at the small parking area would be high (e.g., vegetation disturbance).

The guidelines contained in this document are designed as “tools” to assist managers implement recreation management decisions and actions. At this stage, the environmental effects of implementing the guidelines are too broad, speculative, or conjectural to lend themselves to meaningful environmental analysis under the National Environmental Policy Act (NEPA). Furthermore, most implementing actions will be subject to further NEPA analysis. Therefore, adoption of the guidelines are categorically excluded from NEPA analysis 6

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.

Guidelines, Recreation: Recreation management tools, methods, and techniques designed to provide activities, experiences, and benefits for the recreating public while maintaining or achieving healthy public lands as defined by the standards. The recreation guidelines contained in this document are directed toward maintaining or achieving public land health.

Landscape: A defined land area that forms a management unit or basis of analysis.

Mechanized Vehicle: Any non-motorized vehicle capable of or designed for, travel on or immediately over land. An example of a mechanized vehicle is a mountain bike.

Motorized Vehicle: Synonymous with off-road vehicle. Examples of this type of vehicle include all-terrain vehicles (ATV), Sport Utility Vehicles (SUV), motorboats, and snowmobiles.

Non-Motorized Use: Recreational human and animal foot traffic. Examples include horses, llamas and other domestic animals.

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 (or 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.

Off-Road Vehicle 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 roads and trails; use on designated roads and trails; 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.

Protect: To take actions to guard against injury or loss.

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.

Recreation Support Services: Resource, facility, and visitor management actions taken to provide activities, experiences, and benefits for the recreating public.

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.

Transportation Management Plans: An activity plan 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.

Visitor Use Infrastructure: Amenities such as roads, parking areas, and facilities, to protect the resource and support the recreation user in his/her pursuit of activities, experiences, and benefits.

Appendix 12

COST ANALYSIS OF IMPLEMENTING TMP ALTERNATIVES

All of the alternatives would require the expenditure of both BLM funds and funds from outside sources to implement actions commensurate with the needs of the alternative. The actions and associated costs that are considered in this analysis include: road maintenance, reconstruction and construction costs; trail maintenance, reconstruction and construction costs; route closure and reclamation costs; travel management signing costs.

Road Maintenance Costs:

Currently, BLM performs regularly scheduled maintenance on approximately 50 miles of the most heavily used roads in the Arkansas River TMP area. All of these roads are included in Travel Use Category O (General) and in Travel Way Classes 3b, 3c, 4 and 5. Normal maintenance consists of blading the road surface with a motor patrol, reconstructing water bars, and cleaning drainage turnouts. Some of these roads are maintained annually (14 miles), while the remaining 36 miles are maintained every two or three years. Additional emergency work using bull dozer or other types of heavy equipment is occasionally needed to repair roads that have been damaged by heavy rains.

In addition to scheduled maintenance that is performed under contracts administered by BLM's Engineering Field Office, maintenance and improvements of roads are sometimes funded by other means, including deferred maintenance and capital investment programs and by acquiring funding through grants that are available under the State OHV Program. Maintenance of some roads is also done in conjunction with performing individual project activities such as fuels treatment projects, wood products sales, and fire suppression operations.

A substantial amount of road maintenance is also performed by holders of right-of-ways and permits issued by BLM. Approximately 60 miles of roads currently exist in the TMP area that are under BLM right-of-ways and that are in addition to 112 miles of right-of-ways for county, state, and federal highways. Roads that are used to access power and communication facilities, mines, quarries, private residences and other authorized right-of-ways, or that provide access to permitted activities such as for managing livestock grazing and timber harvesting operations are periodically maintained by the right-of-way and permit holders. Since right-of-ways issued by BLM do not usually confer exclusive use of roads to the holders, many of these roads are also used by the public. Only a few right-of-ways are closed to public use where safety or protecting valuable equipment is required. On the other hand, not all administrative access roads that are used by grazing permittees and other permit holders are open to the public for use with motor vehicles. Consequently, some of these roads are only available to authorized persons for administrative access. Generally, the roads that are only used for administrative access do not require frequent maintenance, since many of them are only driven a few times a year.

Except for the 50 miles of roads in the General Category, which are routinely maintained under BLM’s scheduled maintenance program, it is difficult to develop accurate estimates of the total miles of roads that are periodically maintained by other parties or that are accomplished by other means. Records pertaining to maintenance performed by holders of right-of-ways and permits or that is accomplished in conjunction with other project work are not kept in a central file location and are not easily available. Also, holders of right-of-ways are not required to get permission from or to inform BLM when maintenance is performed. Consequently, a lot of maintenance is accomplished without BLM knowledge. Some educated guess estimates of current maintenance, however, are provided in the following table (Table 1).

Table 1 – Estimated Miles of Current Road Maintenance Performed in the Arkansas River TMP Area by Travel Use Category, Means of Accomplishment, and Frequency

Travel Use Category and Means of Accomplishment	Miles and Frequency of Maintenance			
	1-3 yrs.	4-6 yrs.	7-10 yrs.	Total
O (General) – BLM: Scheduled, Emergencies and as needed, Other Project Activities	50	20	73	143
O (General) – Right-of-Way Holders	12	36	12	60
Subtotal	62	56	85	203
AA (Administrative Access) – Permit Holders and BLM Project Activities	25	60	41	126
Total	87	116	126	329

The estimates in Table 1 show that 126 miles of roads are being maintained at intervals of 7-10 years. At first glance this large number could be interpreted as meaning that a high percentage of the roads in the TMP are not being adequately maintained. The figure by itself, however, may be misleading, particularly for the roads that are included in the Administrative Access (AA) category. Unlike the roads in the General travel use category that are used by the public and generally bear higher amounts of traffic, the AA roads are not available to the public and most receive very little use. In fact, of the 126 miles of roads in the AA category, 66 miles are identified in the inventory as lacking legal public access (see [Map 17](#)). In other words, they are located on BLM but are surrounded by private lands and cannot be legally accessed by the general public. Many of these are only driven by authorized personnel a few times a year and some go for intervals of many years without being used.

As for the roads included in the General category, in some cases a maintenance interval of 7 to 10 years would be inadequate; however, it does not necessarily mean that this level of maintenance is inadequate for all 85 miles that are maintained at this frequency. Under favorable soil and ground conditions and where roads are located on gentle terrain, this level of maintenance may actually be quite appropriate. Blading or disturbing roads

that are predominantly rocky in nature or that are located across well-drained soils with high amounts of ground vegetation may actually do more harm than good for retarding erosion and improving surface conditions. In addition, many miles of the BLM roads in this category are little more than unaltered travel ways located in the bottoms of dry washes, and which for all practical purposes, do not require maintenance.

Compared to the number of roads in the area, the Arkansas River TMP contains relatively few single-track (foot, horse, mountain bike, motorcycle) or narrow double-track (ATV) trails. The inventory (Table 2-a) includes only 35 miles of non-motorized single-track, 3 miles of motorized single track, and 26 miles of narrow double-track ATV routes. As a general rule, most of the trails, both single-track and double-track, are not constructed but were developed over time through use. Some originally served as cattle and game trails that were later used and improved by people. Many of the current ATV trails occur on old road beds that are no longer useable by full-size vehicles because of the presence of washouts, rocks, trees, and other obstacles, but which are useable by smaller ATV equipment. Of the 38 miles of inventoried single-track, only 8.3 miles of non-motorized and 1.3 miles of motorized trails showed signs of being constructed. Of the 26 miles of inventoried ATV routes, 22.4 miles showed signs of being constructed or were located on old constructed road beds.

Construction, maintenance, and improvement of trails are accomplished primarily through the volunteer efforts of organizations and groups affiliated with various recreation users and with funding acquired through the State OHV Grant Program. Due to the popularity of the Texas Creek Travel Management Area and the heavy amounts of motorized recreation use that it receives, most trail maintenance efforts within the TMP have been focused in the Texas Creek subunit, with very little or no maintenance of trails in other areas of the TMP.

As indicated earlier, the adequacy of the maintenance that is currently being performed in the TMP cannot be directly interpreted from the mileages given in Table 1. Other factors affect whether or not a given frequency of maintenance is adequate, including such things as the amount and type of traffic that occurs on the routes and their physical characteristics. For the most part, these factors were not considered in the estimates included in Table 1. In order to develop better estimates of the maintenance costs that would be needed under each alternative, further analysis of the inventory data was performed that considered the amounts and types of uses and the legal access status of the existing roads and trails. Rather than focusing on the adequacy of maintenance that is performed currently, this analysis was aimed at identifying the frequency of maintenance that should be performed to adequately maintain the roads and trails that would be managed under each alternative. The summary of this analysis is included in Tables 2-a – 2-d. The mileage figures in these tables were derived from GIS data tables by selecting routes in each alternative by travel use category, type of use, and amount of use and assigning them into one of three maintenance frequency categories: 1-3yrs., 4-6 yrs., and 7-10 yrs.

Table 2-a – No Action Alternative - Estimated Miles of Maintenance Needed by Travel Use Category, Means of Accomplishment, and Frequency

Travel Use Category and Means of Accomplishment	Miles and Frequency of Maintenance			
	1-3 yrs.	4-6 yrs.	7-10 yrs.	Total
O (General) – BLM: Scheduled, Emergencies and as needed, Other Project Activities	74	46	23	143
O (General) – Right-of-Way Holders	12	36	12	60
Subtotal	86	82	35	203
AA (Administrative Access) – Permit Holders and BLM Project Activities	7	34	85	126
Sub-Total All Roads	87	116	126	329
A (ATV)	20	4	1	25
M (Motorcycle)	2	1	0	3
Sub-Total All Motorized Trails	22	5	1	28
B (Mountain Bike)	3	0	0	3
E (Horse)	1	27	0	28
F (Foot)	1	1	2	4
Sub-Total All Non-motorized Trails	5	28	2	35

Table 2-b – Alternative A - Estimated Miles of Maintenance Needed by Travel Use Category, Means of Accomplishment, and Frequency

Travel Use Category and Means of Accomplishment	Miles and Frequency of Maintenance			
	1-3 yrs.	4-6 yrs.	7-10 yrs.	Total
O (General) – BLM: Scheduled, Emergencies and as needed, Other Project Activities	71	32	0	103
O (General) – Right-of-Way Holders	12	36	12	60
Subtotal	83	68	12	163
AA (Administrative Access) – Permit Holders and BLM Project Activities	0	0	96	96
Sub-Total All Roads	83	68	108	259
A (ATV)	31	8	2	41
M (Motorcycle)	14	1	0	15
Sub-Total All Motorized Trails	45	9	2	56
B (Mountain Bike)	47	0	0	47
E (Horse)	4	47	4	55
F (Foot)	1	0	0	1
Sub-Total All Non-motorized Trails	52	47	4	103

Table 2-c – Alternative B - Estimated Miles of Maintenance Needed by Travel Use Category, Means of Accomplishment, and Frequency

Travel Use Category and Means of Accomplishment	Miles and Frequency of Maintenance			
	1-3 yrs.	4-6 yrs.	7-10 yrs.	Total
O (General) – BLM: Scheduled, Emergencies and as needed, Other Project Activities	52	2	0	54
O (General) – Right-of-Way Holders	12	36	12	60
Subtotal	64	38	12	114
AA (Administrative Access) – Permit Holders and BLM Project Activities	0	12	104	116
Sub-Total All Roads	64	50	116	230
A (ATV)	18	0	0	18
M (Motorcycle)	2	0	0	2
Sub-Total All Motorized Trails	20	0	0	20
B (Mountain Bike)	17	0	0	17
E (Horse)	5	13	1	19
F (Foot)	6	0	2	8
Sub-Total All Non-motorized Trails	28	13	3	103

Table 2-d – Alternative C - Estimated Miles of Maintenance Needed by Travel Use Category, Means of Accomplishment, and Frequency

Travel Use Category and Means of Accomplishment	Miles and Frequency of Maintenance			
	1-3 yrs.	4-6 yrs.	7-10 yrs.	Total
O (General) – BLM: Scheduled, Emergencies and as Needed, Other Project Activities	70	23	0	77
O (General) – Right-of-Way Holders	12	36	12	60
Subtotal	82	59	12	153
AA (Administrative Access) – Permit Holders and BLM Project Activities	0	0	103	103
Sub-Total All Roads	82	59	115	256
A (ATV)	24	0	0	24
M (Motorcycle)	4	0	0	4
Sub-Total All Motorized Trails	28	0	0	28
B (Mountain Bike)	27	0	0	27
E (Horse)	5	39	3	47
F (Foot)	2	0	0	2
Sub-Total All Non-motorized Trails	34	39	3	76

The next table, Table 3, displays and compares the estimated costs for maintaining the roads and trails that would be managed under each alternative. These costs would occur annually and are considered as recurring costs of travel management implementation. The annual maintenance estimates for roads in the General BLM category are based a cost of \$250.00 per mile, including overhead, which was the average amount that was spent in FY 2006 on maintenance contracts administered by the Engineering Field Office. The roads in General category only include those that are maintained by BLM on a scheduled or emergency basis, or in conjunction with other project activities. The costs for maintaining roads in the General and Administrative Access categories that are maintained by holders of right-of-ways and permits are not included, since the costs for maintaining these are borne by other parties. For the purposes of this analysis the assumption is made that 50% of the Administrative Access roads are maintained by right-of-way and permit holders. Also, the following factors were applied to the miles of roads in each maintenance frequency category for calculating the miles of roads that would be maintained annually: For roads maintained at a frequency of 1-3 years the number of miles maintained annually equals the total miles times 0.333; for roads maintained at a frequency of 4-6 years the number of miles maintained annually equals the total miles times 0.167; and for roads maintained at a frequency of 7-10 years the number of miles maintained annually equals the total miles times 0.10.

Table 3 – Comparison of Annual Road Maintenance Costs by Alternative

ALTERNATIVE	ROAD USE CATEGORY				
	General		Administrative Access		Total Cost
	Miles	Cost	Miles	Cost	
No Action Alternative	34.6	\$8650	8.3	\$2075	\$10725
Alternative A	28.9	\$7225	4.8	\$1200	\$8425
Alternative B	17.6	\$4400	6.2	\$1550	\$5950
Alternative C	27.1	\$6775	5.2	\$1300	\$8075

Comparison of the road maintenance figures shows that costs would be reduced under all three of the action alternatives from that which would be spent under the No Action Alternative. The reason for this is because under all three action alternatives some General category roads that are currently open would be closed, designated as Administrative Access routes, or designated as other types of trails. Likewise, some of the Administrative Access roads included in the No Action Alternative would be closed under the action alternatives. The following table, Table 4, compares the changes that would occur under each of the action alternatives.

Table 4 – Changes in Road Mileages between the No Action Alternative and Alternatives A, B, and C

The roads included under the No Action Alternative as	Would be changed to this travel use designation	For the miles shown under each alternative		
		A	B	C
General (O)	Closed (CL)	42.9	70.7	47.5
General (O)	Administrative Access (AA)	13.7	17.3	11.7
General (O)	ATV (A)	-	3.6	4.4
General (O)	Motorcycle (M)	-	-	0.8
General (O)	Mountain Bike (B)	0.5	0.2	0.5
General (O)	Equestrian (E)	1.1	3.2	1.9
General (O)	Foot (F)	-	0.1	-
Administrative Access (AA)	Closed (CL)	24.7	26.2	21.5
	All Designations	82.9	121.3	88.3

Trail Maintenance Costs

The average costs per mile included in the following tables (Tables 5-7) are very general

estimates of what it would cost to maintain, construct, and reconstruct various types of trails within the Royal Gorge Field Office. The estimates account for the fact that the majority of the trail maintenance work in the Field Office is performed by volunteers or through projects funded under the State OHV Grant Program. The same also applies to construction and reconstruction work. Only small amounts of maintenance, construction, and reconstruction work are directly performed by BLM personnel or by private contractors with BLM funds. Most of the direct costs to BLM are associated with such activities as administering grants and supervising volunteers. In reality, the maintenance, construction, and reconstruction of trails encompass a broad range of costs that vary greatly between trails that have different physical characteristics. Because of the tremendous variation of the costs of this work, the figures included in the tables are intended to be used only for comparing the estimated costs of the TMP alternatives and should not be used for budgetary planning purposes.

Table 5 – Comparison of Annual Trail Maintenance Costs by Alternative

ALTERNATIVE	TRAIL USE CATEGORY						
	A		M, B, E		F		TOTAL
	Miles	Cost	Miles	Cost	Miles	Cost	
No Action Alternative	7.4	\$7400	6.7	\$670	0.7	\$42	\$8112
Alternative A	11.6	\$11600	27.7	\$2770	0.3	\$18	\$14388
Alternative B	6.0	\$6000	10.4	\$1040	2.2	\$132	\$7172
Alternative C	8.0	\$8000	18.8	\$1880	0.7	\$42	\$9922

The following unit costs were used for calculating the total estimated maintenance costs included in Table 5:

ATV trails: \$1,000.00 per mile (machine)

Motorcycle, mountain bike, and horse trails: \$100.00 per mile (hand crews)

Foot trails: \$60.00 per mile

Road and Trail and Construction and Reconstruction Costs

Construction involves building an entirely new road or trail where none currently exists. Reconstruction involves relocating, realignment, and redevelopment of an existing road or trail cross-section to increase travel width, reduce out-slope, and install or re-build erosion control structures. The costs incurred for constructing and reconstructing routes are considered as one-time costs of implementation. The miles of new construction and

reconstruction that would occur under each alternative are included in Table 6. The No Action alternative is not included because no routes would be constructed or reconstructed under that alternative.

Table 6 – Miles of New Construction (NC) and Reconstruction (R) by Travel Use Category and Alternative

Travel Use Category	Alternative					
	A		B		C	
	NC	R	NC	R	NC	R
O (General)	0.7	0.9	0.6	0.4	0.7	0.6
A (ATV)	0.6	4.6	0	0.6	0	3.0
M (Motorcycle)	7.6	0	0	0	0.2	0
B (Mountain Bike)	28.2	4.3	1.6	2.5	6.5	4.3
E (Horse)	3.5	26.3	2.1	0.1	3.0	27.2
F (Foot)	0	0	0	3.7	0	0
Total	39.9	32.9	4.3	7.3	10.4	35.1

The next table (Table 7) displays the estimated costs of constructing and reconstructing roads and trails. The following unit costs were used in calculating these costs:

Construction costs:

- Road (General): \$60,000 per mile
- ATV: \$15,000.00 per mile
- Motorcycle, mountain bike, horse: \$8,000.00 per mile (hand crews)
- Foot: \$5,000.00 per mile (hand crews)

Reconstruction costs:

- Road (General): \$10,000.00 per mile (machine)
- ATV: \$10,000 per mile
- Motorcycle, mountain bike, horse: \$1000.00 per mile
- Foot: \$500.00 per mile

Table 7 – Costs in Thousands of Dollars of New Construction (NC) and Reconstruction (R) by Travel Use Category and Alternative

Travel Use Category	Alternative					
	A		B		C	
	NC	R	NC	R	NC	R
O (General)	42.0	9.0	36.0	4.0	42.0	6.0
A (ATV)	9.0	46.0	0	6.0	0	30.0
M (Motorcycle)	60.8	0	0	0	1.6	0
B (Mountain Bike)	225.6	4.3	12.8	2.5	52.0	4.3
E (Horse)	28.0	26.3	16.8	0.1	24.0	27.2
F (Foot)	0	0	0	1.8	0	0
Total	337.4	85.6	65.6	14.4	119.6	67.5

Road and Trail Closure Costs

Closure costs include the costs associated with decommissioning routes that are designated in the TMP alternatives as closed (CL). The costs associated with decommissioning closed routes are considered as one-time costs of travel management implementation. Some route closures would require installing physical barriers to prevent vehicular access, such as constructing fences, placing large boulders, or installing metal gates in existing fence lines. Other routes, such as those that are located in open areas where installing barricades is not a practical option, would simply be closed with signs that prohibit motorized uses. In addition to closing the routes, in those cases where serious erosion is occurring, decommissioning would also include mechanically ripping and seeding the route to reclaim it to a natural state. In most cases reclamation would be allowed to occur naturally.

Because closure devices are only needed at one or both ends of a route, the total number of closure devices that would be needed under each alternative is directly related to the number of routes that would be closed. Because reclamation involves treating the entire route, the total miles mechanical reclamation that would be needed under each alternative is directly related to the miles of routes that would be closed. In order to estimate the total costs of closing and decommissioning routes, both the numbers and miles routes must be considered.

Not all of the routes that are designated as closed would require barriers, signs, or mechanical treatment to decommission them. Under all of the action alternatives (A, B, and C) many of the routes that would be designated closed are not legally accessible. For example, under Alternative A, approximately 172.3 miles would be designated closed. Included in this total, however, are 45.9 miles that are not legally accessible to the public. In most cases these routes would not require barriers or other actions to decommission them. Likewise, 237.7 miles would be designated closed under Alternative B, which includes 51.5 miles without legal public access; and 202.1 miles would be designated closed under Alternative C, of which 50.7 miles are not legally accessible. Thus, if the routes without legal public access are subtracted from the total closed routes for each

alternative, then the net miles of routes that would require some type of closure device and/or reclamation would be 126.4 miles for Alternative A, 186.2 miles for Alternative B, and 151.4 miles for Alternative C.

During the development of the alternatives the ID team made an effort to identify the types of closures and reclamation treatment that would be needed for each alternative. In many cases, however, decisions regarding the location and type of closure needed were deferred until Six closure categories and two reclamation categories were used to identify the types of closure devices and reclamation methods that would be needed. The categories included:

- B = Closing with constructed barricades, boulders, or mounds of earth (tank traps)
- NF = Closing by constructing new fence
- EG = Closing by installing lock on existing gate
- NG = Closing with new locked gate
- CP = Signing as closed with Carsonite post without installing physical barriers
- TBD = Determine location and type of closure upon field inspection
- MR = Mechanical Reclamation (backfilling, ripping, and seeding)
- NR = Natural Reclamation (allowing vegetation to naturally reestablish)

The following table (Table 8) displays the total numbers and miles of legally accessible routes according to how routes would be closed and rehabilitated under each alternative. The No Action alternative is not included because no routes would be decommissioned under that alternative.

Table 8 - Numbers of Closures by Type of Closure Device and Miles of Rehabilitation Using Mechanical Treatment; Kiosks and Travel Management Area Entry Signs

Type of Closure	Alternative		
	A	B	C
B – Constructed barricades, boulders, etc.	61	64	62
NF – Constructing new fence	1*	1*	1*
EG – Locking existing gates	1	1	1
NG – Installing new locked gate	12	12	12
CP – Signing with Carsonite post	26	26	26
TBD – To be determined in field	67	71	69
Miles of Mechanical Reclamation	12.2	12.2	12.2
Kiosks - Large	2	2	2
Kiosks - Small	3	3	3
Travel Management Area Entry Signs	51	51	51

* Includes approximately 1 mile of new fence

The following unit costs were applied for calculating the total estimated costs shown in Table 9 for closing and rehabilitating routes and installing kiosks and travel management area entry signs:

Constructing barricades with boulders - \$200.00 per closure
 Constructing new fence (wire and t-post) - \$1.50 per foot
 Installing locks on existing gates - \$60.00 per gate
 Installing new locked gates - \$600.00 per gate
 Installing Carsonite posts - \$50.00 per post
 Ripping and seeding - \$1,500 per mile
 Large Kiosk - \$2,000.00 per kiosk
 Small Kiosk - \$1,200.00 per kiosk
 Travel Management Area Entry Sign - \$100.00 per sign

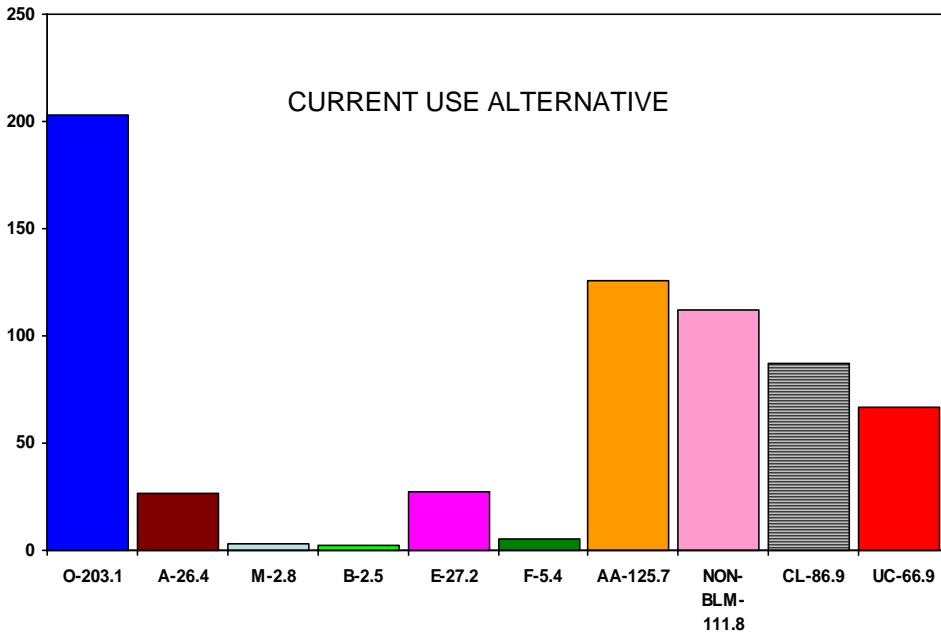
Table 9 – Estimated Implementation Costs for Closures, Reclamation, Kiosks, and Travel Management Area Entry Signs

Type of Closure	Cost in Dollars by Alternative		
	A	B	C
B – Constructed barricades, boulders, etc.	12,200	12,800	12,400
NF – Constructing new fence	7,920	7,920	7,920
EG – Locking existing gates	60	60	60
NG – Installing new locked gate	7,200	7,200	7,200
CP – Signing with Carsonite post	1,300	1,300	1,300
TBD – To be determined in field	*	*	*
Subtotal	28,680	29,280	28,880
Subtotal x 1.33*	38,144	38,942	38,410
Mechanical Rehabilitation	18,300	18,300	18,300
Kiosks	7,600	7,600	7,600
Travel Management Entry Signs	5,100	5,100	5,100
Total	69,144	69,942	69,410

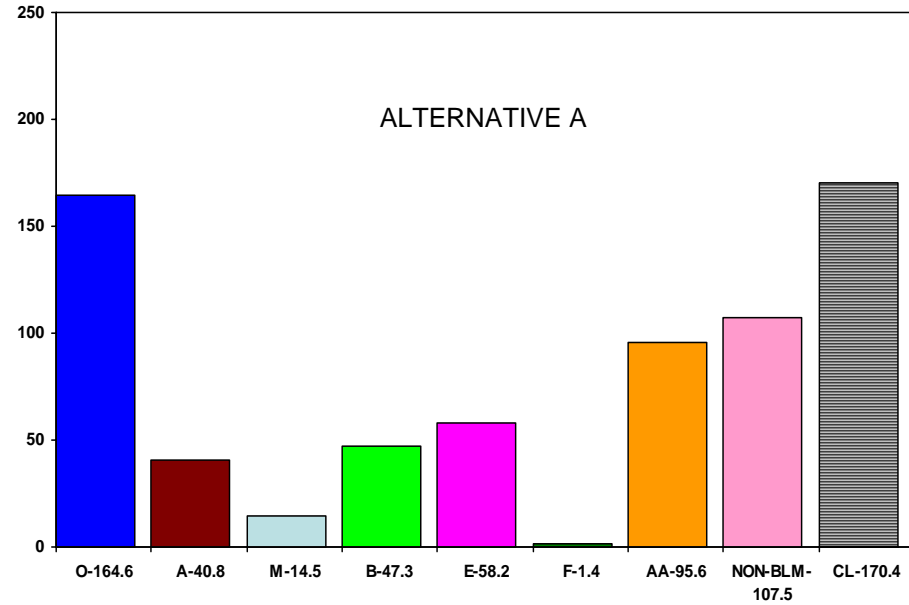
*Because decisions pertaining to the types of closures that would be employed were not identified for approximately one-third of the routes that would be closed, the assumption has been made that the total costs for installing closure devices would actually be a third more than the Subtotal shown in Table 9.

MILES OF DESIGNATED ROUTES – ALL SUBUNITS

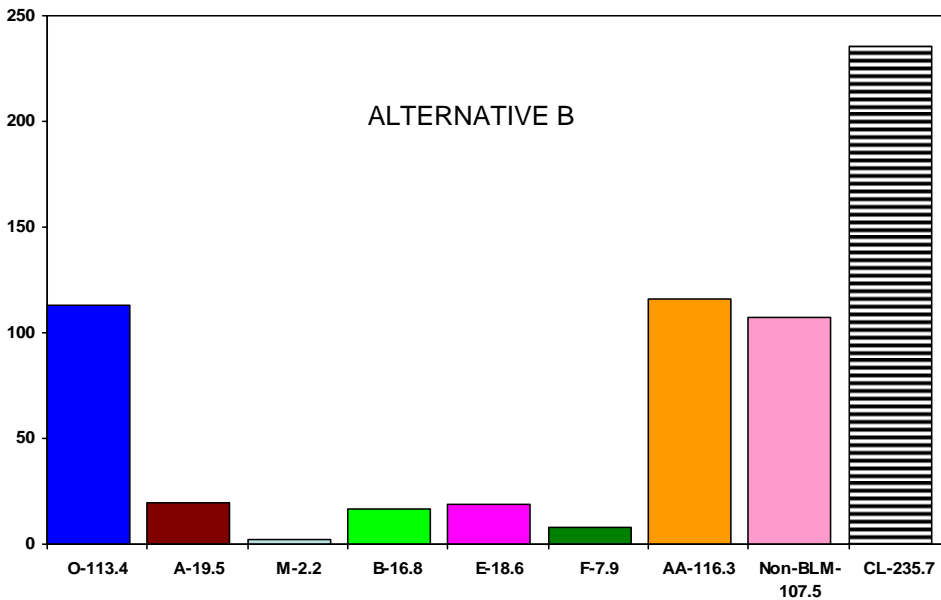
CURRENT USE ALTERNATIVE



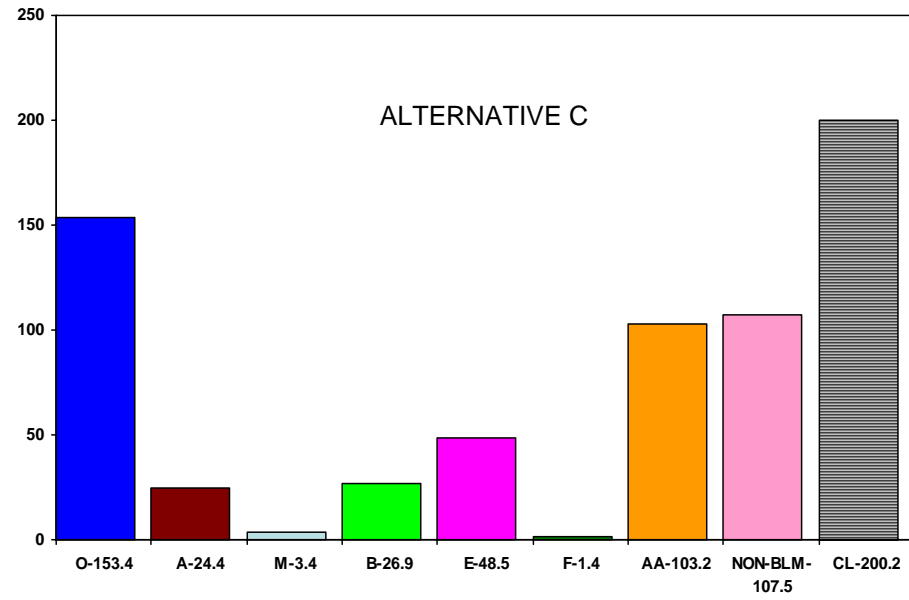
ALTERNATIVE A



ALTERNATIVE B

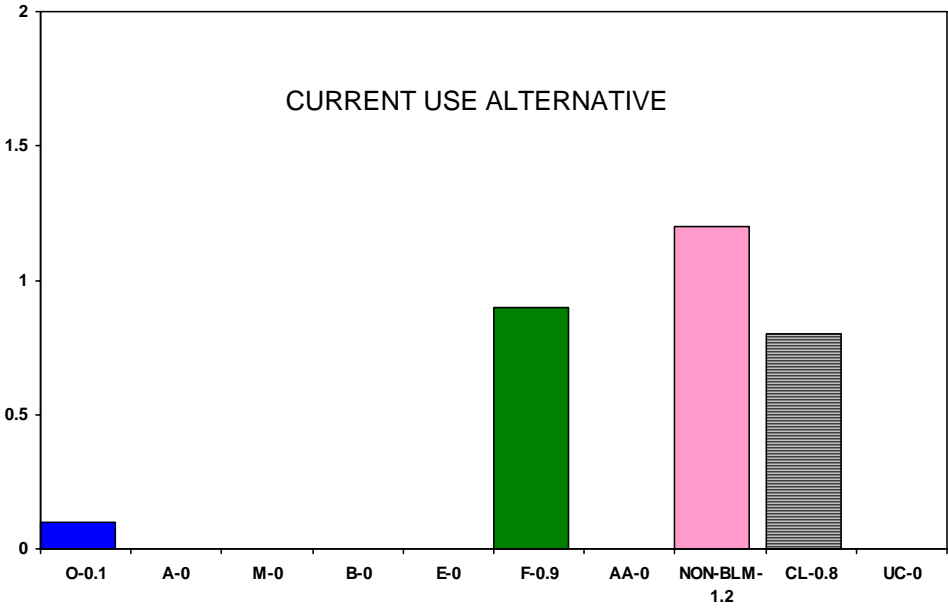


ALTERNATIVE C

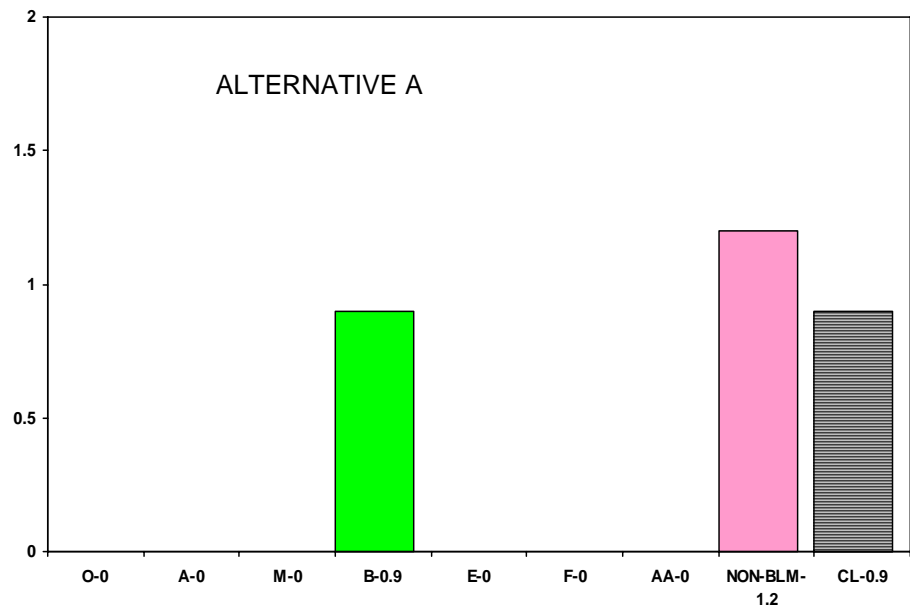


MILES OF DESIGNATED ROUTES – BROWNS CANYON

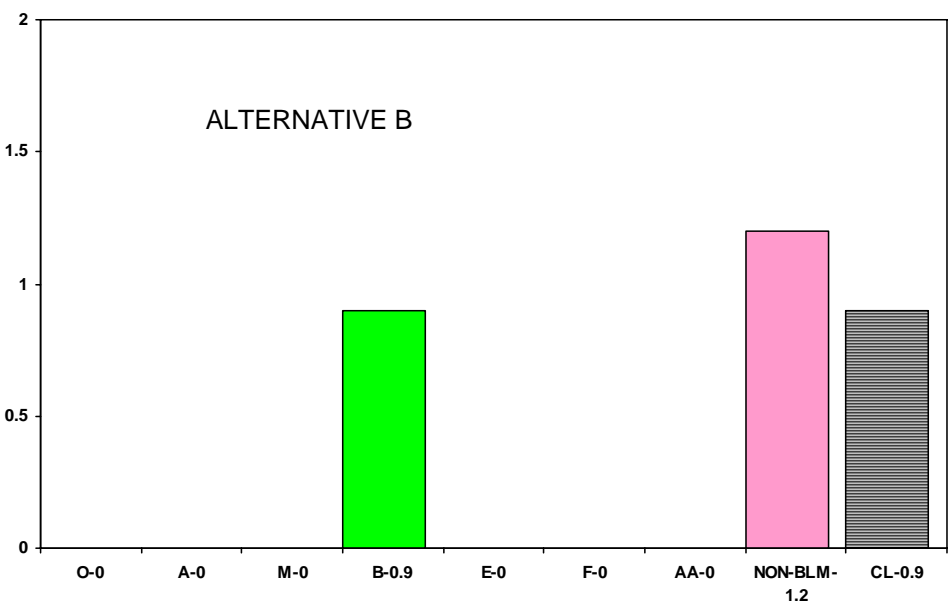
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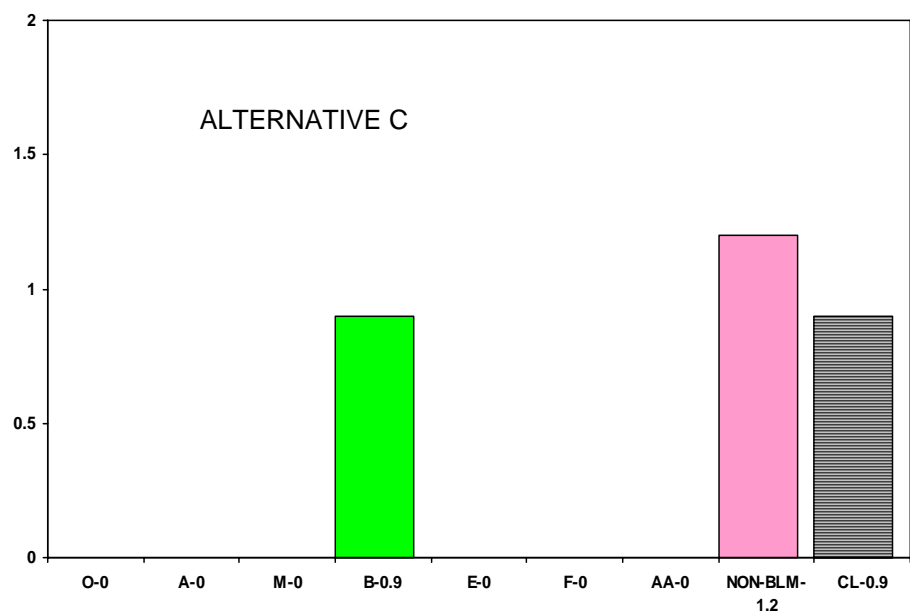
ALTERNATIVE A



ALTERNATIVE B

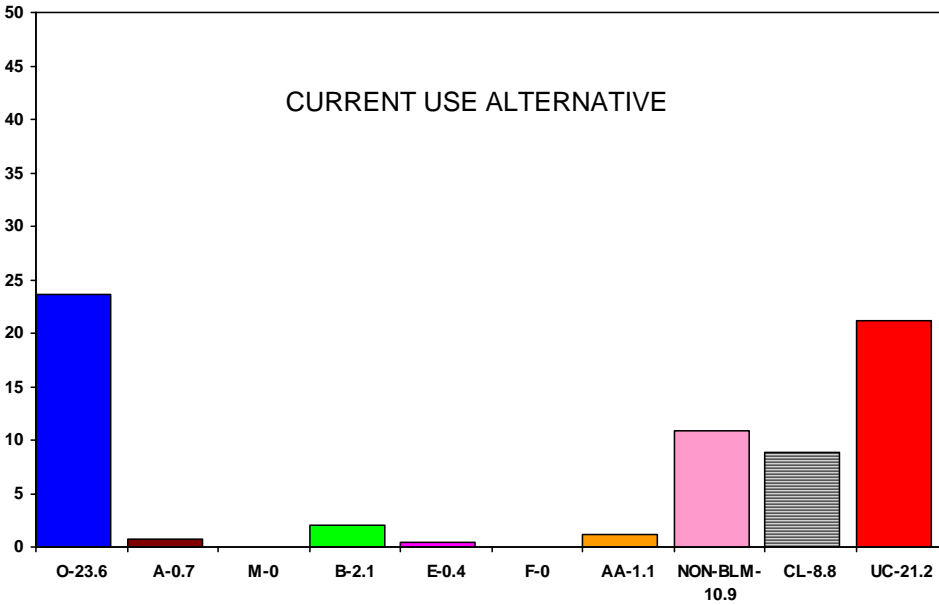


ALTERNATIVE C

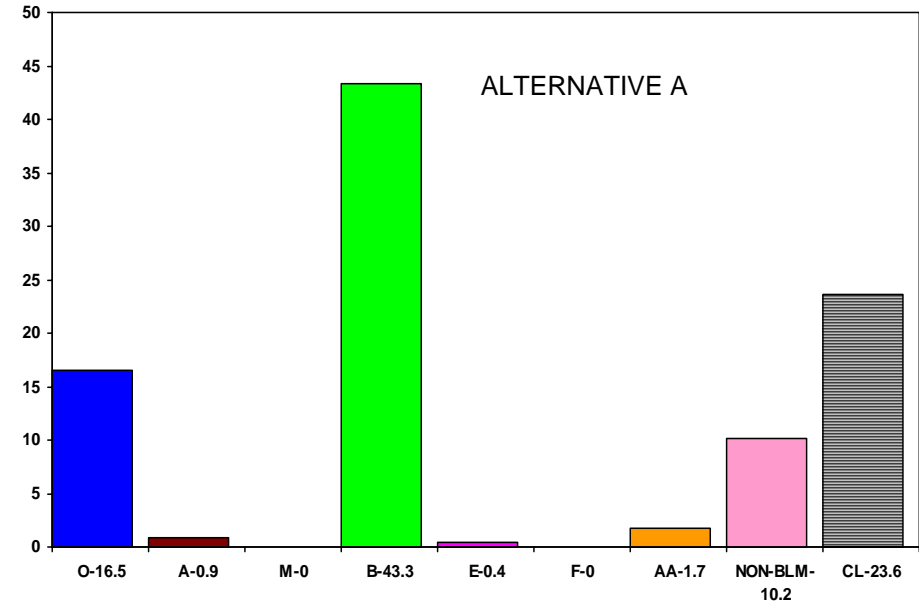


MILES OF DESIGNATED ROUTES – SALIDA

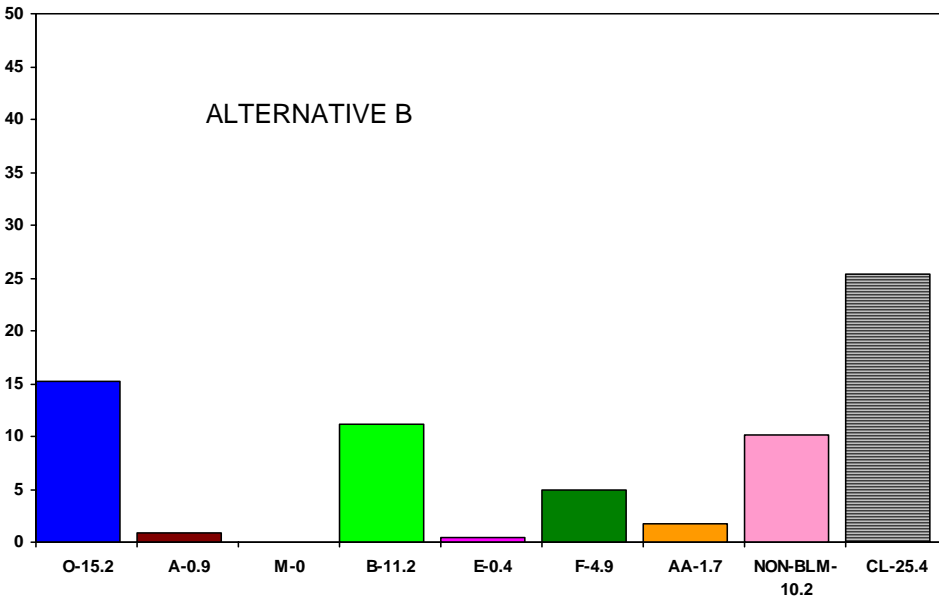
CURRENT USE ALTERNATIVE



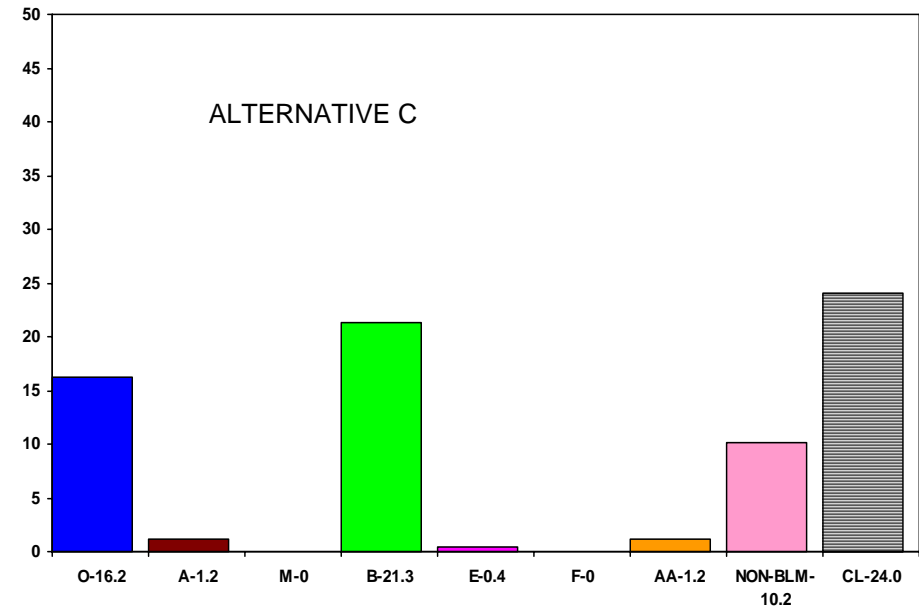
ALTERNATIVE A



ALTERNATIVE B

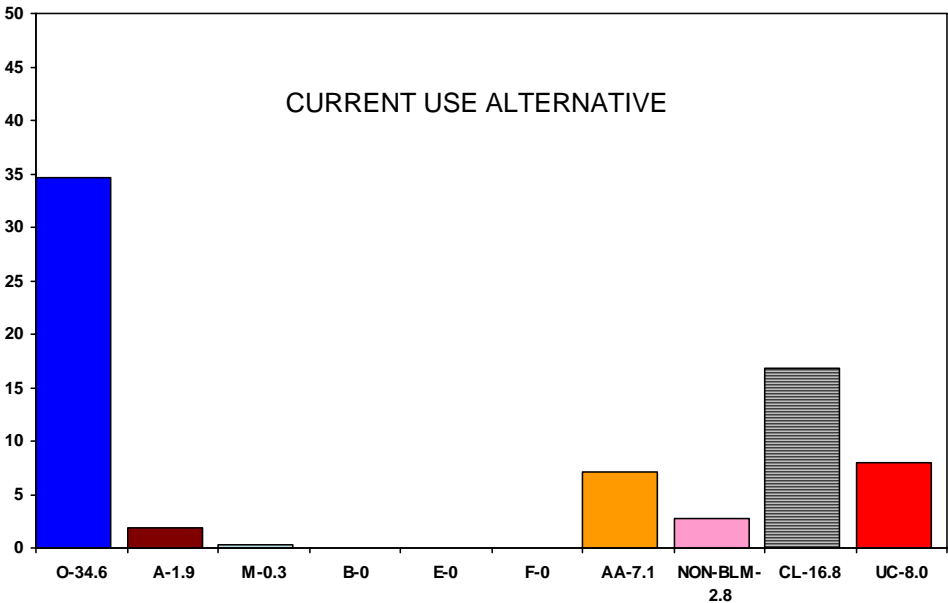


ALTERNATIVE C

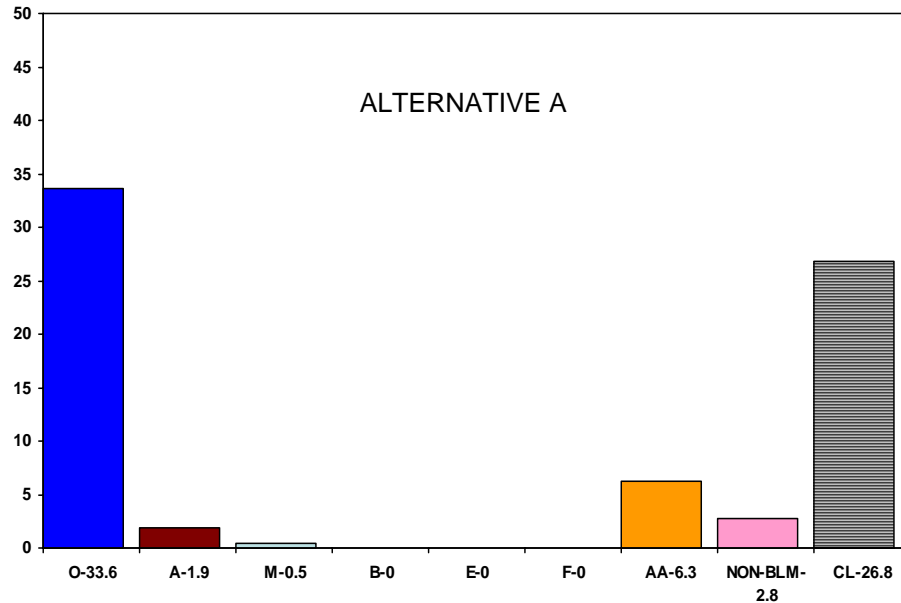


MILES OF DESIGNATED ROUTES – BADGER CREEK

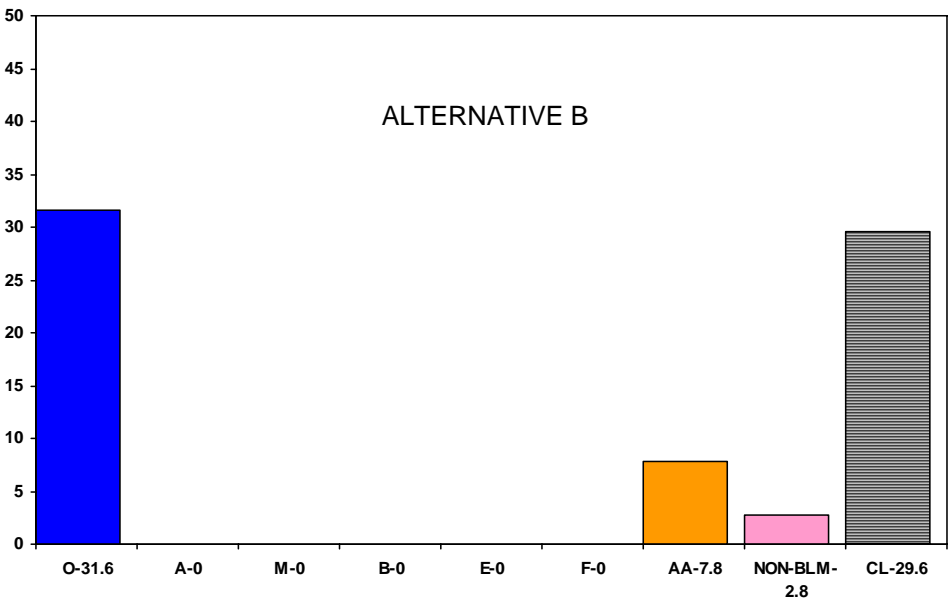
CURRENT USE ALTERNATIVE



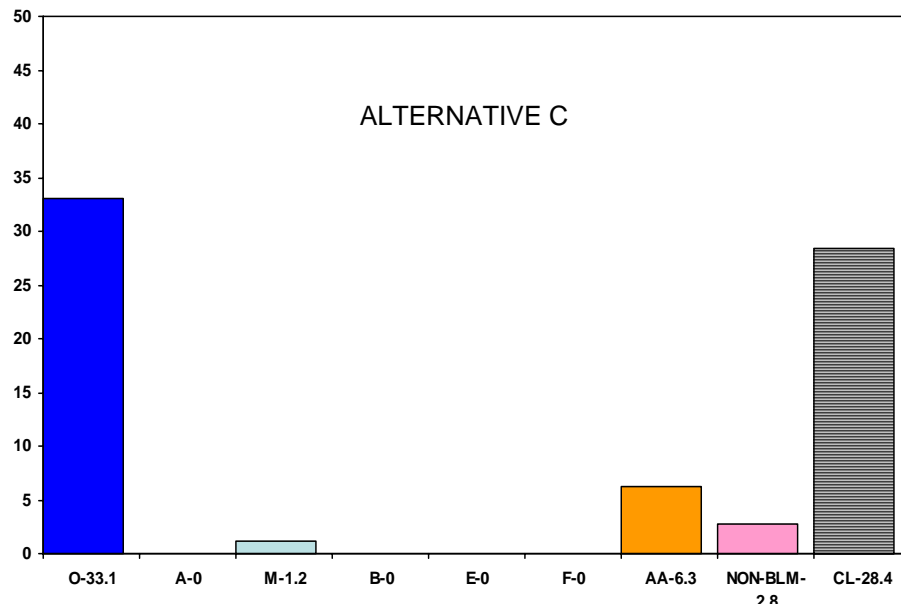
ALTERNATIVE A



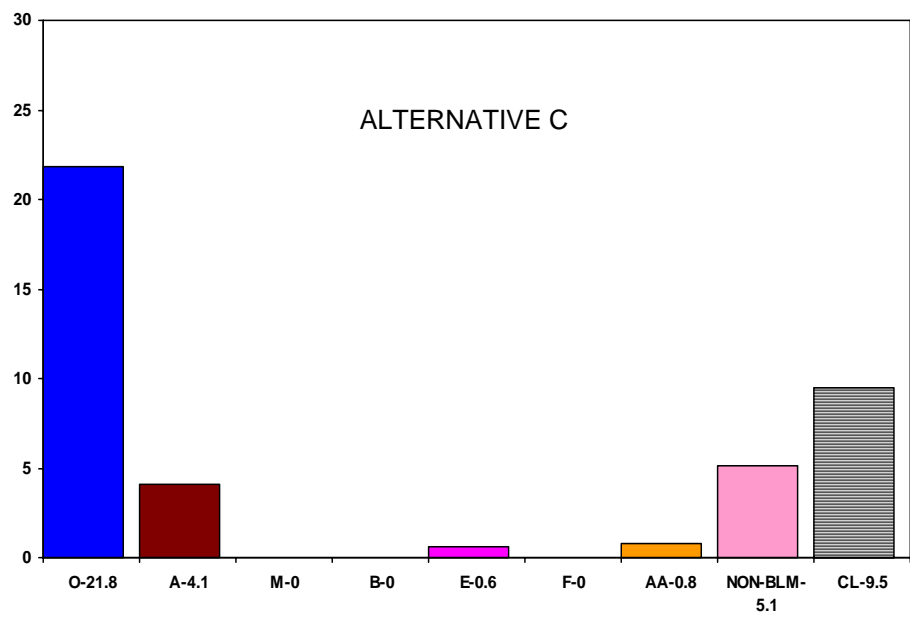
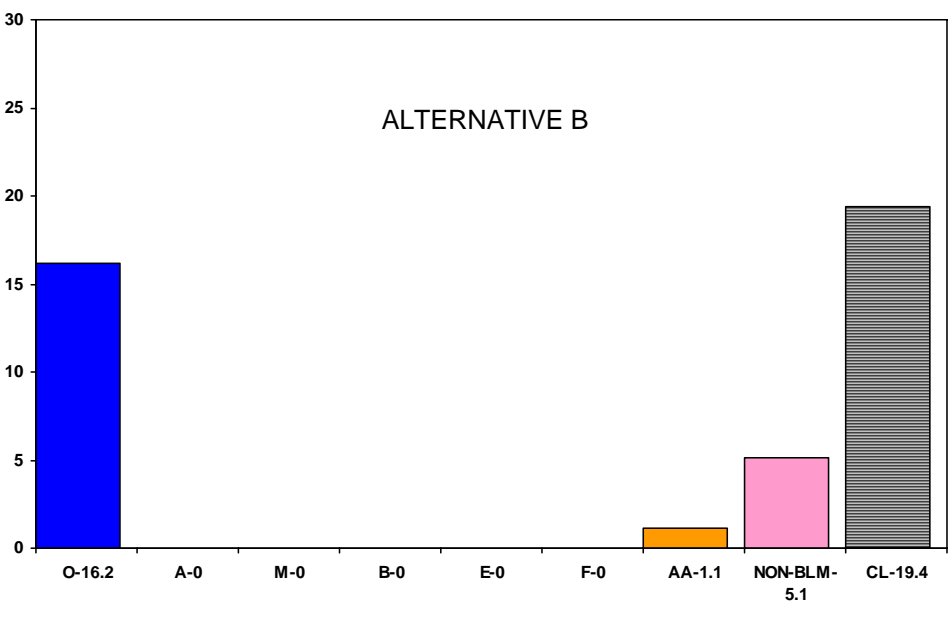
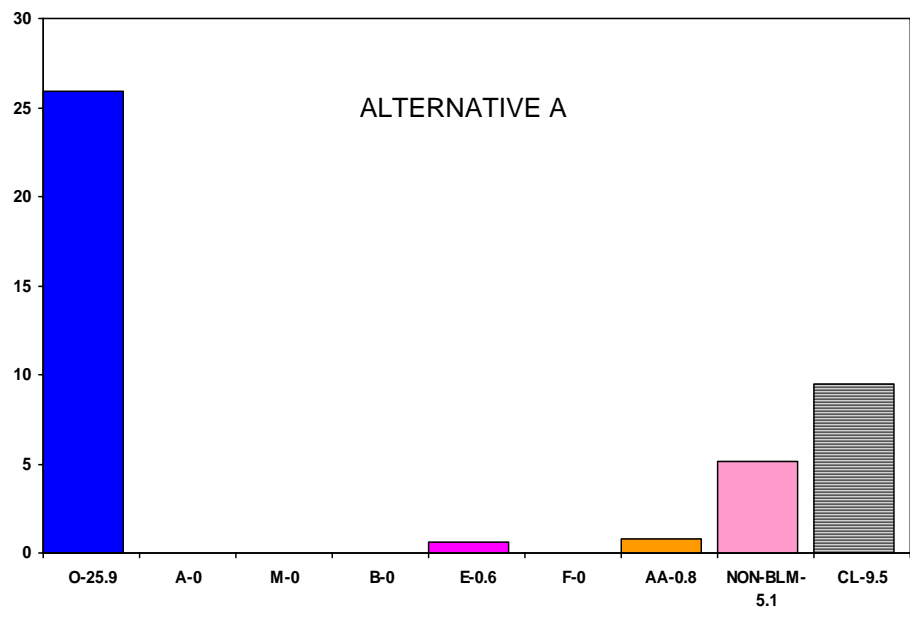
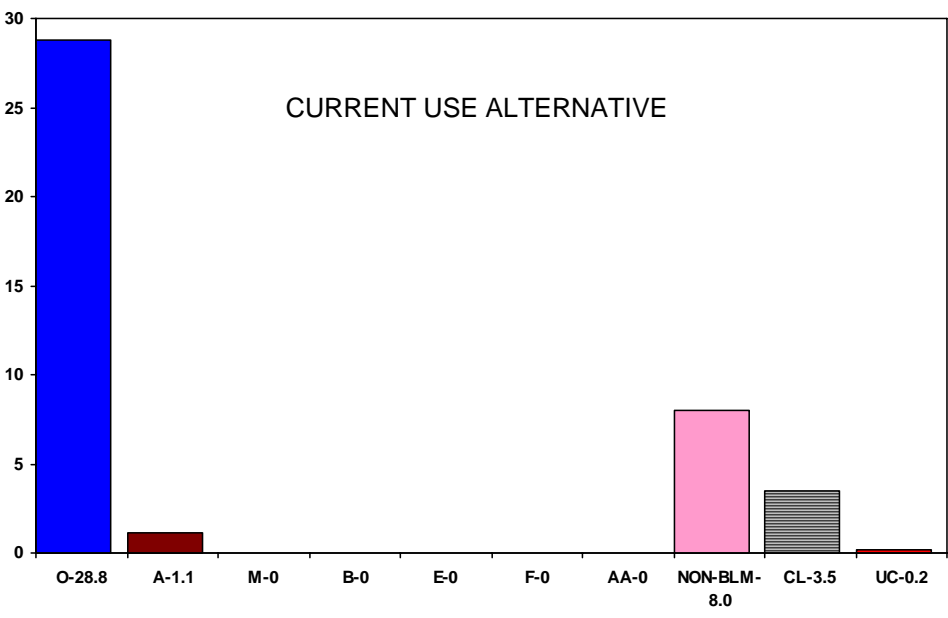
ALTERNATIVE B



ALTERNATIVE C

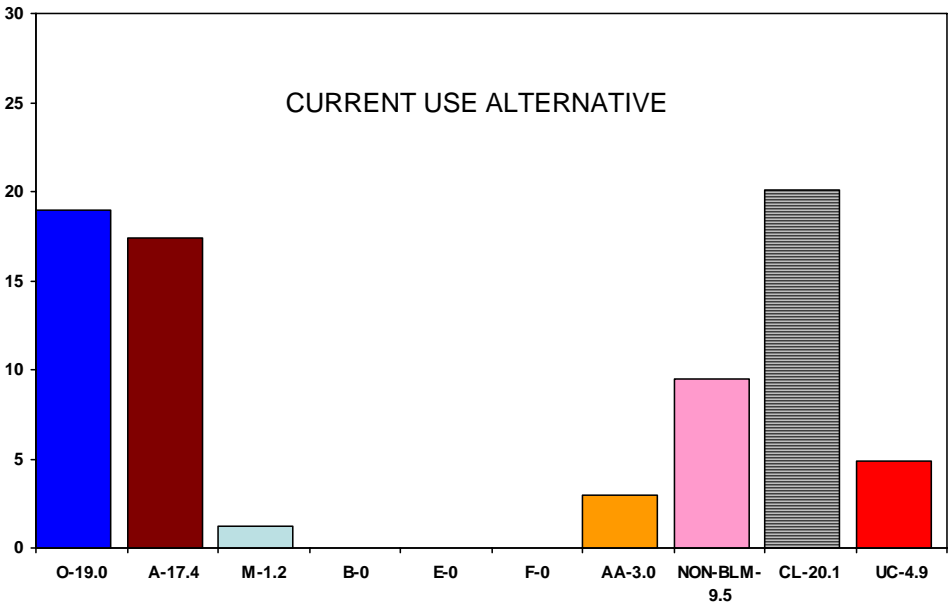


MILES OF DESIGNATED ROUTES – RED GULCH

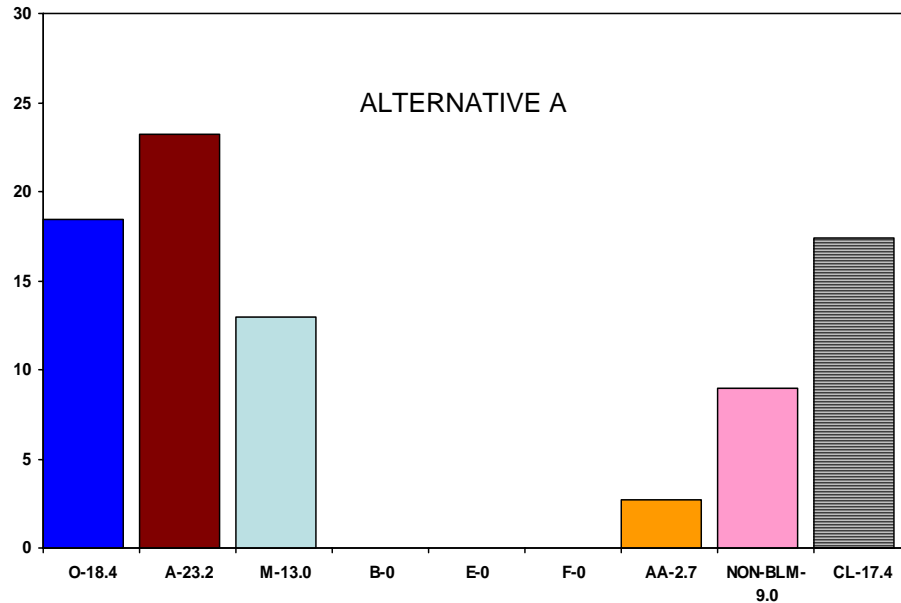


MILES OF DESIGNATED ROUTES – TEXAS CREEK

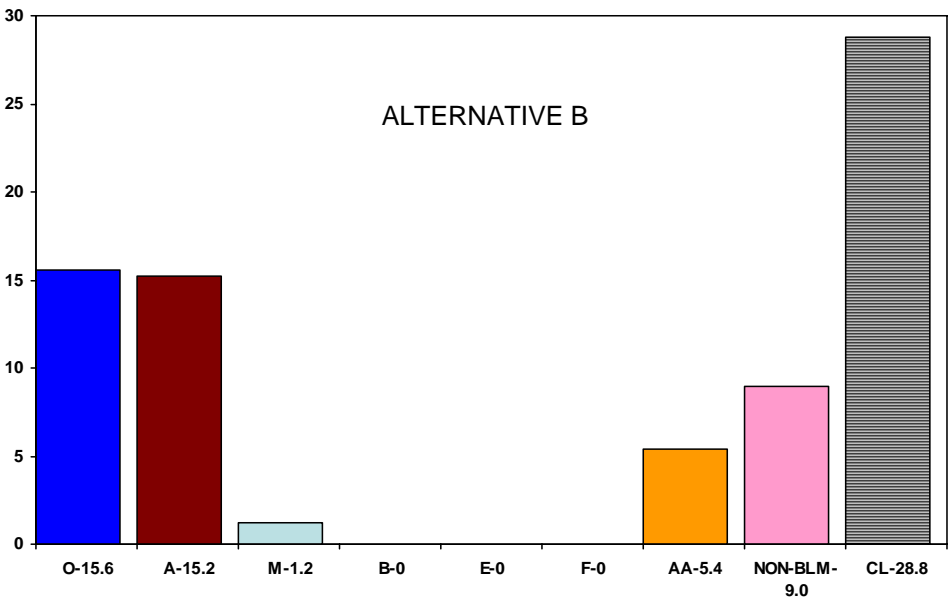
CURRENT USE ALTERNATIVE



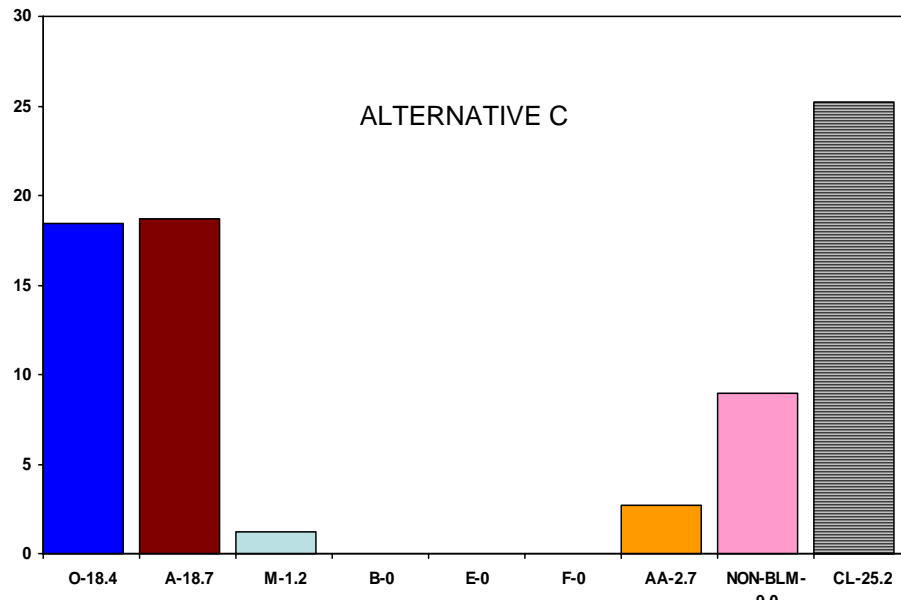
ALTERNATIVE A



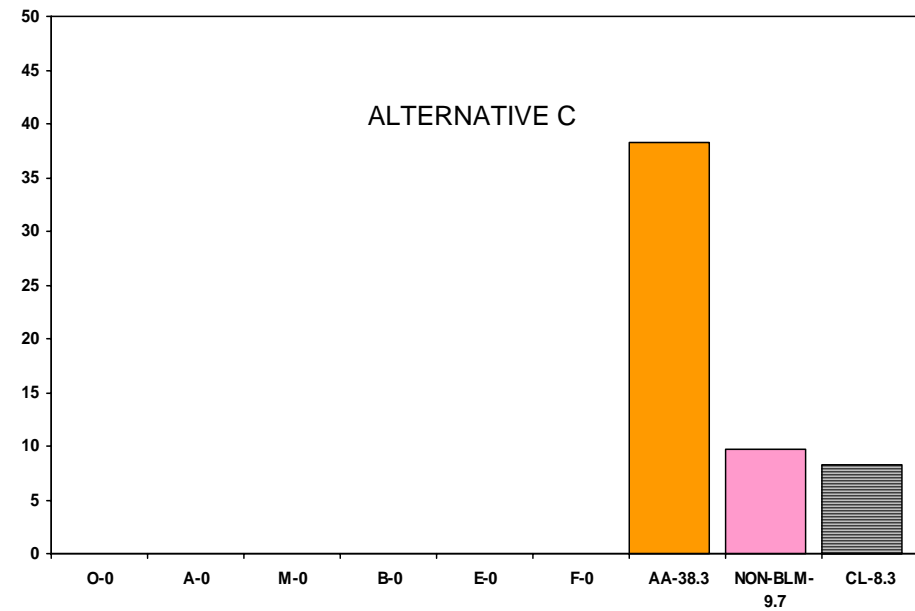
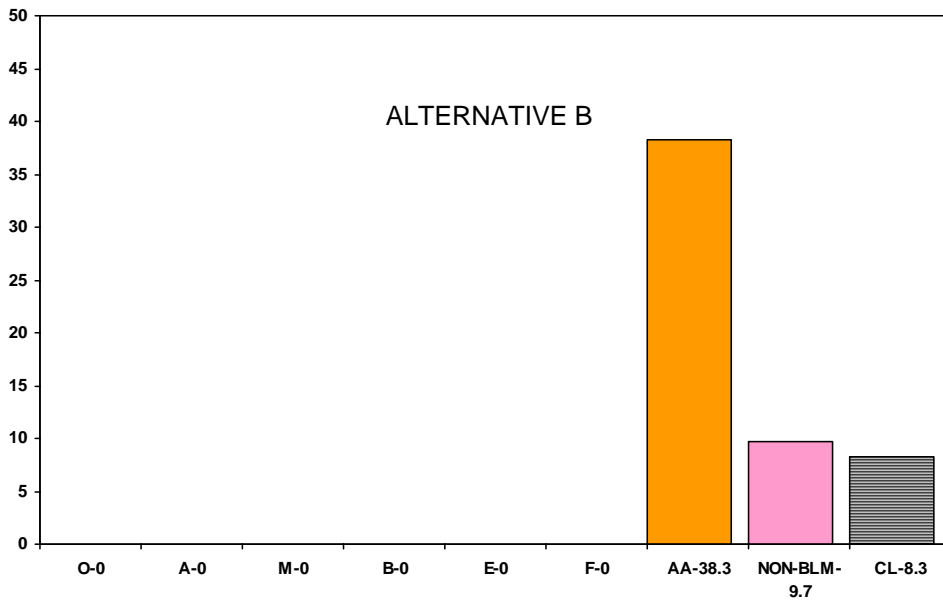
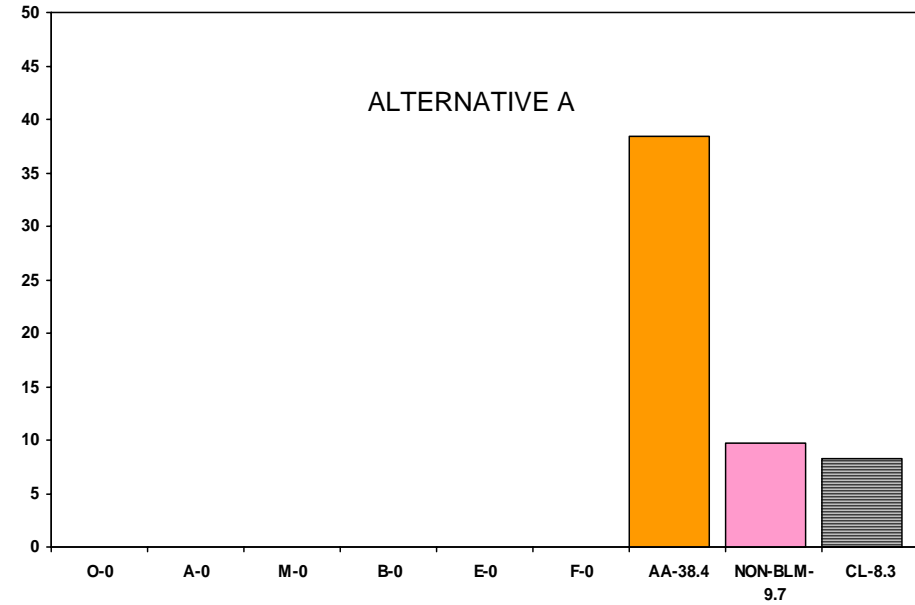
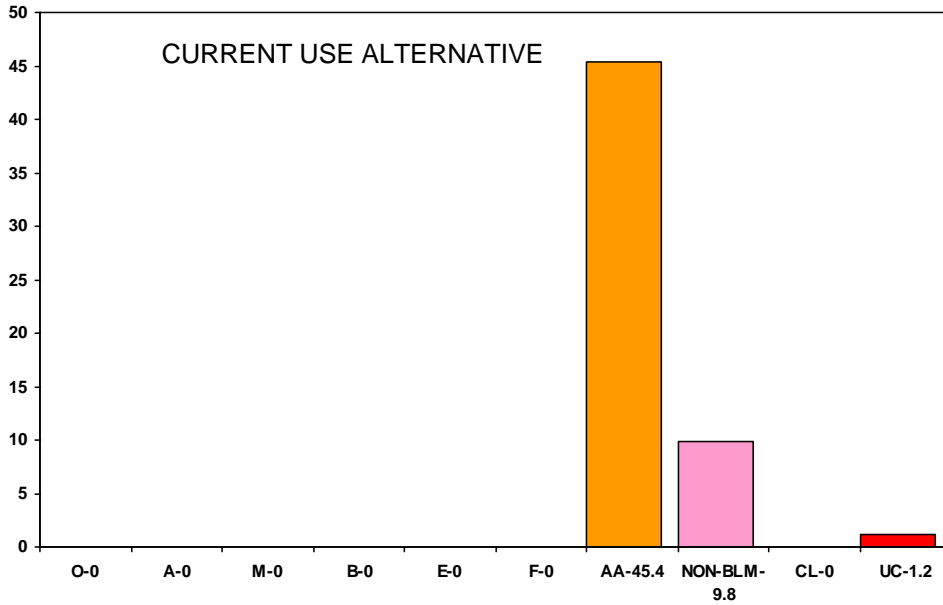
ALTERNATIVE B



ALTERNATIVE C

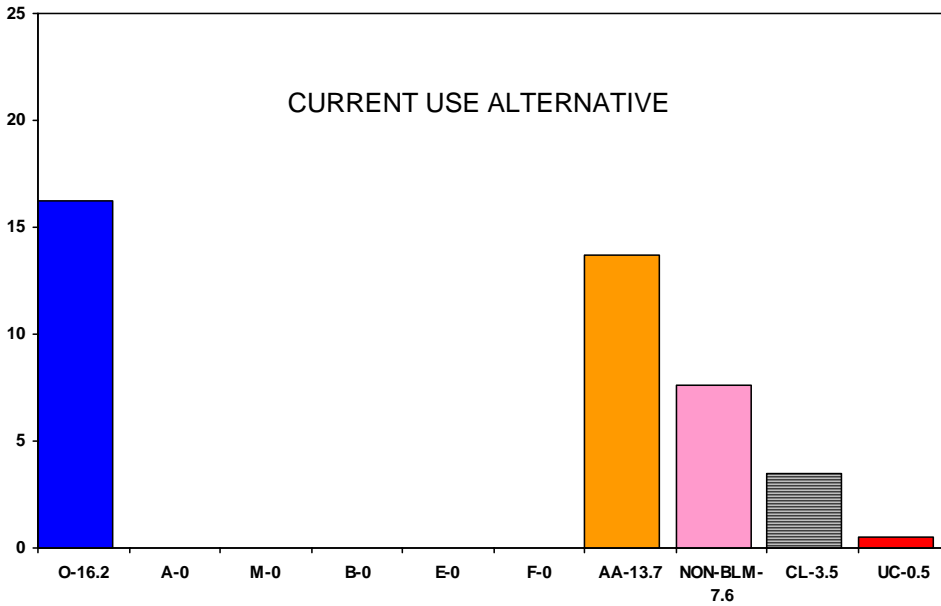


MILES OF DESIGNATED ROUTES – BIG HOLE

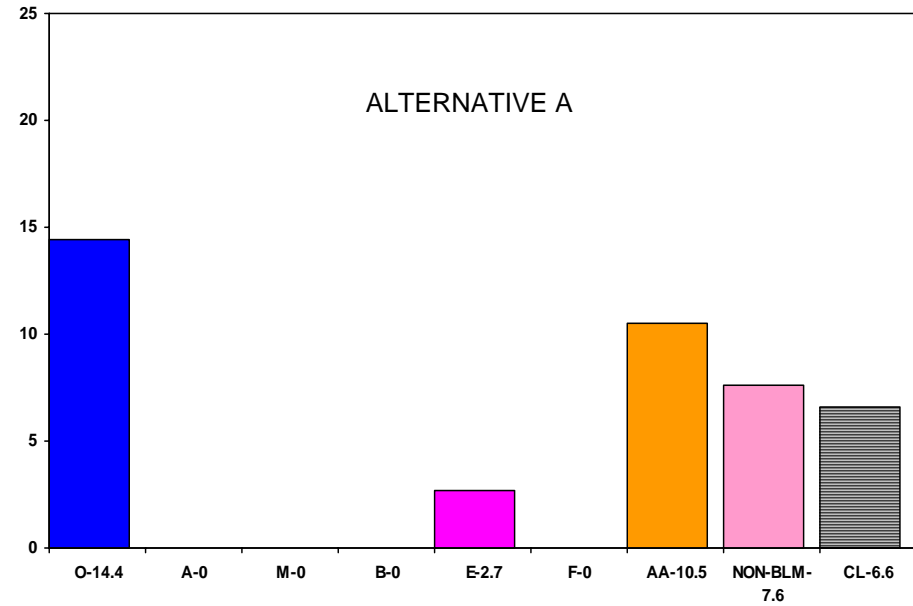


MILES OF DESIGNATED ROUTES – CRAMPTON MOUNTAIN

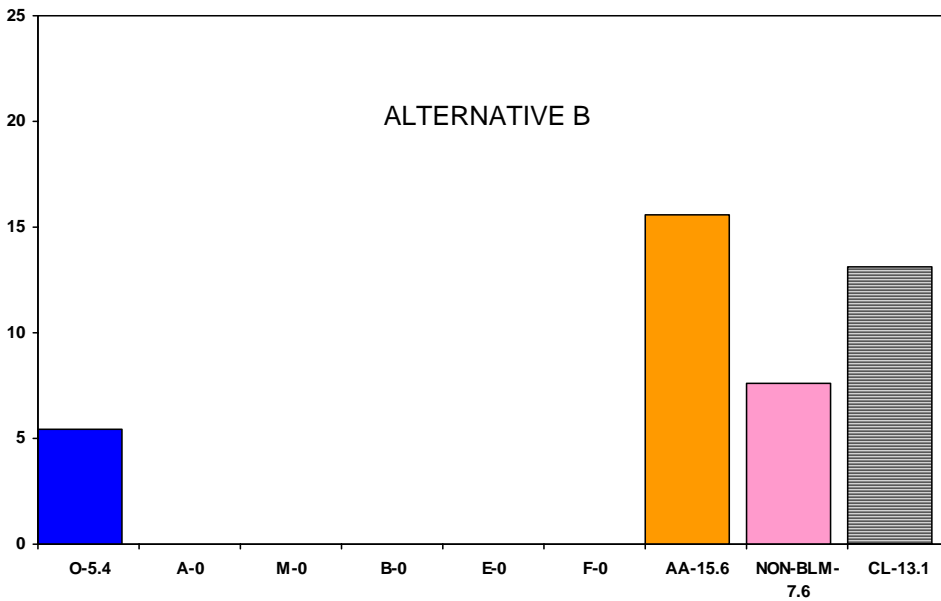
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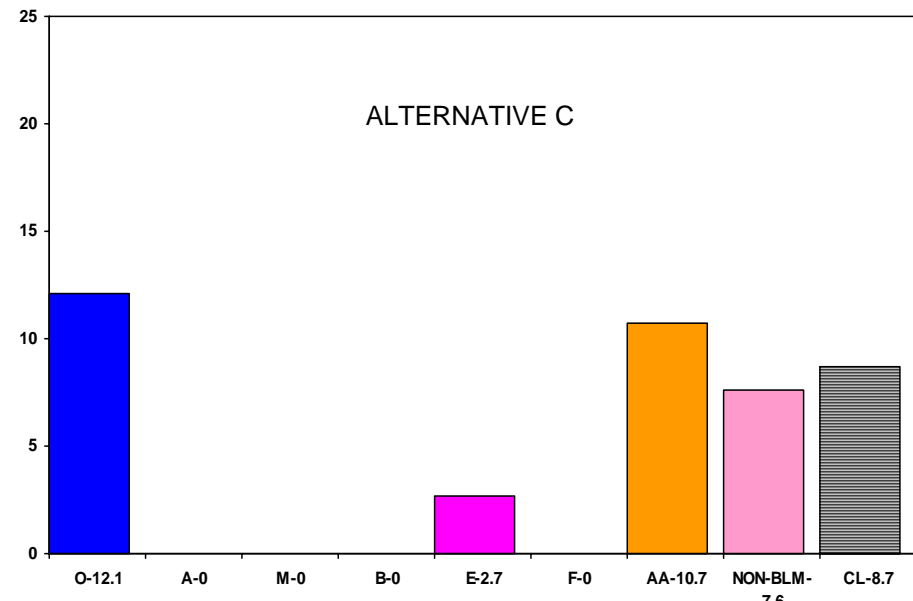
ALTERNATIVE A



ALTERNATIVE B

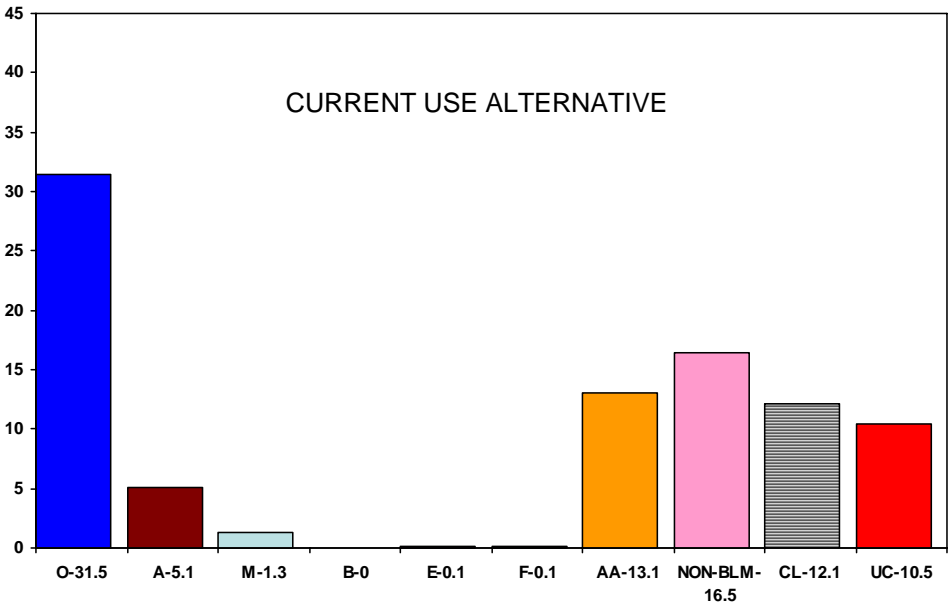


ALTERNATIVE C

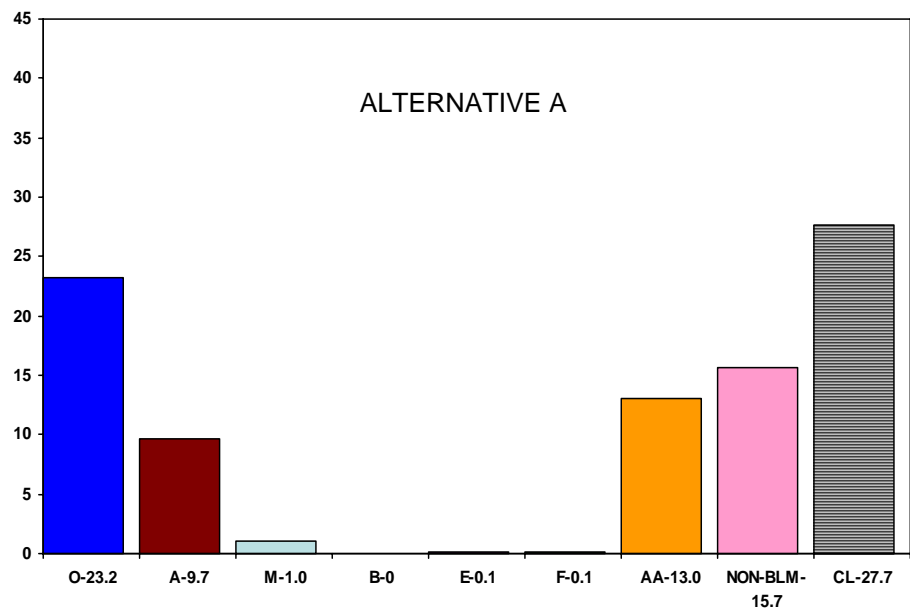


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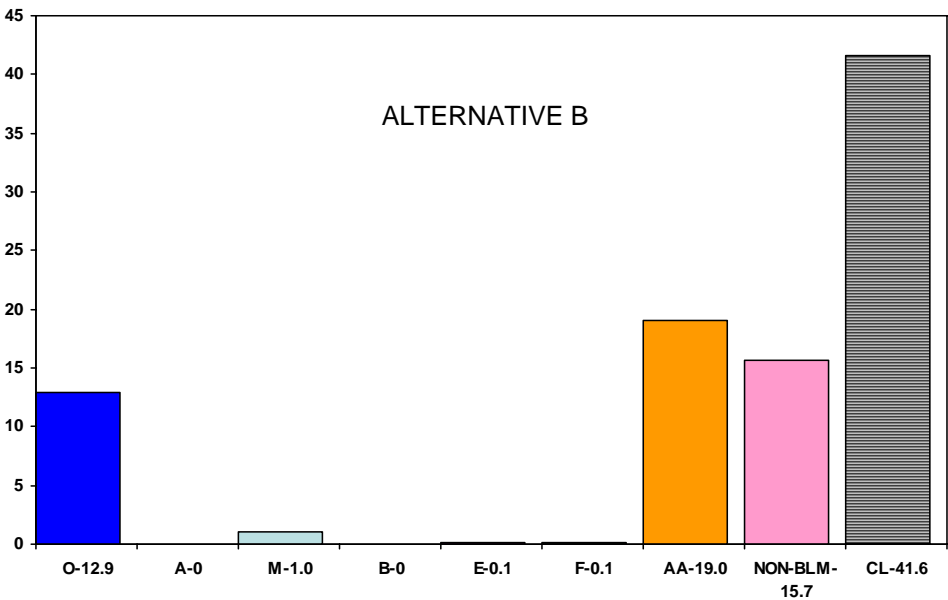
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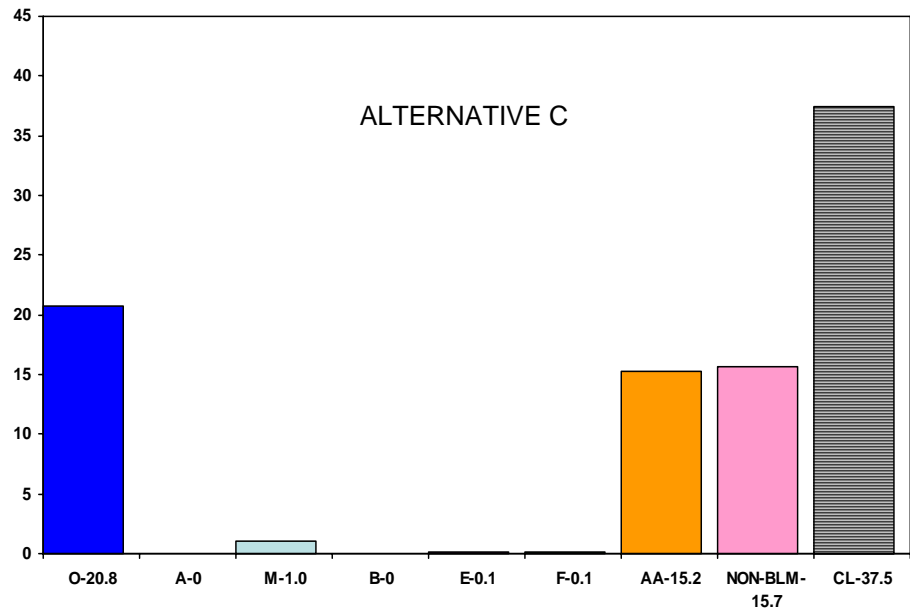
ALTERNATIVE A



ALTERNATIVE B

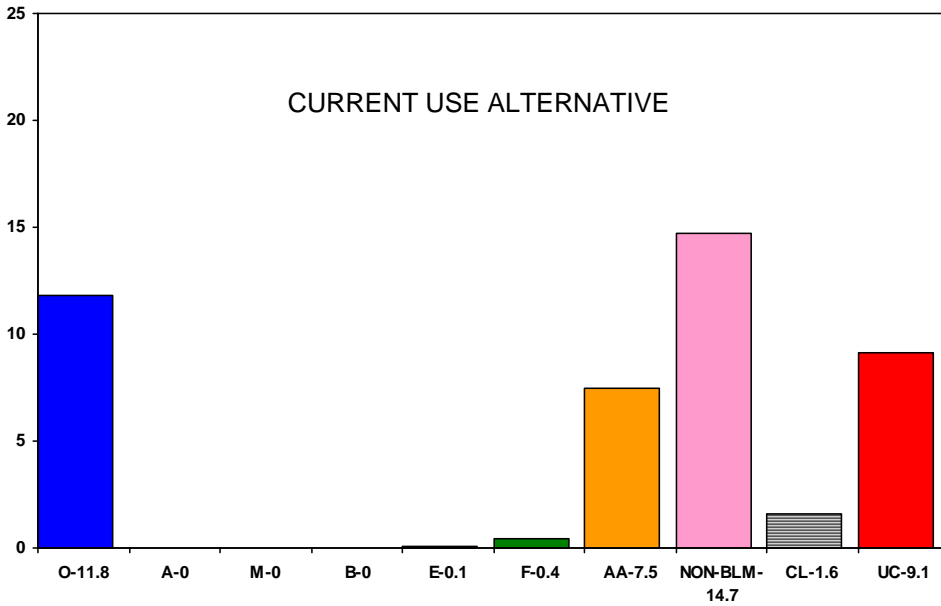


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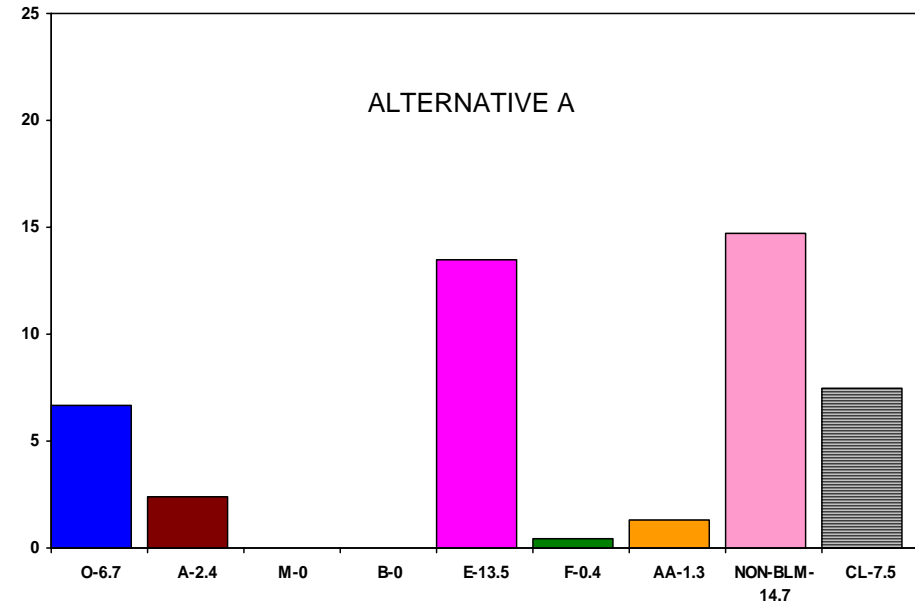


MILES OF DESIGNATED ROUTES – WEST MCCOY GULCH

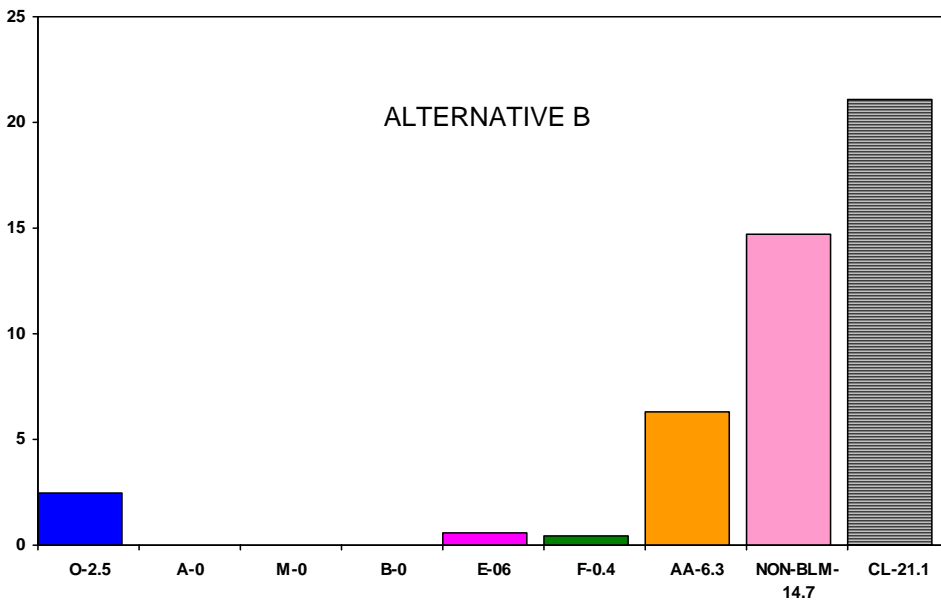
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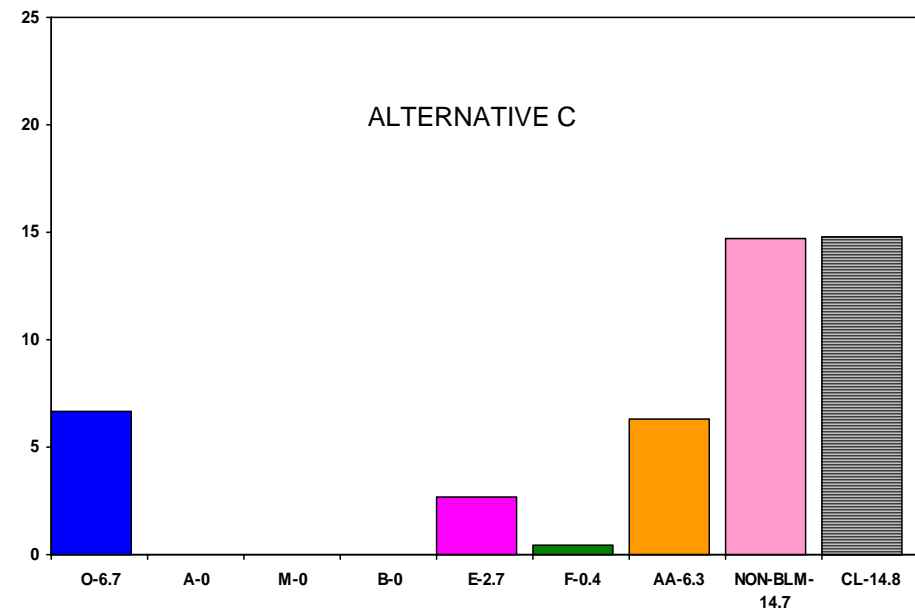
ALTERNATIVE A



ALTERNATIVE B

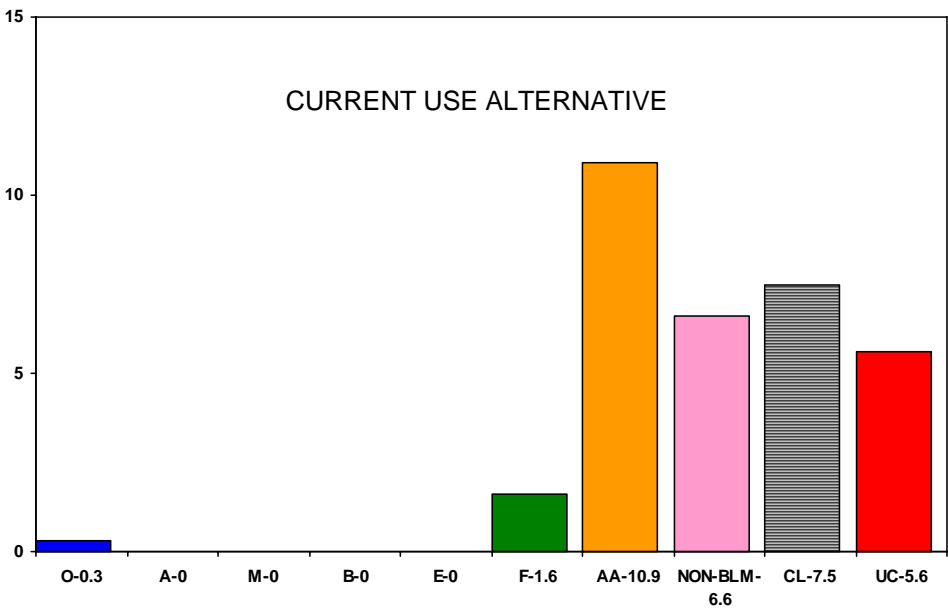


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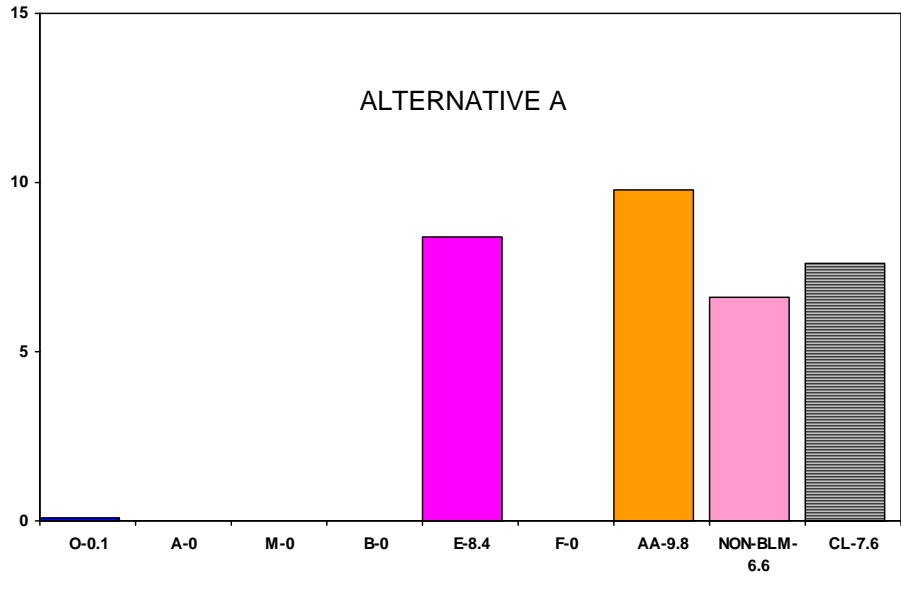


MILES OF DESIGNATED ROUTES – MCINTYRE HILLS

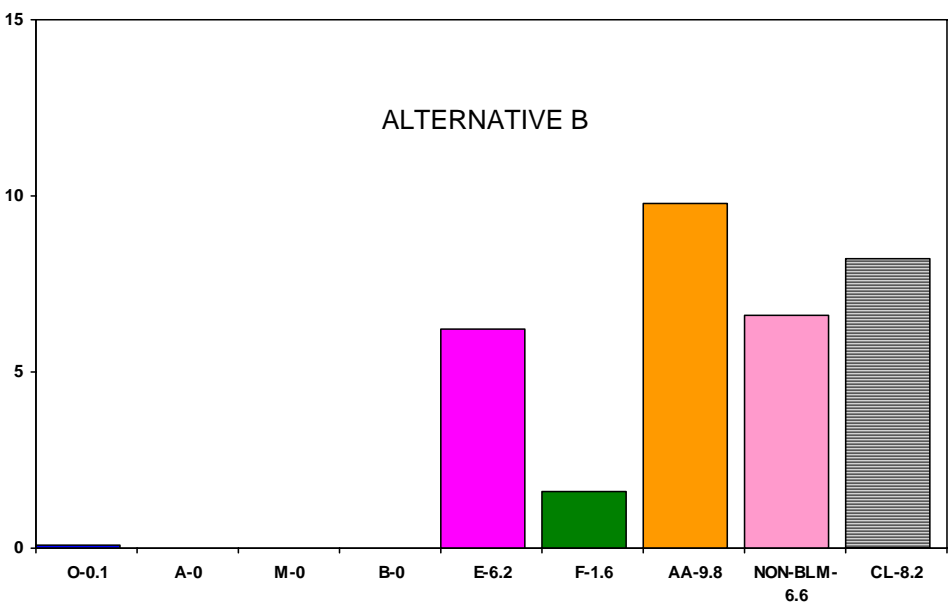
CURRENT USE ALTERNATIVE



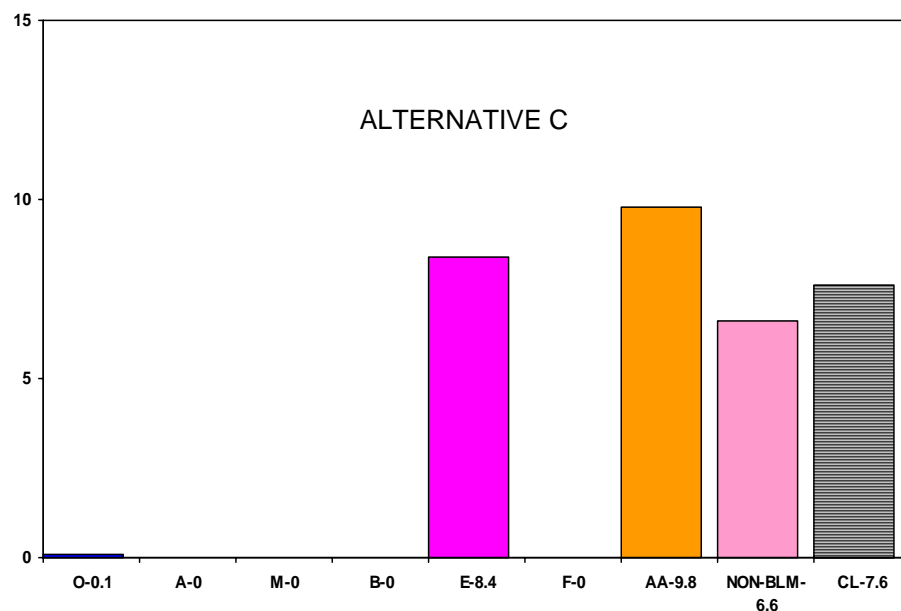
ALTERNATIVE A



ALTERNATIVE B

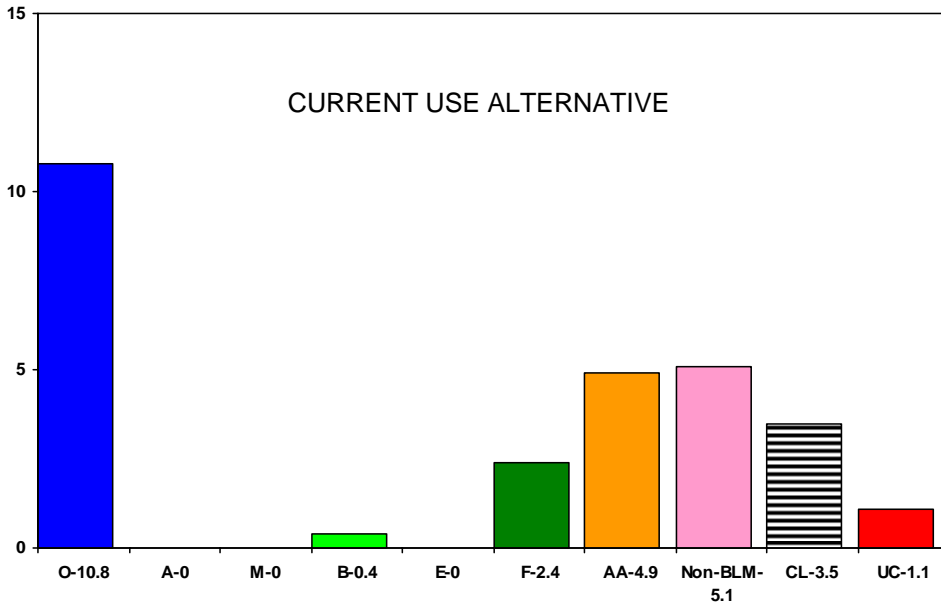


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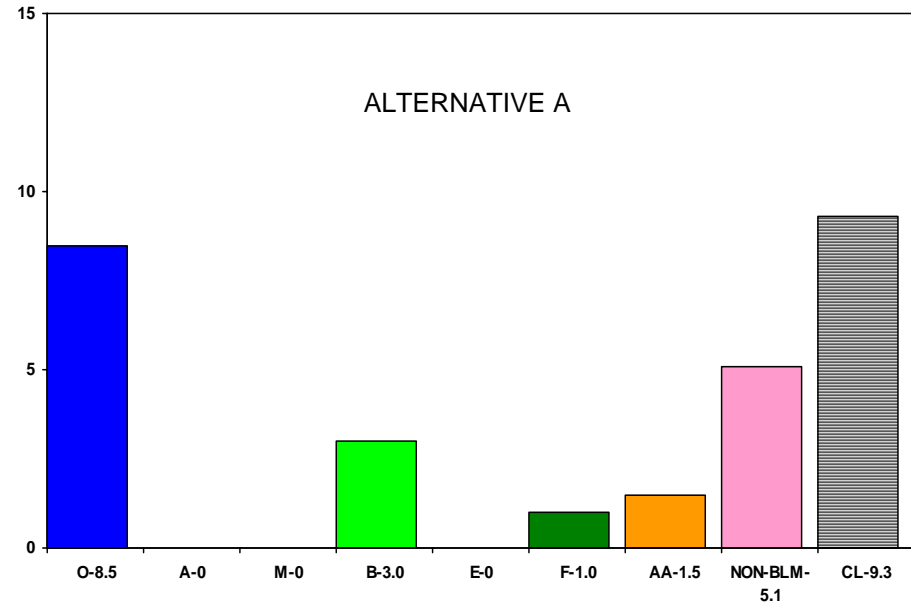


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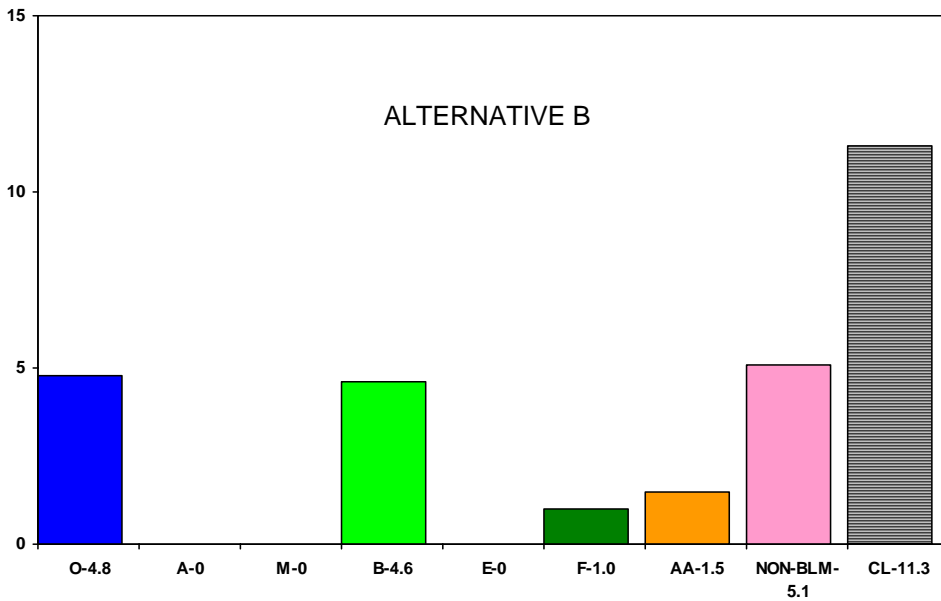
CURRENT USE ALTERNATIVE



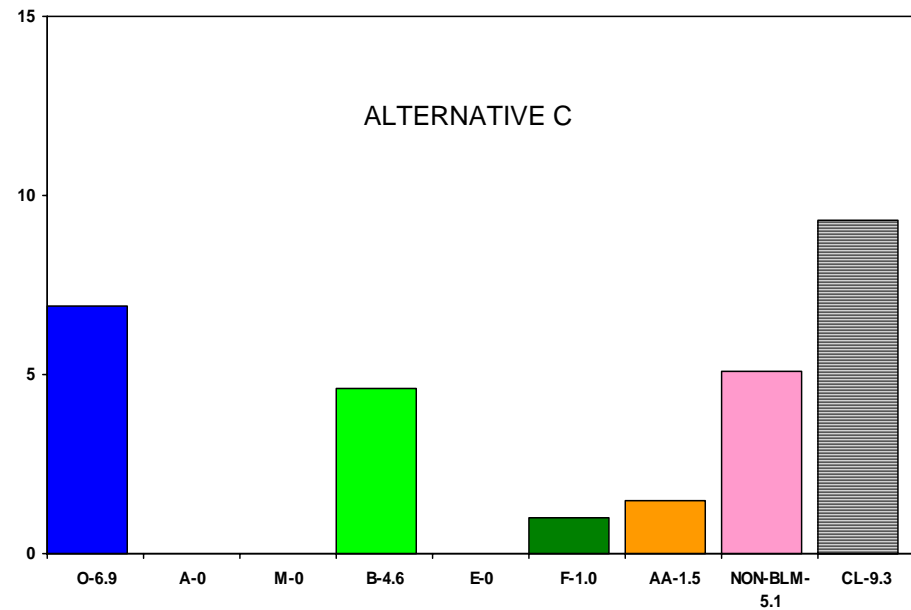
ALTERNATIVE A



ALTERNATIVE B

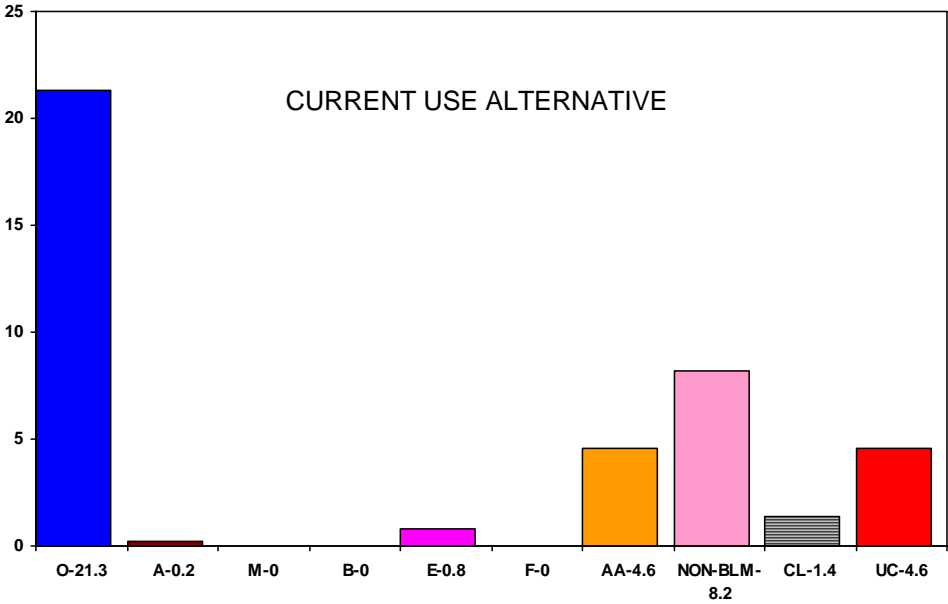


ALTERNATIVE C

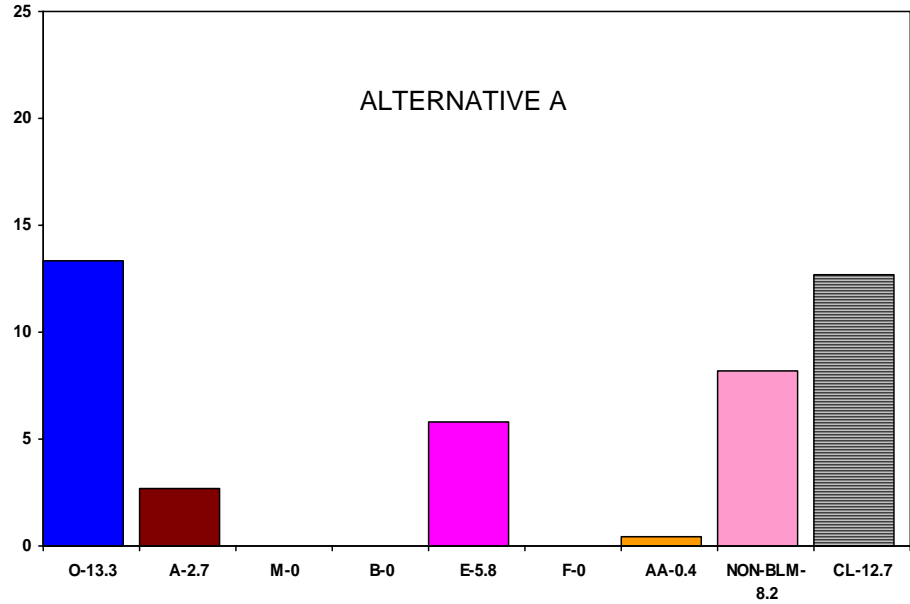


MILES OF DESIGNATED ROUTES – ROAD GULCH

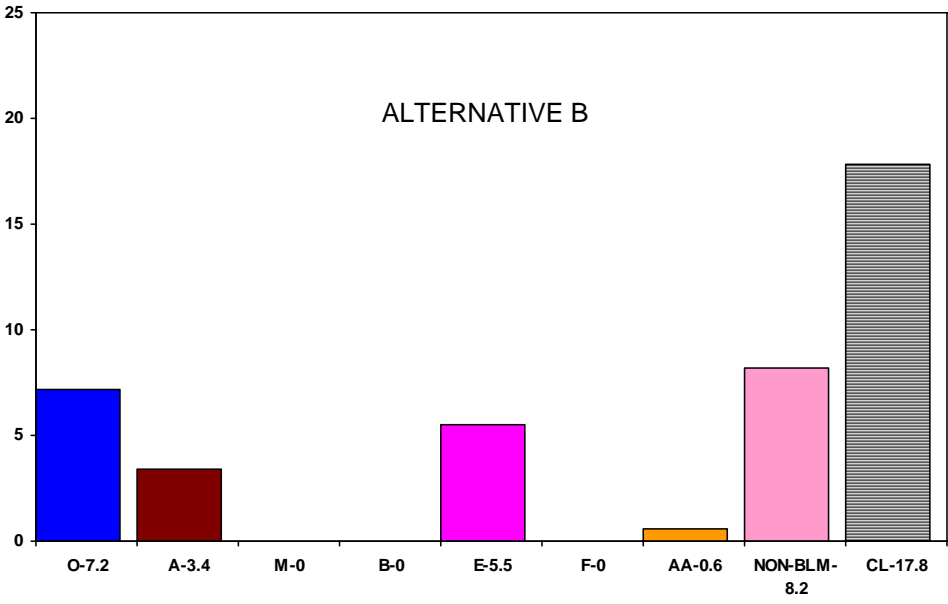
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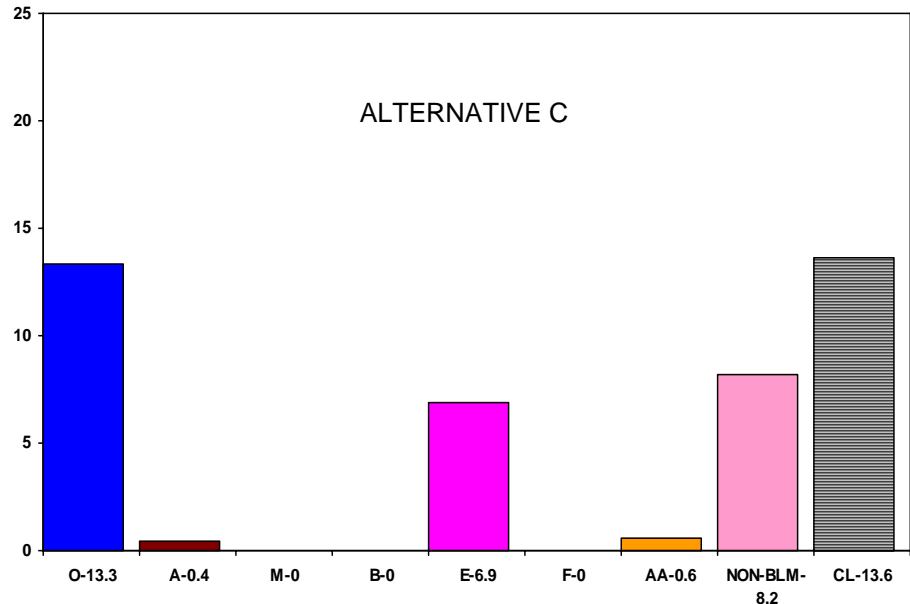
ALTERNATIVE A



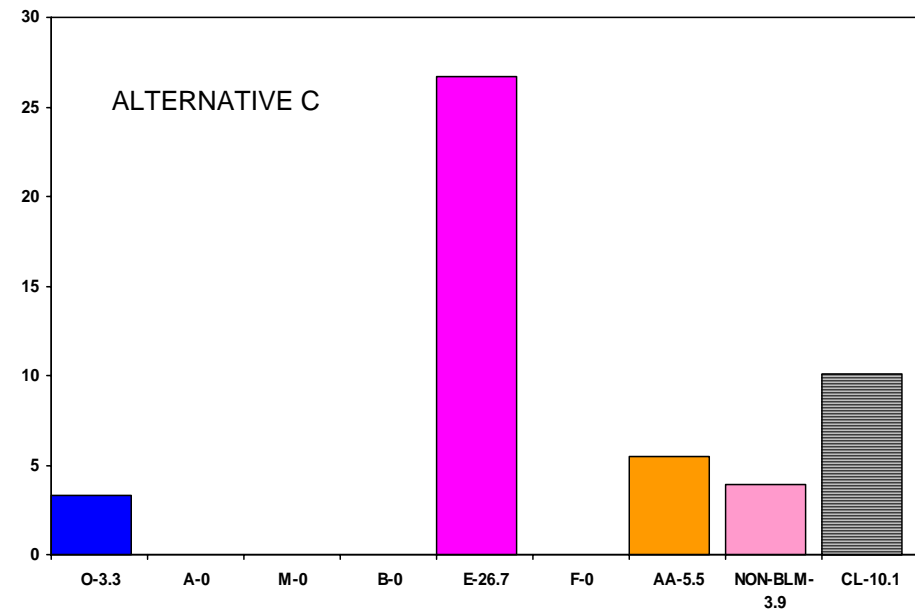
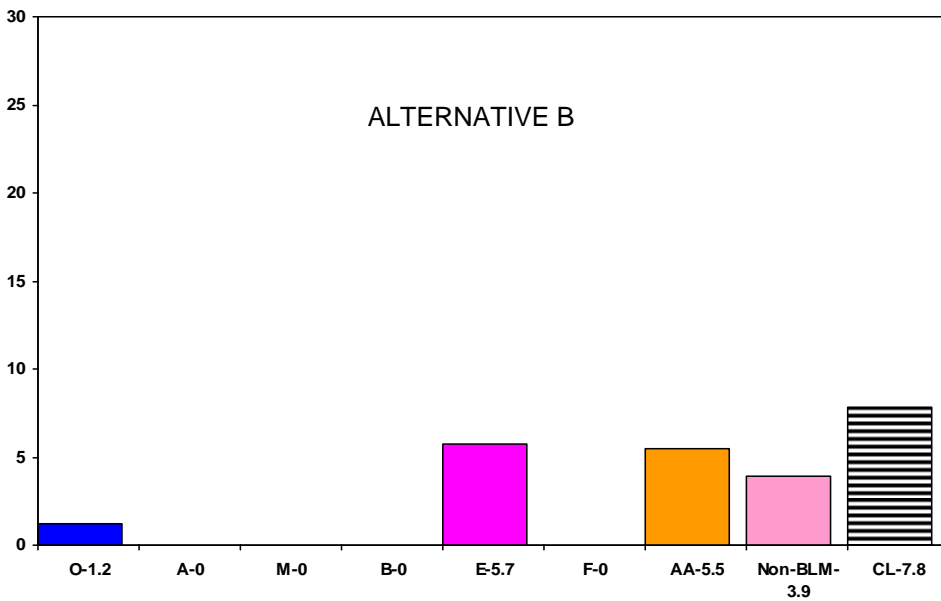
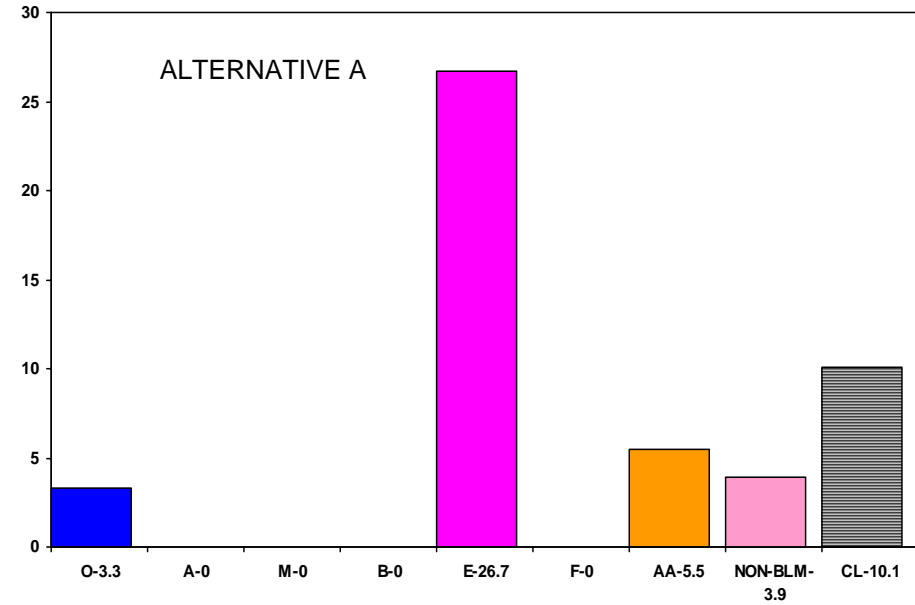
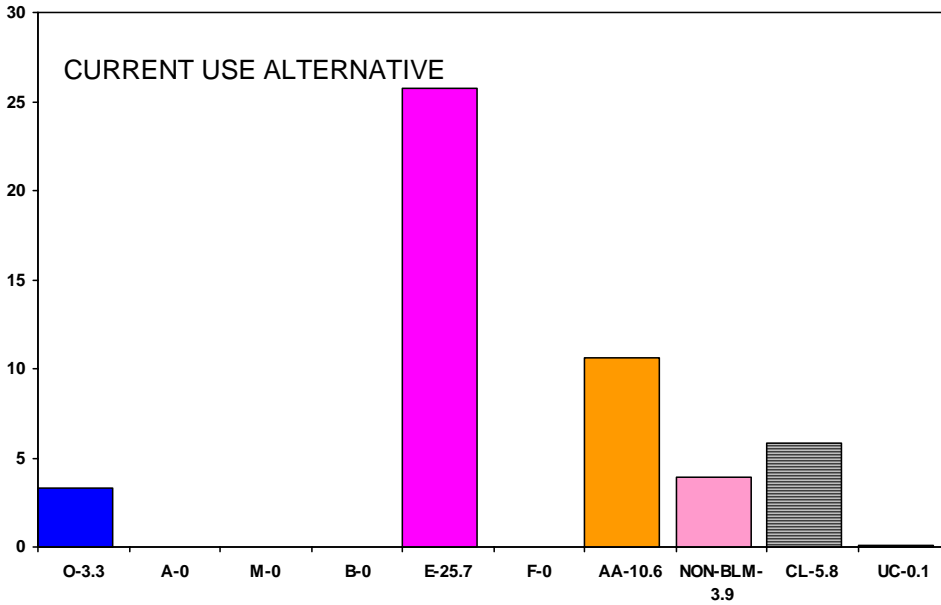
ALTERNATIVE B



ALTERNATIVE C

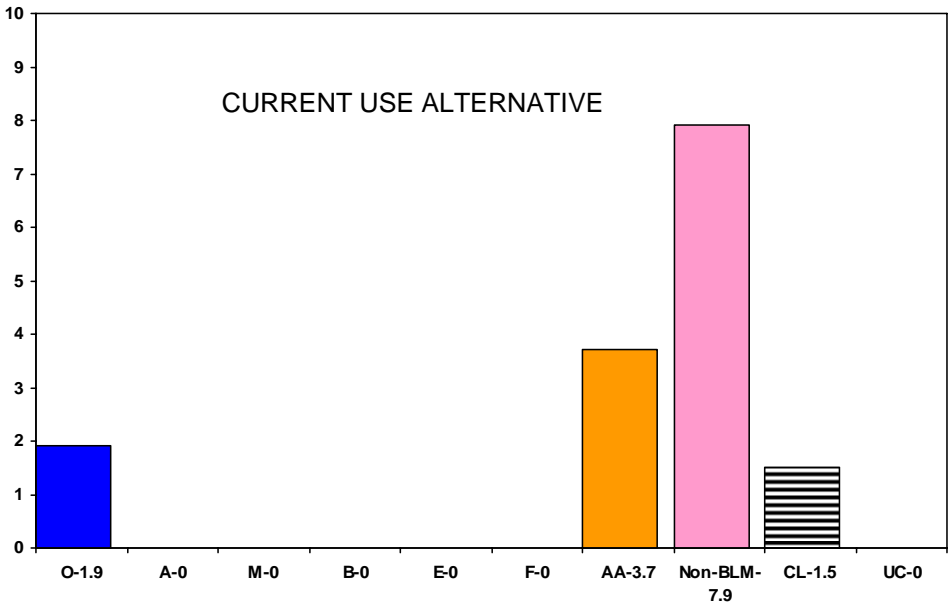


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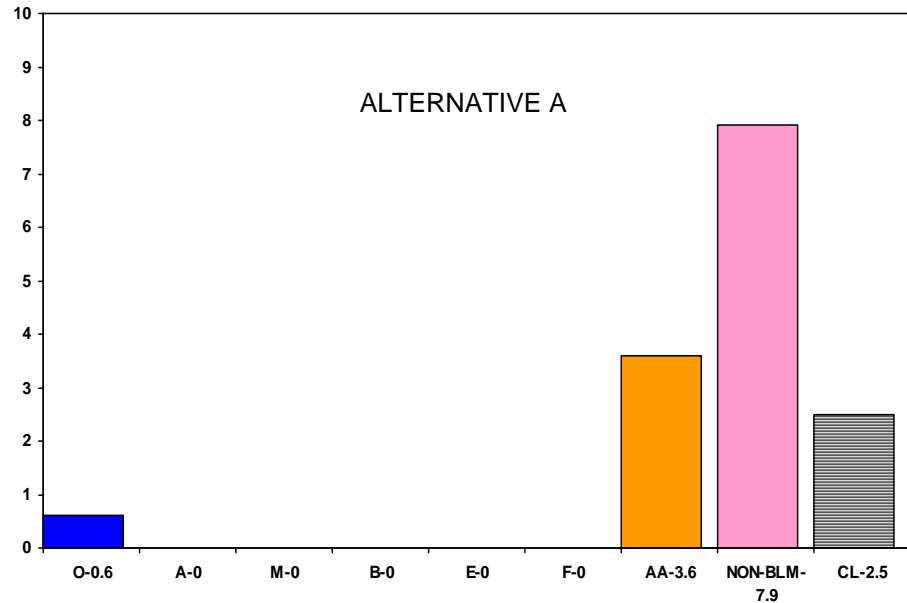


MILES OF DESIGNATED ROUTES – CUSTER COUNTY

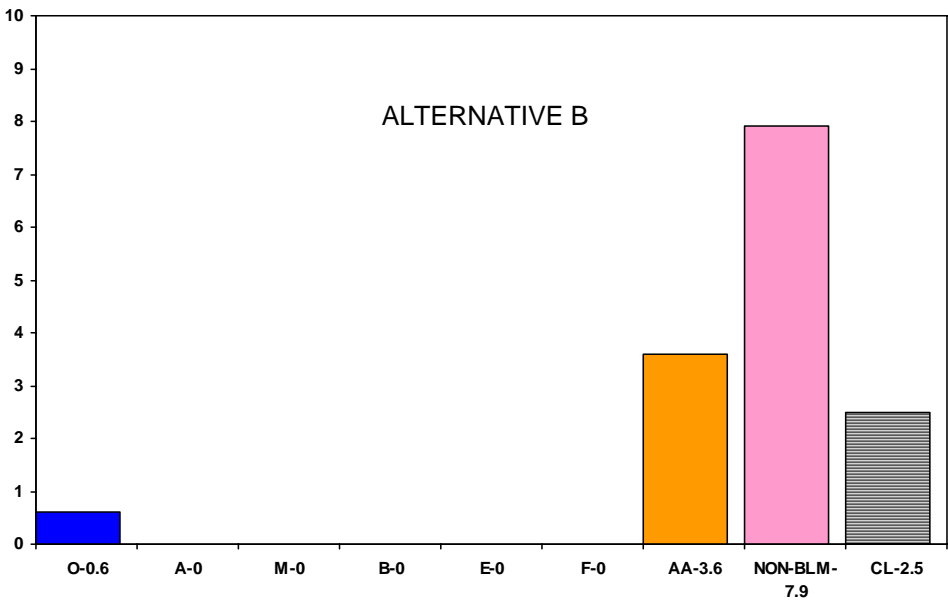
CURRENT USE ALTERNATIVE



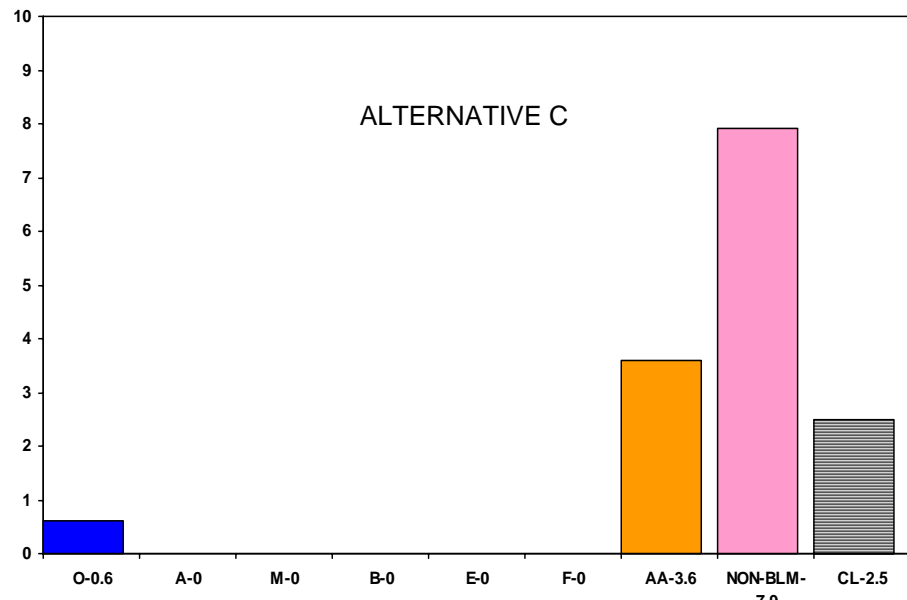
ALTERNATIVE A



ALTERNATIVE B



ALTERNATIVE C



Appendix 14 – Changes in Route Designations Between Alternatives

Table 1 – Changes in Route Designations between the No Action Alternative and Alternatives A, B, and C for the Entire Arkansas River TMP Area

The routes included under the No Action Alternative as	Would be changed to this travel use designation	For the miles shown under each alternative		
		A	B	C
General (O)	Closed (CL)	42.9	70.7	47.5
General (O)	Administrative Access (AA)	13.7	17.3	11.7
General (O)	ATV (A)	-	3.6	4.4
General (O)	Motorcycle (M)	-	-	0.8
General (O)	Mountain Bike (B)	0.5	0.2	0.5
General (O)	Equestrian (E)	1.1	3.2	1.9
General (O)	Foot (F)	-	0.1	-
ATV (A)	Closed (CL)	4.9	10.4	7.2
ATV (A)	Administrative Access (AA)	-	2.2	-
ATV (A)	General (O)	3.0	0.1	3.0
ATV (A)	Motorcycle (M)	-	-	0.2
ATV (A)	Mountain Bike (B)	-	-	-
ATV (A)	Equestrian (E)	-	-	-
ATV (A)	Foot (F)	-	-	-
Motorcycle (M)	Closed (CL)	0.3	0.6	0.6
Motorcycle (M)	Administrative Access (AA)	-	-	-
Motorcycle (M)	Mountain Bike (B)	-	-	-
Motorcycle (M)	Equestrian (E)	-	-	-
Motorcycle (M)	Foot (F)	-	-	-
Mountain Bike (B)	Closed (CL)	-	-	-
Mountain Bike (B)	Administrative Access (AA)	-	-	-
Mountain Bike (B)	Equestrian (E)	-	-	-
Mountain Bike (B)	Foot (F)	-	2.1	-
Equestrian (E)	Closed (CL)	0.1	0.1	0.1
Equestrian (E)	Administrative Access (AA)	-	-	-
Equestrian (E)	Mountain Bike (B)	-	-	-
Equestrian (E)	Foot (F)	-	-	-
Foot (F)	Closed (CL)	0.1	0.1	0.1
Foot (F)	Administrative Access (AA)	0.8	0.6	0.8
Foot (F)	Mountain Bike (B)	1.5	1.5	1.5
Foot (F)	Equestrian (E)	1.6	-	1.6
Closed (CL)	Administrative Access (AA)	1.1	2.2	1.1
Closed (CL)	General (O)	2.6	-	0.6
Closed (CL)	ATV (A)	8.1	-	3.0
Closed (CL)	Motorcycle (M)	3.1	-	-
Closed (CL)	Mountain Bike (B)	1.1	0.7	1.1
Closed (CL)	Equestrian (E)	6.1	2.7	5.1
Closed (CL)	Foot (F)	-	-	-
Administrative Access (AA)	Closed (CL)	21.5	26.2	21.5
Administrative Access (AA)	General (O)	9.9	0.8	8.4
Administrative Access (AA)	ATV (A)	1.9	-	0.4
Administrative Access (AA)	Motorcycle (M)	-	-	-
Administrative Access (AA)	Mountain Bike (B)	0.7	2.3	2.3
Administrative Access (AA)	Equestrian (E)	9.4	1.2	4.4
Administrative Access (AA)	Foot (F)	-	-	-
User Created (UC)	Closed (CL)	41.6	50.4	48.5
User Created (UC)	ATV (A)	2.8	-	0.5
User Created (UC)	Motorcycle (M)	-	-	-
User Created (UC)	Mountain Bike (B)	12.3	9.5	11.9
User Created (UC)	Equestrian (E)	9.5	4.3	5.6
User Created (UC)	Foot (F)	-	2.7	-
Non-BLM	Closed (CL)	0.4	1.2	1.1
Non-BLM	Administrative Access (AA)	0.1	0.1	0.1
Non-BLM	General (O)	4.0	3.2	3.3
Non-BLM	ATV (A)	-	-	-
Non-BLM	Motorcycle (M)	-	-	-
Non-BLM	Mountain Bike (B)	0.6	0.6	0.6
Non-BLM	Equestrian (E)	-	0.7	-
Non-BLM	Foot (F)	-	-	-

Table 2 – Changes in Route Designations between the No Action Alternative and Alternatives A, B, and C for the Texas Creek Subunit

The routes included under the No Action Alternative as	Would be changed to this travel use designation	For the miles shown under each alternative		
		A	B	C
General (O)	Closed (CL)	1.0	1.8	1.0
General (O)	Administrative Access (AA)	-	1.5	-
General (O)	ATV (A)	0.3	0.2	0.3
General (O)	Motorcycle (M)	-	-	-
General (O)	Mountain Bike (B)	-	-	-
General (O)	Equestrian (E)	-	-	-
General (O)	Foot (F)	-	-	-
ATV (A)	Closed (CL)	2.1	2.2	2.1
ATV (A)	Administrative Access (AA)	-	-	-
ATV (A)	General (O)	-	-	-
ATV (A)	Motorcycle (M)	-	-	-
ATV (A)	Mountain Bike (B)	-	-	-
ATV (A)	Equestrian (E)	-	-	-
ATV (A)	Foot (F)	-	-	-
Motorcycle (M)	Closed (CL)	0.1	0.1	0.1
Motorcycle (M)	Administrative Access (AA)	-	-	-
Motorcycle (M)	Mountain Bike (B)	-	-	-
Motorcycle (M)	Equestrian (E)	-	-	-
Motorcycle (M)	Foot (F)	-	-	-
Mountain Bike (B)	Closed (CL)	-	-	-
Mountain Bike (B)	Administrative Access (AA)	-	-	-
Mountain Bike (B)	Equestrian (E)	-	-	-
Mountain Bike (B)	Foot (F)	-	-	-
Equestrian (E)	Closed (CL)	-	-	-
Equestrian (E)	Administrative Access (AA)	-	-	-
Equestrian (E)	Mountain Bike (B)	-	-	-
Equestrian (E)	Foot (F)	-	-	-
Foot (F)	Closed (CL)	-	-	-
Foot (F)	Administrative Access (AA)	-	-	-
Foot (F)	Mountain Bike (B)	-	-	-
Foot (F)	Equestrian (E)	-	-	-
Closed (CL)	Administrative Access (AA)	-	1.1	-
Closed (CL)	General (O)	-	-	-
Closed (CL)	ATV (A)	7.6	-	3.0
Closed (CL)	Motorcycle (M)	3.1	-	-
Closed (CL)	Mountain Bike (B)	-	-	-
Closed (CL)	Equestrian (E)	-	-	-
Closed (CL)	Foot (F)	-	-	-
Administrative Access (AA)	Closed (CL)	0.3	0.3	0.3
Administrative Access (AA)	General (O)	-	-	-
Administrative Access (AA)	ATV (A)	-	-	-
Administrative Access (AA)	Motorcycle (M)	-	-	-
Administrative Access (AA)	Mountain Bike (B)	-	-	-
Administrative Access (AA)	Equestrian (E)	-	-	-
Administrative Access (AA)	Foot (F)	-	-	-
User Created (UC)	Closed (CL)	4.2	4.9	4.2
User Created (UC)	General (O)	-	-	0.5
User Created (UC)	ATV (A)	0.2	-	0.2
User Created (UC)	Motorcycle (M)	-	-	-
User Created (UC)	Mountain Bike (B)	-	-	-
User Created (UC)	Equestrian (E)	-	-	-
User Created (UC)	Foot (F)	-	-	-
Non-BLM	Closed (CL)	0.4	0.4	0.4
Non-BLM	Administrative Access (AA)	-	-	-
Non-BLM	General (O)	-	-	-
Non-BLM	ATV (A)	-	-	-
Non-BLM	Motorcycle (M)	-	-	-
Non-BLM	Mountain Bike (B)	-	-	-
Non-BLM	Equestrian (E)	-	-	-
Non-BLM	Foot (F)	-	-	-
Not Existing	New Motorcycle (M)	8.7	-	-

Table 3 – Changes in Route Designations between the No Action Alternative and Alternatives A, B, and C for the Salida Subunit

The routes included under the No Action Alternative as	Would be changed to this travel use designation	For the miles shown under each alternative		
		A	B	C
General (O)	Closed (CL)	6.5	7.7	6.5
General (O)	Administrative Access (AA)	0.6	0.6	0.6
General (O)	ATV (A)	-	-	-
General (O)	Motorcycle (M)	-	-	-
General (O)	Mountain Bike (B)	0.5	0.2	0.5
General (O)	Equestrian (E)	0.1	-	0.1
General (O)	Foot (F)	-	0.1	-
ATV (A)	Closed (CL)	-	-	-
ATV (A)	Administrative Access (AA)	-	-	-
ATV (A)	General (O)	-	-	-
ATV (A)	Motorcycle (M)	-	-	-
ATV (A)	Mountain Bike (B)	-	-	-
ATV (A)	Equestrian (E)	-	-	-
ATV (A)	Foot (F)	-	-	-
Motorcycle (M)	Closed (CL)	-	-	-
Motorcycle (M)	Administrative Access (AA)	-	-	-
Motorcycle (M)	Mountain Bike (B)	-	-	-
Motorcycle (M)	Equestrian (E)	-	-	-
Motorcycle (M)	Foot (F)	-	-	-
Mountain Bike (B)	Closed (CL)	-	-	-
Mountain Bike (B)	Administrative Access (AA)	-	-	-
Mountain Bike (B)	Equestrian (E)	-	-	-
Mountain Bike (B)	Foot (F)	-	2.1	-
Equestrian (E)	Closed (CL)	-	-	-
Equestrian (E)	Administrative Access (AA)	-	-	-
Equestrian (E)	Mountain Bike (B)	-	-	-
Equestrian (E)	Foot (F)	-	-	-
Foot (F)	Closed (CL)	-	-	-
Foot (F)	Administrative Access (AA)	-	-	-
Foot (F)	Mountain Bike (B)	-	-	-
Foot (F)	Equestrian (E)	-	-	-
Closed (CL)	Administrative Access (AA)	0.1	0.1	0.1
Closed (CL)	General (O)	-	-	-
Closed (CL)	ATV (A)	-	-	-
Closed (CL)	Motorcycle (M)	-	-	-
Closed (CL)	Mountain Bike (B)	0.4	-	0.4
Closed (CL)	Equestrian (E)	-	-	-
Closed (CL)	Foot (F)	-	-	-
Administrative Access (AA)	Closed (CL)	-	-	-
Administrative Access (AA)	General (O)	-	-	-
Administrative Access (AA)	ATV (A)	-	-	-
Administrative Access (AA)	Motorcycle (M)	-	-	-
Administrative Access (AA)	Mountain Bike (B)	-	-	-
Administrative Access (AA)	Equestrian (E)	-	-	-
Administrative Access (AA)	Foot (F)	-	-	-
User Created (UC)	Closed (CL)	8.8	9.1	9.1
User Created (UC)	General (O)	0.3	-	-
User Created (UC)	ATV (A)	-	-	0.3
User Created (UC)	Motorcycle (M)	-	-	-
User Created (UC)	Mountain Bike (B)	12.0	9.2	11.7
User Created (UC)	Equestrian (E)	-	-	-
User Created (UC)	Foot (F)	-	2.7	-
Non-BLM	Closed (CL)	-	-	-
Non-BLM	Administrative Access (AA)	-	-	-
Non-BLM	General (O)	0.1	0.1	0.1
Non-BLM	ATV (A)	-	-	-
Non-BLM	Motorcycle (M)	-	-	-
Non-BLM	Mountain Bike (B)	0.6	0.6	0.6
Non-BLM	Equestrian (E)	-	-	-
Non-BLM	Foot (F)	-	-	-
Not Existing	New Mountain Bike (B)	27.8	1.2	6.1

APPENDIX 15

**TABLES 8-1 Thru 8-16
COMPARISON OF ALTERNATIVES A, B, and C
To the CURRENT USE ALTERNATIVE**

Table 8-1: Miles by Alternative and Travel Use Categories for All Subunits Showing Differences from Current Use Alternative (highlighted in red)

Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)
O	203.1	164.6 (-38.5)	113.4 (-89.7)	153.4 (-49.7)
A	26.4	40.8 (+14.4)	19.5 (-6.9)	24.4 (-2.0)
M	2.8	14.5 (+11.7)	2.2 (-0.6)	3.4 (+0.6)
B	2.5	47.3 (+44.8)	16.8 (+14.3)	26.9 (+24.4)
E	27.2	58.2 (+31.0)	18.6 (-18.6)	48.5 (+21.3)
F	5.4	1.4 (-4.0)	7.9 (+2.5)	1.4 (-4.0)
AA	125.7	95.6 (-30.1)	116.3 (-9.4)	103.2 (-22.5)
CL	87.6	172.3 (+84.7)	237.7 (+150.1)	202.1 (+114.5)
UC	68.1	0 (-68.1)	0 (-68.1)	0 (-68.1)

Table 8-2: Miles by Alternative and Motorized and Non-Motorized Travel Use Categories for All Subunits Showing Differences from Current Use Alternative (highlighted in red)

Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)
Motorized: O,A, and M	232.3	219.9 (-12.4)	135.1 (-97.2)	181.2 (-51.1)
Non-motorized: B, E, and F	35.1	106.9 (+71.8)	43.3 (+8.2)	76.8 (+41.7)

Table 8-3: Miles by Alternative and Travel Use Categories for Browns Canyon Subunit Showing Differences from Current Use Alternative (highlighted in red)

<i>BROWNS CANYON</i>							
Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)			
O	0.1	0	(-0.1)	0	(-0.1)	0	(-0.1)
A	0	0	(0)	0	(0)	0	(0)
M	0	0	(0)	0	(0)	0	(0)
B	0	0.9	(+0.9)	0.9	(+0.9)	0.9	(+0.9)
E	0	0	(0)	0	(0)	0	(0)
F	0.9	0	(-0.9)	0	(-0.9)	0	(-0.9)
AA	0	0	(0)	0	(0)	0	(0)
CL	0.9	0.9	(0)	0.9	(0)	0.9	(0)
UC	0	-----		-----		-----	

Table 8-4: Miles by Alternative and Travel Use Categories for Salida Subunit Showing Differences from Current Use Alternative (highlighted in red)

<i>SALIDA</i>							
Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)			
O	23.6	16.5	(-7.2)	15.2	(-8.4)	16.2	(-7.4)
A	0.7	0.9	(+0.2)	0.9	(+0.2)	1.2	(+0.5)
M	0	0	(0)	0	(0)	0	(0)
B	2.1	43.3	(+41.2)	11.2	(+9.1)	21.3	(+19.2)
E	0.4	0.4	(0)	0.4	(0)	0.4	(0)
F	0	0	(0)	4.9	(+4.9)	0	(0)
AA	1.1	1.7	(+0.6)	1.7	(+0.6)	1.2	(+0.1)
CL	8.8	23.6	(+14.8)	25.4	(+16.6)	24.0	(+15.2)
UC	21.2	-----		-----		-----	

Table 8-5: Miles by Alternative and Travel Use Categories for Badger Creek Subunit Showing Differences from Current Use Alternative (highlighted in red)

<i>BADGER CREEK</i>							
Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)			
O	34.6	33.6 (-1.0)	31.6 (-3.0)	33.1 (-1.5)			
A	1.9	1.9 (0)	0 (-1.9)	0 (-1.9)			
M	0.3	0.5 (+0.2)	0 (-0.3)	1.2 (+0.9)			
B	0	0 (0)	0 (0)	0 (0)			
E	0	0 (0)	0 (0)	0 (0)			
F	0	0 (0)	0 (0)	0 (0)			
AA	7.1	6.3 (-0.8)	7.8 (+0.7)	6.3 (-0.8)			
CL	16.8	26.8 (+10.0)	29.6 (+12.8)	28.4 (+11.6)			
UC	8.0	-----	-----	-----			

Table 8-6: Miles by Alternative and Travel Use Categories for Red Gulch Subunit Showing Differences from Current Use Alternative (highlighted in red)

<i>RED GULCH</i>							
Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)			
O	28.8	25.9 (-2.9)	16.2 (-12.6)	21.8 (-7.0)			
A	1.1	0 (-1.1)	0 (-1.1)	4.1 (+3.0)			
M	0	0 (0)	0 (0)	0 (0)			
B	0	0 (0)	0 (0)	0 (0)			
E	0	0.6 (+0.6)	0 (0)	0.6 (+0.6)			
F	0	0 (0)	0 (0)	0 (0)			
AA	0	0.8 (+0.8)	1.1 (+1.1)	0.8 (+0.8)			
CL	3.5	9.5 (+6.0)	19.4 (+15.9)	9.5 (+6.0)			
UC	0.2	-----	-----	-----			

Table 8-7: Miles by Alternative and Travel Use Categories for Texas Creek Subunit Showing Differences from Current Use Alternative (highlighted in red)

<i>TEXAS CREEK</i>							
Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)			
O	19.0	18.4 (-0.6)	15.6 (-3.4)	18.4 (-0.6)			
A	17.4	23.2 (+5.8)	15.2 (-2.2)	18.7 (+1.3)			
M	1.2	13.0 (+11.8)	1.2 (0)	1.2 (0)			
B	0	0 (0)	0 (0)	0 (0)			
E	0	0 (0)	0 (0)	0 (0)			
F	0	0 (0)	0 (0)	0 (0)			
AA	3.0	2.7 (-0.3)	5.4 (+2.4)	2.7 (-0.3)			
CL	20.1	17.4 (-2.7)	28.8 (+8.7)	25.2 (+5.1)			
UC	4.9	-----	-----	-----			

Table 8-8: Miles by Alternative and Travel Use Categories for Big Hole Subunit Showing Differences from Current Use Alternative (highlighted in red)

<i>BIG HOLE</i>							
Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)			
O	0	0 (0)	0 (0)	0 (0)			
A	0	0 (0)	0 (0)	0 (0)			
M	0	0 (0)	0 (0)	0 (0)			
B	0	0 (0)	0 (0)	0 (0)			
E	0	0 (0)	0 (0)	0 (0)			
F	0	0 (0)	0 (0)	0 (0)			
AA	45.4	38.4 (-7.0)	38.3 (-7.1)	38.3 (-7.1)			
CL	0	8.3 (+8.3)	8.3 (+8.3)	8.3 (+8.3)			
UC	1.2	-----	-----	-----			

Table 8-9: Miles by Alternative and Travel Use Categories for Crampton Mountain Subunit Showing Differences from Current Use Alternative (highlighted in red)

CRAMPTON MOUNTAIN

Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)
O	16.2	14.4 (-1.8)	5.4 (-10.8)	12.1 (-4.1)
A	0	0 (0)	0 (0)	0 (0)
M	0	0 (0)	0 (0)	0 (0)
B	0	0 (0)	0 (0)	0 (0)
E	0	2.7 (+2.7)	0 (0)	2.7 (+2.7)
F	0	0 (0)	0 (0)	0 (0)
AA	13.7	10.5 (-3.2)	15.6 (+1.9)	10.7 (-3.0)
CL	3.5	6.6 (+3.1)	13.1 (+9.6)	8.7 (+5.2)
UC	0.5	-----	-----	-----

Table 8-10: Miles by Alternative and Travel Use Categories for Sangres Foothills Subunit Showing Differences from Current Use Alternative (highlighted in red)

SANGRES FOOTHILLS

Travel Use Category (Proposed)	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)
O	31.5	23.2 (-8.3)	12.9 (-18.6)	20.8 (-10.7)
A	5.1	9.7 (-4.6)	0 (0)	0 (0)
M	1.3	1.0 (-0.3)	1.0 (-0.3)	1.0 (-0.3)
B	0	0 (0)	0 (0)	0 (0)
E	0.1	0.1 (0)	0.1 (0)	0.1 (0)
F	0.1	0.1 (0)	0.1 (0)	0.1 (0)
AA	13.1	13.0 (-0.1)	19.0 (+5.9)	15.2 (+2.1)
CL	12.1	27.7 (+15.6)	41.6 (+29.5)	37.5 (+25.4)
UC	10.5	-----	-----	-----

Table 8-11: Miles by Alternative and Travel Use Categories for West McCoy Gulch Subunit Showing Differences from Current Use Alternative (highlighted in red)

WEST MCCOY GULCH

Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)
O	11.8	6.7 (-5.1)	2.5 (-9.3)	6.7 (-5.1)
A	0	2.4 (+2.4)	0 (0)	0 (0)
M	0	0 (0)	0 (0)	0 (0)
B	0	0 (0)	0 (0)	0 (0)
E	0.1	13.5 (+13.4)	0.6 (+0.5)	2.7 (+2.6)
F	0.4	0.4 (0)	0.4 (0)	0.4 (0)
AA	7.5	1.3 (-6.2)	6.3 (-1.2)	6.3 (-1.2)
CL	1.6	7.5 (+5.9)	21.1 (+19.5)	14.8 (+13.2)
UC	9.1	-----	-----	-----

Table 8-12: Miles by Alternative and Travel Use Categories for McIntyre Hills Subunit Showing Differences from Current Use Alternative (highlighted in red)

MCINTYRE HILLS

Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)
O	0.3	0.1 (-0.2)	0.1 (-0.2)	0.1 (-0.2)
A	0	0 (0)	0 (0)	0 (0)
M	0	0 (0)	0 (0)	0 (0)
B	0	0 (0)	0 (0)	0 (0)
E	0	8.4 (+8.4)	6.2 (+6.2)	8.4 (+8.4)
F	1.6	0 (+1.6)	1.6 (+1.6)	0 (-1.6)
AA	10.9	9.8 (-1.1)	9.8 (-1.1)	9.8 (-1.1)
CL	7.5	7.6 (+0.1)	8.2 (+0.7)	7.6 (+0.1)
UC	5.6	-----	-----	-----

Table 8-13: Miles by Alternative and Travel Use Categories for Grand Canyon Hills Subunit Showing Differences from Current Use Alternative (highlighted in red)

<i>GRAND CANYON HILLS</i>							
Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)			
O	10.8	8.5 (-2.3)	4.8 (-6.0)	6.9 (-3.9)			
A	0	0 (0)	0 (0)	0 (0)			
M	0	0 (0)	0 (0)	0 (0)			
B	0.4	3.0 (+2.6)	4.6 (+4.2)	4.6 (+4.2)			
E	0	0 (0)	0 (0)	0 (0)			
F	2.4	1.0 (-1.4)	1.0 (-1.4)	1.0 (-1.4)			
AA	4.9	1.5 (-3.4)	1.5 (-3.4)	1.5 (-3.4)			
CL	3.5	9.3 (+5.8)	11.3 (+7.8)	9.3 (+5.8)			
UC	1.1	-----	-----	-----			

Table 8-14: Miles by Alternative and Travel Use Categories for Road Gulch Subunit Showing Differences from Current Use Alternative (highlighted in red)

<i>ROAD GULCH</i>							
Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)			
O	21.3	13.3 (-8.0)	7.2 (-14.1)	13.3 (-8.0)			
A	0.2	2.7 (+2.5)	3.4 (+3.2)	0.4 (+0.2)			
M	0	0 (0)	0 (0)	0 (0)			
B	0	0 (0)	0 (0)	0 (0)			
E	0.8	5.8 (+5.0)	5.5 (+4.7)	6.9 (+6.1)			
F	0	0 (0)	0 (0)	0 (0)			
AA	4.6	0.4 (-4.2)	0.6 (-4.0)	0.6 (-4.0)			
CL	1.4	12.7 (+11.3)	17.8 (+16.4)	13.6 (+12.2)			
UC	4.6	-----	-----	-----			

Table 8-15: Miles by Alternative and Travel Use Categories for Grape Creek Subunit Showing Differences from Current Use Alternative (highlighted in red)

<i>GRAPE CREEK</i>							
Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)			
O	3.3	3.3 (0)	1.2 (-2.1)	3.3 (0)			
A	0	0 (0)	0 (0)	0 (0)			
M	0	0 (0)	0 (0)	0 (0)			
B	0	0 (0)	0 (0)	0 (0)			
E	25.7	26.7 (+1.0)	5.7 (-20.0)	26.7 (+1.0)			
F	0	0 (0)	0 (0)	0 (0)			
AA	10.6	5.5 (-5.1)	5.5 (-5.1)	5.5 (-5.1)			
CL	6.6	12.0 (+5.4)	9.7 (+3.1)	12.0 (+5.4)			
UC	1.3	-----	-----	-----			

Table 8-16: Miles by Alternative and Travel Use Categories for Custer County Subunit Showing Differences from Current Use Alternative (highlighted in red)

<i>CUSTER COUNTY</i>							
Travel Use Category	Current Use Alternative	Alternative A (High Use)	Alternative B (Low Use)	Alternative C (Moderate Use)			
O	1.9	0.6 (+1.3)	0.6 (+1.3)	0.6 (+1.3)			
A	0	0 (0)	0 (0)	0 (0)			
M	0	0 (0)	0 (0)	0 (0)			
B	0	0 (0)	0 (0)	0 (0)			
E	0	0 (0)	0 (0)	0 (0)			
F	0	0 (0)	0 (0)	0 (0)			
AA	3.6	3.6 (0)	3.6 (0)	3.6 (0)			
CL	1.5	2.5 (+1.3)	2.5 (+1.3)	2.5 (+1.3)			
UC	0	-----	-----	-----			



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Colorado Field Office
755 Parfet Street, Suite 361
Lakewood, Colorado 80215

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IN REPLY REFER TO:

ES/CO: BLM/RoyalGorge
Mail Stop 65412

NOV 23 2004

Mr. Roy Masinton
Bureau of Land Management
Royal Gorge Field Office
3170 East Main Street
Canon City, Colorado 81212

Dear Mr. Masinton:

The U.S. Fish and Wildlife Service (Service) received your letter of October 21, 2004, regarding the proposed Arkansas River Travel Management Plan in Fremont, Chaffee, and Custer counties, Colorado. You requested a list of Federal endangered and threatened species that may exist in the project area. These comments have been prepared under the provisions of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et. seq.).

The Service has no specific knowledge of the project site; however, enclosed is a list of Federal endangered, threatened, proposed and candidate species, by county, in Colorado. The list for Fremont, Chaffee, and Custer counties can be used as a basis for determining species potentially present in the project area.

While other species could occur at or visit the project area, endangered or threatened species most likely to occur include:

- Birds: Bald eagle, *Haliaeetus leucocephalus*, Threatened
Mexican spotted owl, *Strix occidentalis lucida*, Threatened
- Mammals: Canada lynx, *Lynx canadensis*, Threatened
Black-footed ferret, *Mustela nigripes*, Endangered
- Fish: Greenback cutthroat trout, *Oncorhynchus clarki stomias*, Threatened

The Service also is interested in the protection of species which are candidates for official listing as threatened or endangered (Federal Register, Vol. 61, No. 40, February 28, 1996). While these species presently have no legal protection under the ESA, it is within the spirit of this Act to consider project impacts to potentially sensitive candidate species. It is the intention of the Service to protect these species before human-related activities adversely impact their habitat to a degree that they would

need to be listed and, therefore, protected under the ESA. Additionally, we wish to make you aware of the presence of Federal candidates should any be proposed or listed prior to the time that all Federal actions related to the project are completed. If any candidate species will be unavoidably impacted, appropriate mitigation should be proposed and discussed with this office.

While the Service has no specific knowledge of the presence of these species within the project area, the following may occur in or visit the project area.

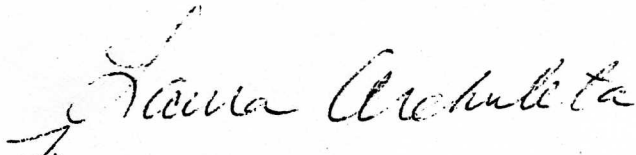
Birds: Gunnison sage-grouse, *Centrocercus minimus*, Candidate

Amphibians: Boreal toad, *Bufo boreas boreas*, Candidate

Fish: Arkansas darter, *Etheostoma cragini*, Candidate

If the Service can be of further assistance, contact Leslie Ellwood of my staff at (303)275-2383.

Sincerely,



Susan C. Linner
Colorado Field Supervisor

Enclosure Colorado List by County

cc: FWS, CFO (L. Ellwood)

Appendix 17

Research References for the Development of Buffer Distances Used in the Arkansas River TMP Route Impact Analysis

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Table 2-1 Miles of Routes by Alternatives and Travel Use Categories

Travel Use Category	No Action Alternative	Alternative A	Alternative B	Alternative C (Proposed Action)
Foot	5.4	1.4	7.9	1.4
Equestrian	27.2	58.2	18.6	48.5
Bicycle	2.5	47.3	16.8	26.9
Motorcycle	2.8	14.5	2.2	3.4
ATV	26.4	40.8	19.5	24.4
General	203.1	164.6	113.4	153.4
Non-BLM	111.8	107.5	106.8	107.5
Administrative Access*	125.7	95.6	116.3	103.2
Closed**	87.6	172.3	237.7	202.1
User created	68.1	0	0	0

* *The Administrative Access category includes routes that are closed to the public for motorized uses but that may be used by authorized persons for administrative purposes. Under the No Action Alternative, this category includes 125.7 miles of routes, of which 65.5 miles do not have permanent legal public access and 60.2 miles have permanent legal public access. Under the No Action Alternative, the Administrative Access routes that have permanent legal public access can be used by the public for hiking, horseback and bicycle riding, but are not available for use with motor vehicles.*

** *The Closed category includes routes that are not available for public or needed for administrative uses. The category includes many routes that lack permanent legal public access and also includes routes in classified special management areas and those that were closed under previous activity plans. Under the No Action Alternative 87.6 miles of routes would remain closed, including 20.0 miles with no permanent legal public access, 67.0 miles with legal public access, and 0.6 miles where the access status is unknown.*

Table 2-2 Miles of Routes by Alternatives and Travel Use Categories

Travel Use Category	No Action Alternative	Alternative A	Alternative B	Alternative C (Proposed Action)
Foot	5.4	1.4	7.9	1.4
Equestrian	27.2	58.2	18.6	48.5
Bicycle	2.5	47.3	16.8	26.9
Motorcycle	2.8	14.5	2.2	3.4
ATV	26.4	40.8	19.5	24.4
General	203.1	164.6	113.4	153.4
Non-BLM	111.8	107.5	106.8	107.5
Administrative Access*	125.7	95.6	116.3	103.2
Closed**	87.6	172.3	237.7	202.1
User created	68.1	0	0	0

* *The Administrative Access category includes routes that are closed to the public for motorized uses but that may be used by authorized persons for administrative purposes. Under Alternative A, this category includes 95.6 miles of routes, of which 50.3 miles do not have permanent legal public access and 45.3 miles have permanent legal public access. Under Alternative A, the Administrative Access routes that have permanent legal public access can be used by the public for hiking and horseback riding, but are not available for use with bicycles or motor vehicles.*

** *The Closed category includes routes that are not available for public or administrative uses. The category Includes many routes that lack permanent legal public access and also includes routes in classified special management areas and those that were closed under previous activity plans. Under Alternative A, 172.3 miles of routes would be closed, including 45.3 miles with no permanent legal public access, 126.4 miles with legal public access, and 0.6 miles where the access status is unknown.*

Table 2-3 Miles of Routes by Alternatives and Travel Use Categories

Travel Use Category	No Action Alternative	Alternative A	Alternative B	Alternative C (Proposed Action)
Foot	5.4	1.4	7.9	1.4
Equestrian	27.2	58.2	18.6	48.5
Bicycle	2.5	47.3	16.8	26.9
Motorcycle	2.8	14.5	2.2	3.4
ATV	26.4	40.8	19.5	24.4
General	203.1	164.6	113.4	153.4
Non-BLM	111.8	107.5	106.8	107.5
Administrative Access*	125.7	95.6	116.3	103.2
Closed**	87.6	172.3	237.7	202.1
User created	68.1	0	0	0

* *The Administrative Access category includes routes that are closed to the public for motorized uses but that may be used by authorized persons for administrative purposes. Under Alternative B, this category includes 116.3 miles of routes, of which 55.0 miles do not have permanent legal public access and 61.3 miles have permanent legal public access. Under Alternative B, the Administrative Access routes that have permanent legal public access can be used by the public for hiking and horseback riding, but are not available for use with bicycles or motor vehicles.*

** *The Closed category includes routes that are not available for public or administrative uses. The category Includes many routes that lack permanent legal public access and also includes routes in classified special management areas and those that were closed under previous activity plans. Under Alternative B, 237.7 miles of routes would be closed, including 50.9 miles with no permanent legal public access, 186.2 miles with legal public access, and 0.6 miles where the access status is unknown.*

Table 2-4 Miles of Routes by Alternatives and Travel Use Categories

Travel Use Category	No Action Alternative	Alternative A	Alternative B	Alternative C (Proposed Action)
Foot	5.4	1.4	7.9	1.4
Equestrian	27.2	58.2	18.6	48.5
Bicycle	2.5	47.3	16.8	26.9
Motorcycle	2.8	14.5	2.2	3.4
ATV	26.4	40.8	19.5	24.4
General	203.1	164.6	113.4	153.4
Non-BLM	111.8	107.5	106.8	107.5
Administrative Access*	125.7	95.6	116.3	103.2
Closed**	87.6	172.3	237.7	202.1
User created	68.1	0	0	0

* *The Administrative Access category includes routes that are closed to the public for motorized uses but that may be used by authorized persons for administrative purposes. Under Alternative C, this category includes 103.2 miles of routes, of which 50.5 miles do not have permanent legal public access and 52.8 miles have permanent legal public access. Under Alternative C, the Administrative Access routes that have permanent legal public access can be used by the public for hiking and horseback riding, but are not available for use with bicycles or motor vehicles.*

** *The Closed category includes routes that are not available for public or administrative uses. The category Includes many routes that lack permanent legal public access and also includes routes in classified special management areas and those that were closed under previous activity plans. Under Alternative C, 202.1 miles of routes would be closed, including 50.1 miles with no permanent legal public access, 151.4 miles with legal public access, and 0.6 miles where the access status is unknown.*

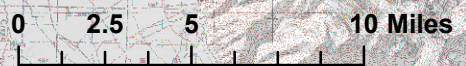
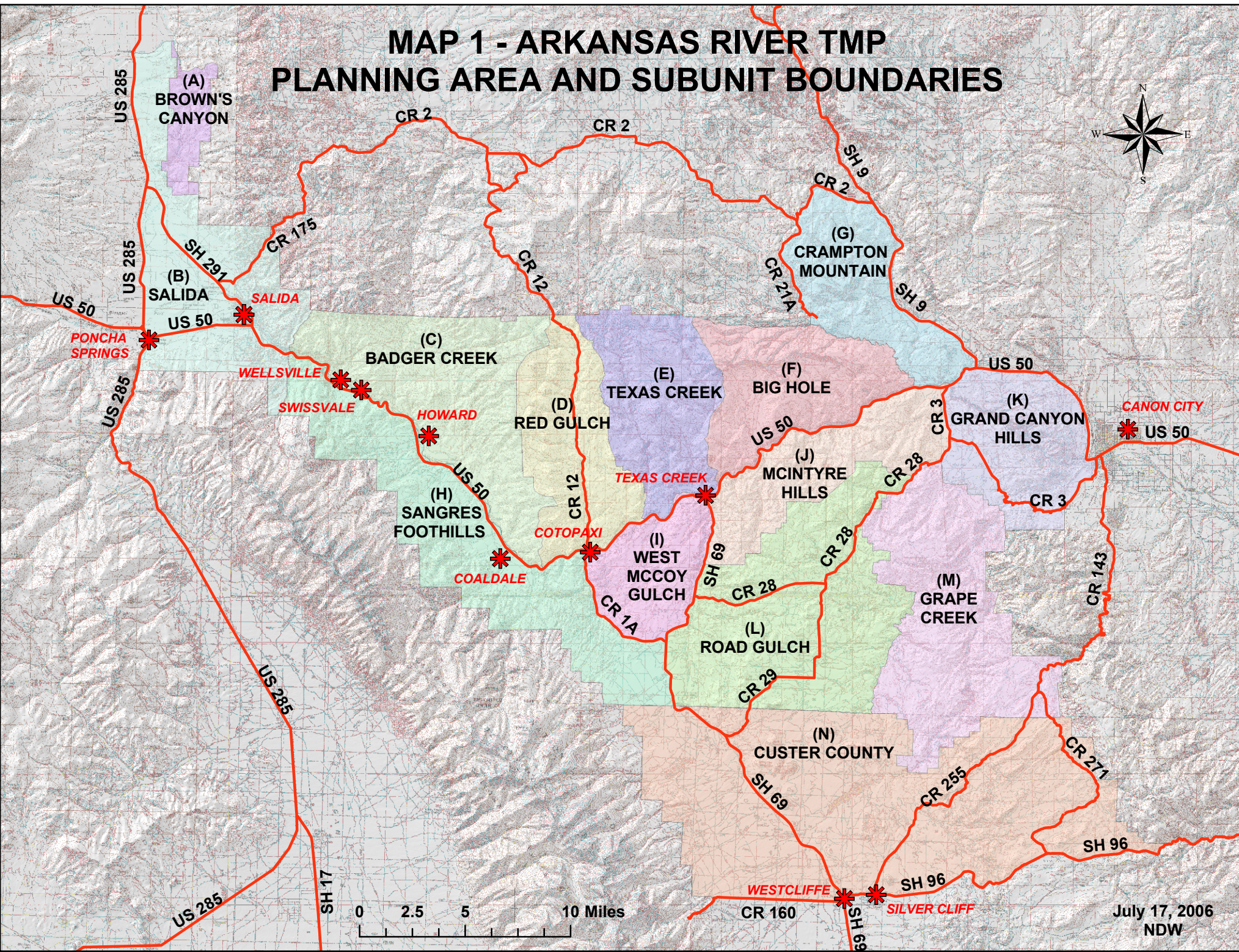
Table 6-3: Comparison of Alternatives - Miles and Acres of Riparian Impacted by Travel Routes for the Entire Arkansas River TMP Area

	No Action	Alternative A	Alternative B	Alternative C
Miles of Routes in Riparian	29.3	30.1	22.3	30.0
Miles of Routes within 100 feet of Riparian	81.9	83.3	75.0	82.5
Acres of Riparian Habitat Directly Impacted by Routes	257	202	182	194

Table 6-3: Comparison of Alternatives - Miles and Acres of Riparian Impacted by Travel Routes for the Entire Arkansas River TMP Area

	No Action	Alternative A	Alternative B	Alternative C
Miles of Routes in Riparian	29.3	30.1	22.3	30.0
Miles of Routes within 100 feet of Riparian	81.9	83.3	75.0	82.5
Total Miles of Routes Directly Impacting Riparian Habitat	111.2	113.4	97.3	112.5
Total Acres of Riparian Habitat Directly Impacted by Routes	257	202	182	194

MAP 1 - ARKANSAS RIVER TMP PLANNING AREA AND SUBUNIT BOUNDARIES



July 17, 2006
NDW

MAP 2 - CURRENT OHV OPEN AREAS AND TRIALS EVENTS AREAS



SAND GULCH
OHV OPEN AREA



TURKEY ROCK
TRIALS EVENT AREA

TEXAS CREEK
OHV OPEN AREA










REESE GULCH
TRIALS EVENT AREA

GRAND CANYON HILLS
OHV OPEN AREA



VOLCANO GULCH
TRIALS EVENT AREA

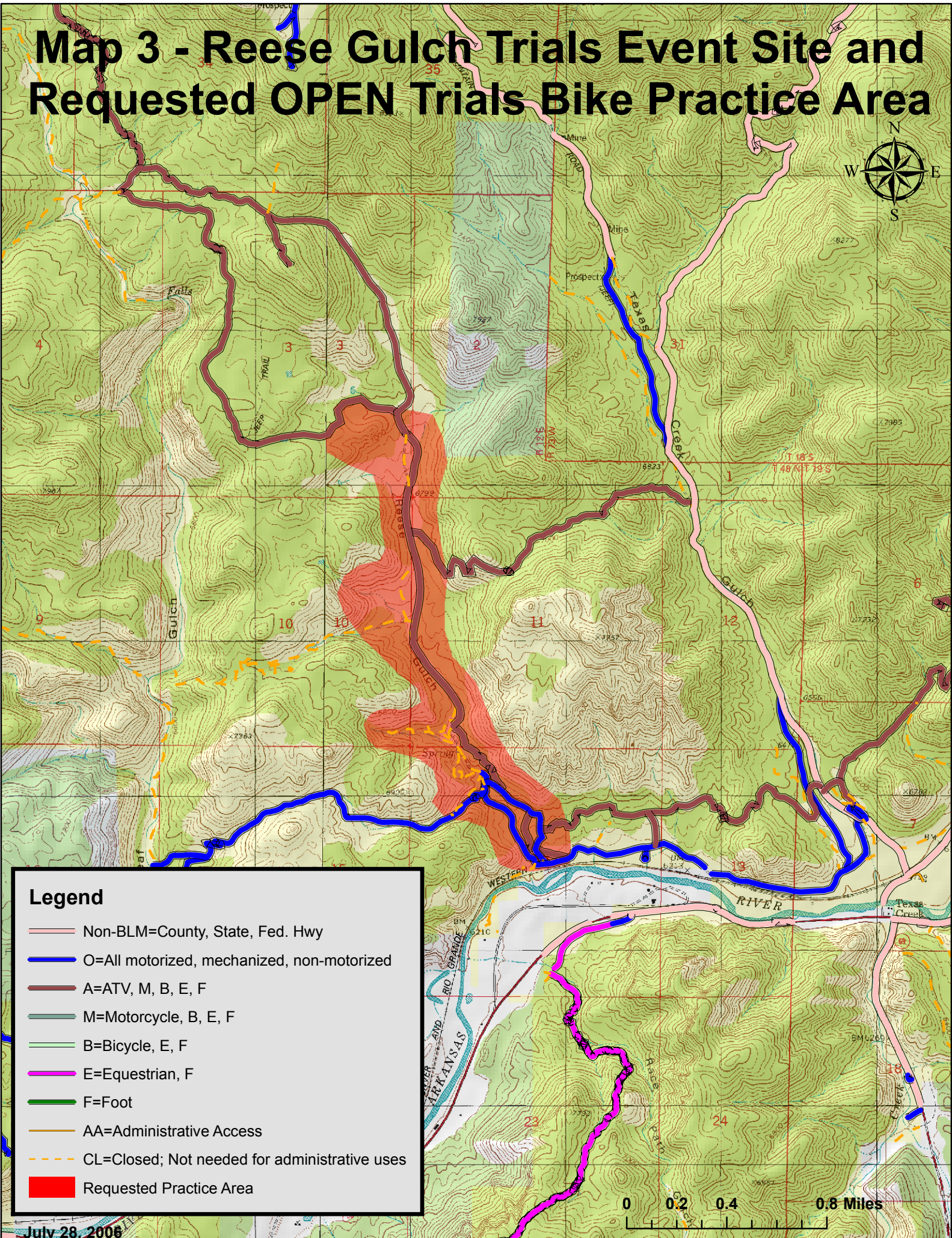
Legend

-  Current Open OHV Areas
-  Arkansas River Travel Management Planning Boundary
-  Bureau of Land Management
-  Private Lands
-  State Lands
-  US Forest Service
-  Trials Event Locations

0 2.5 5 10 Miles

July 31, 2006

Map 3 - Reese Gulch Trials Event Site and Requested OPEN Trials Bike Practice Area

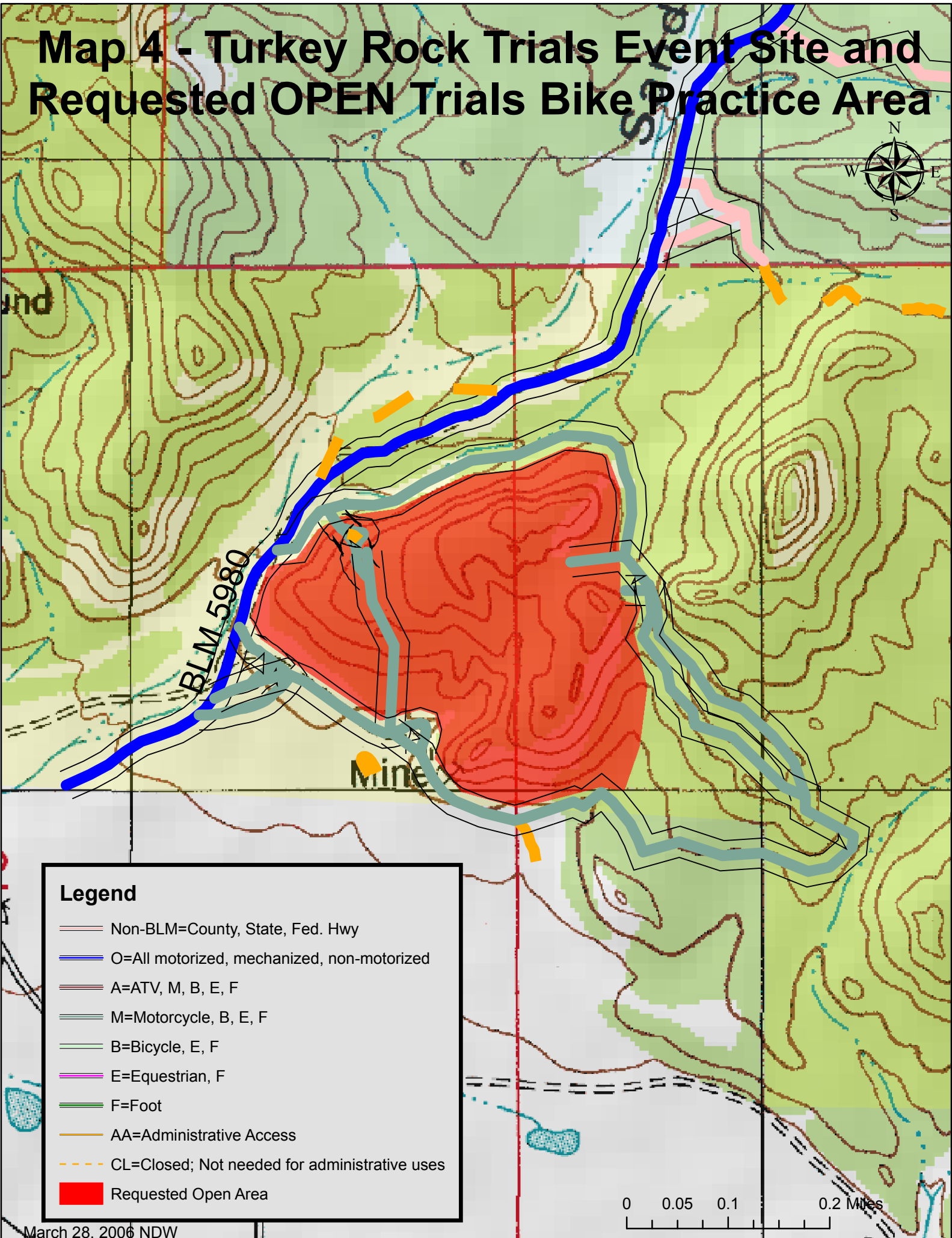


Legend

- Non-BLM=County, State, Fed. Hwy
- O=All motorized, mechanized, non-motorized
- A=ATV, M, B, E, F
- M=Motorcycle, B, E, F
- B=Bicycle, E, F
- E=Equestrian, F
- F=Foot
- AA=Administrative Access
- CL=Closed; Not needed for administrative uses
- Requested Practice Area



Map 4 - Turkey Rock Trials Event Site and Requested OPEN Trials Bike Practice Area



Legend

- Non-BLM=County, State, Fed. Hwy
- O=All motorized, mechanized, non-motorized
- A=ATV, M, B, E, F
- M=Motorcycle, B, E, F
- B=Bicycle, E, F
- E=Equestrian, F
- F=Foot
- AA=Administrative Access
- - - CL=Closed; Not needed for administrative uses
- Requested Open Area



Map 5 - Requested CMTRA Trails



A-2: Reopen Previously Closed Trail and Construct Some New Trail for ATVs and Motorcycles

A-1: Reopen Previously Closed Trail and Construct Some New Trail for ATVs and Motorcycles

A-3: Reopen Previously Closed Trail for ATVs and Motorcycles

S-1: Flagged Location

A-5: Reopen Previously Closed Trail for ATVs and Motorcycles

S-1: Construct All New Trail for Motorcycles

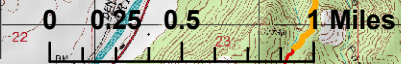
A-4: Reopen Previously Closed Trail for ATVs and Motorcycles

S-2: Reopen Previously Closed Trail and Construct Some New Trail for Motorcycles

S-1: Flagged Location

Legend

- █ █ █ █ Flagged Portions of S-1
- █ █ █ █ Requested Trails
- Non-BLM=County, State, Fed. Hwy
- O=All motorized, mechanized, non-motorized
- A=ATV, M, B, E, F
- M=Motorcycle, B, E, F
- AA=Administrative Access
- CL=Closed
- User Created



July 31, 2006

Map 6 - Requested SMTPC Trails

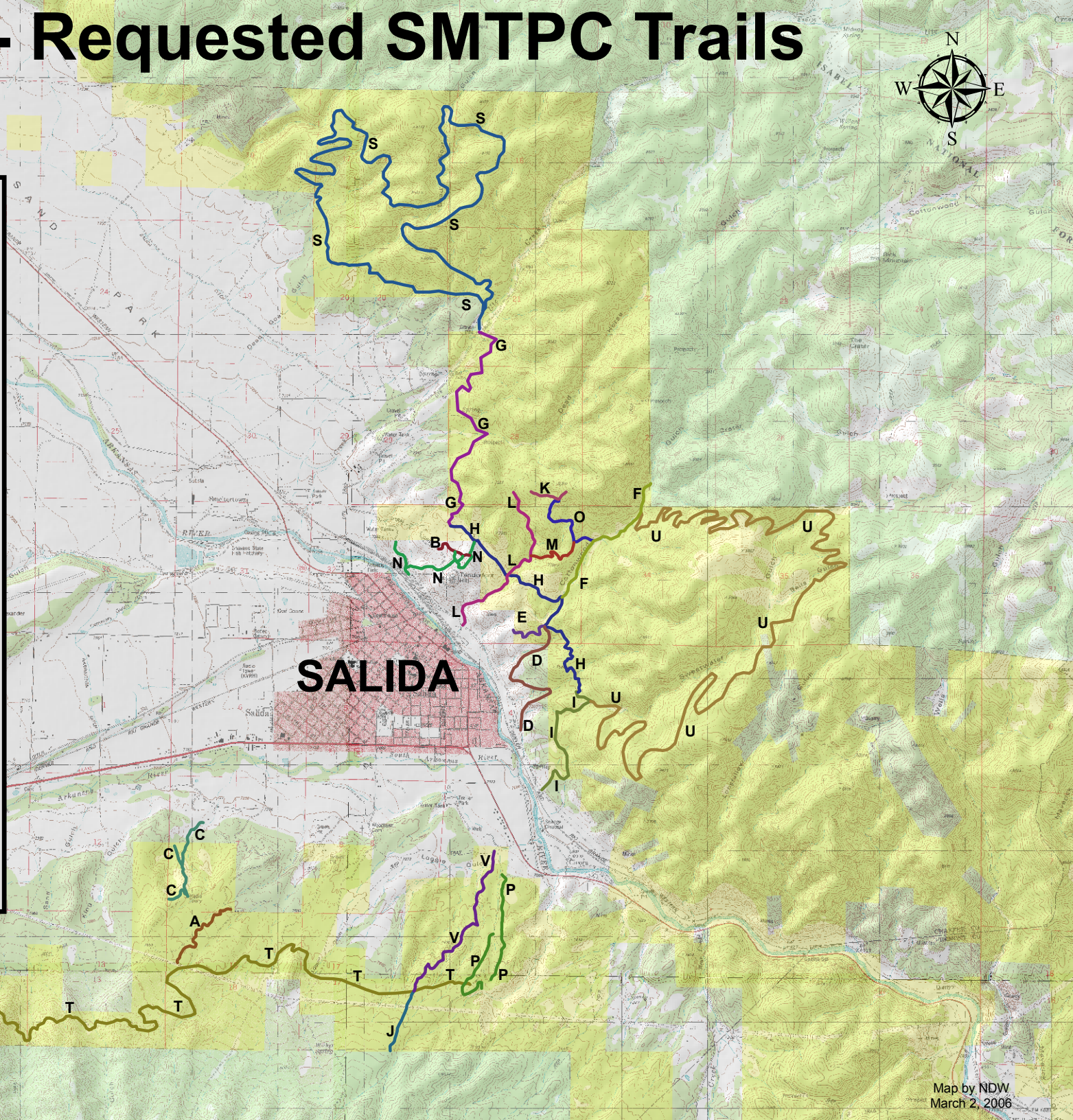


Legend

REQUESTED SMTPC TRAILS

TRAIL_NAME

- A - County 110 and Powerline Connector
- B - FS Road 173
- C - King Gulch
- D - Lower Cottonwood to Cleora
- E - Lower Cottonwood Gulch
- F - Middle Cottonwood Gulch
- G - North Backbone
- H - Mid Backbone
- I - South Backbone
- J - North End Guts Trail
- K - Puali
- L - Sand Dunes
- M - Sand Dunes-Uncle Nasty Connector
- N - S Mountain
- O - Uncle Nasty
- P - West Ridge-Castle Garden
- R (NEW)- Advanced Loop
- S (NEW)- Dead Goat Gulch Loop
- T (NEW)- Little Rainbow
- U (NEW)- Sweetwater Gulch Loop
- V - Lost Trail

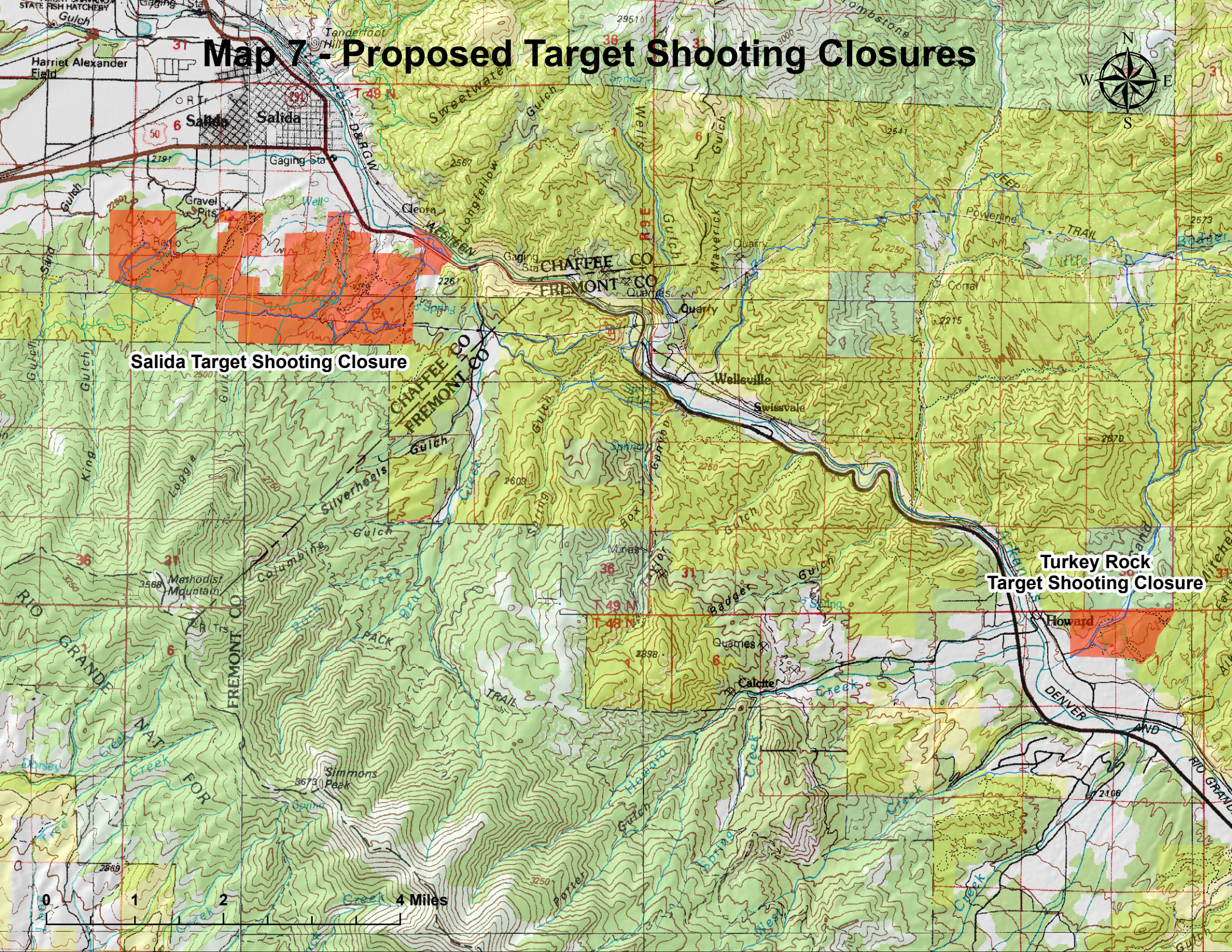


Map 7 - Proposed Target Shooting Closures



Salida Target Shooting Closure

Turkey Rock Target Shooting Closure



0 1 2 4 Miles

MAP 8 - CURRENT OHV AREA DESIGNATIONS



**BROWNS
CANYON
WSA**

**SAND GULCH
OHV OPEN
AREA**




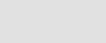
**TEXAS CREEK
OHV OPEN AREA**

**MCINTYRE HILLS
WSA**

**GRAND CANYON HILLS
OHV OPEN AREA**

**GRAPE CREEK
WSA**

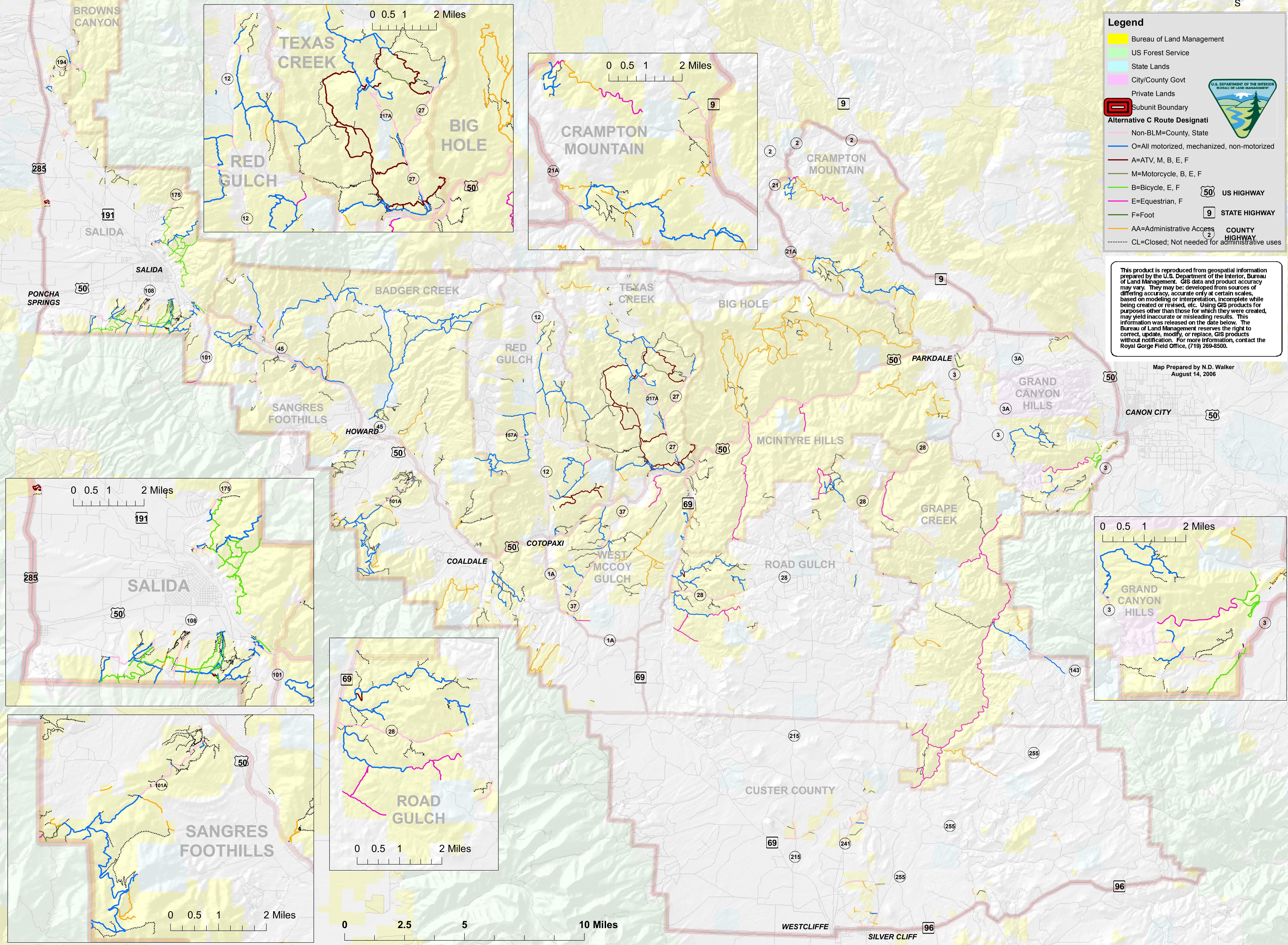
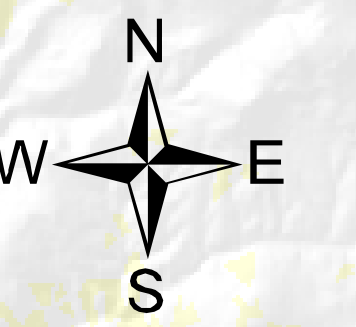
Legend

-  Arkansas River TMP Boundary
-  Closed
-  Open
-  Limited (Unshaded)

0 2.5 5 10 Miles

August 1, 2006

MAP 9: ALTERNATIVE C - ARKANSAS RIVER TRAVEL MANAGEMENT PLAN



Legend

- Bureau of Land Management
- US Forest Service
- State Lands
- City/County Govt
- Private Lands
- Subunit Boundary

Alternative C Route Designati

- O=All motorized, mechanized, non-motorized
- A=ATV, M, B, E, F
- M=Motorcycle, B, E, F
- B=Bicycle, E, F
- E=Equestrian, F
- F=Foot
- AA=Administrative Access
- CL=Closed; Not needed for administrative uses

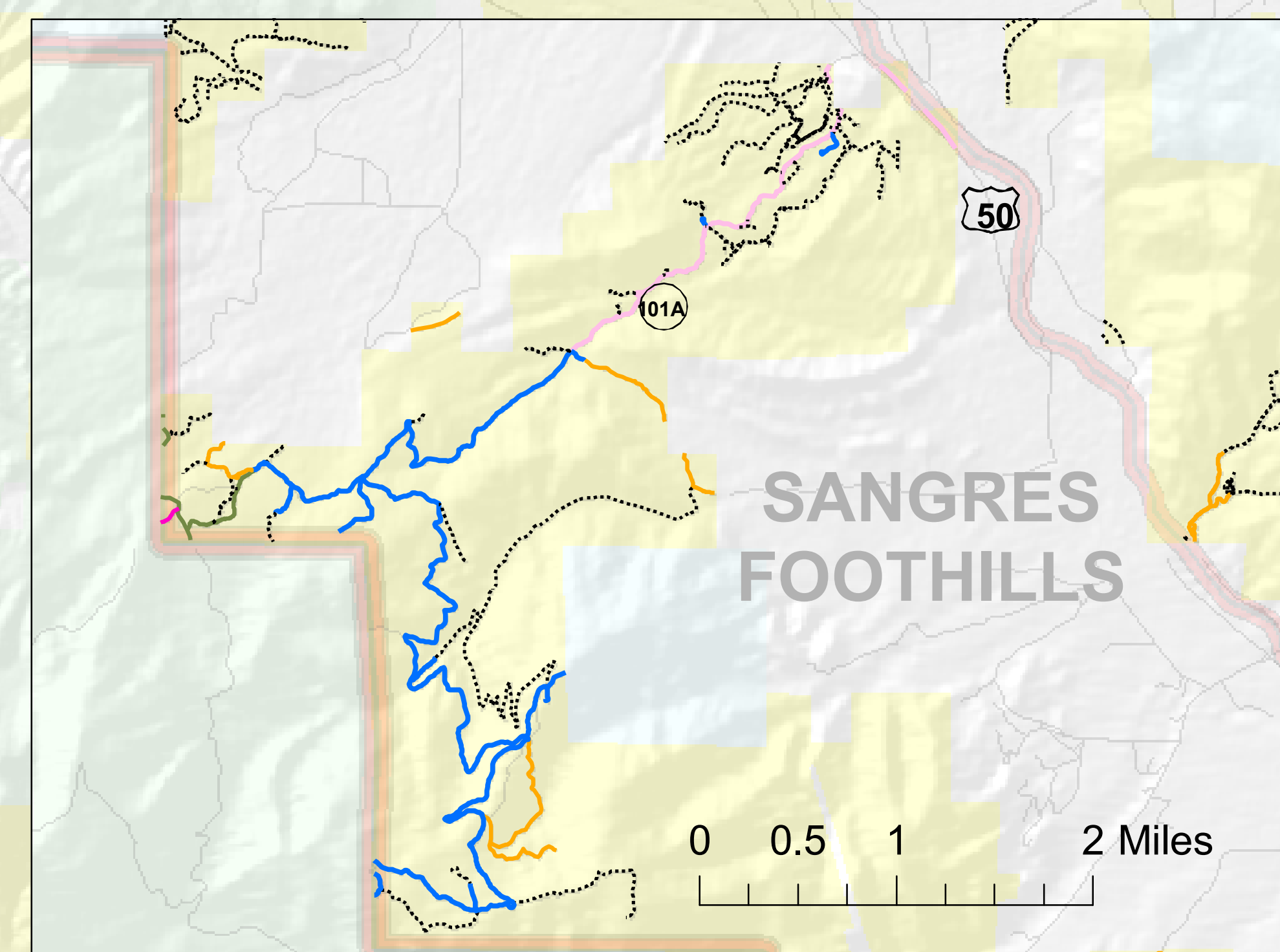
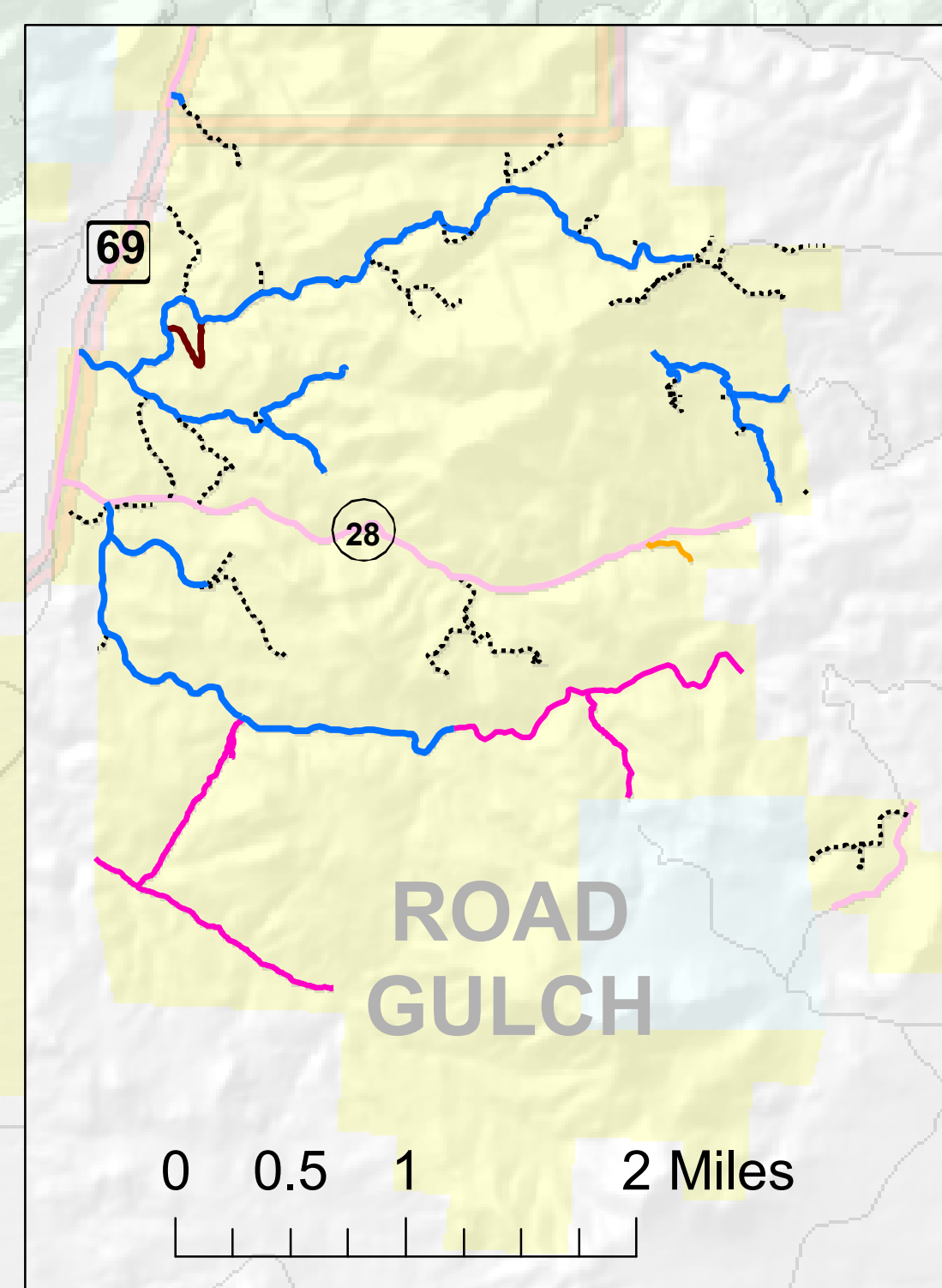
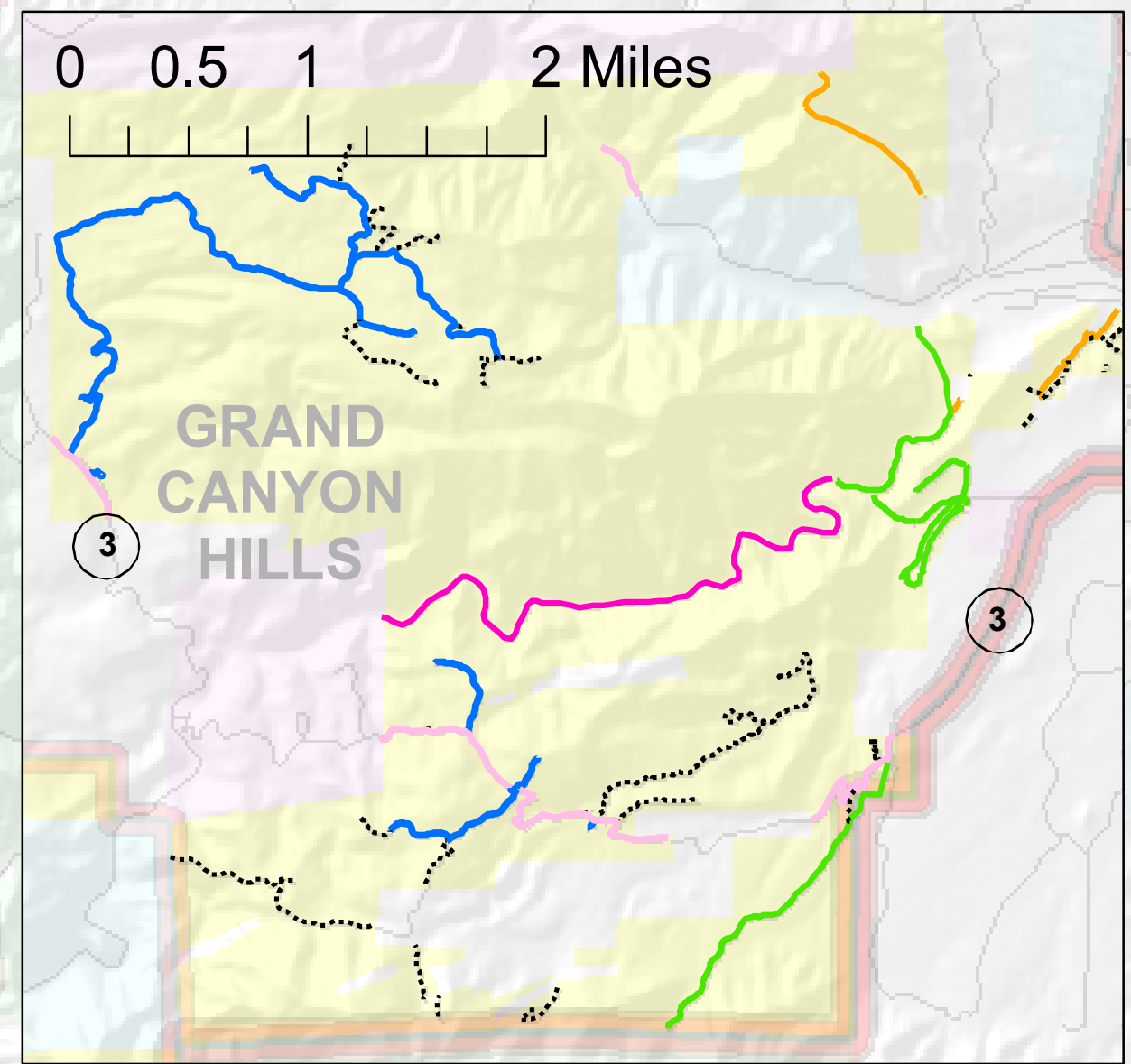
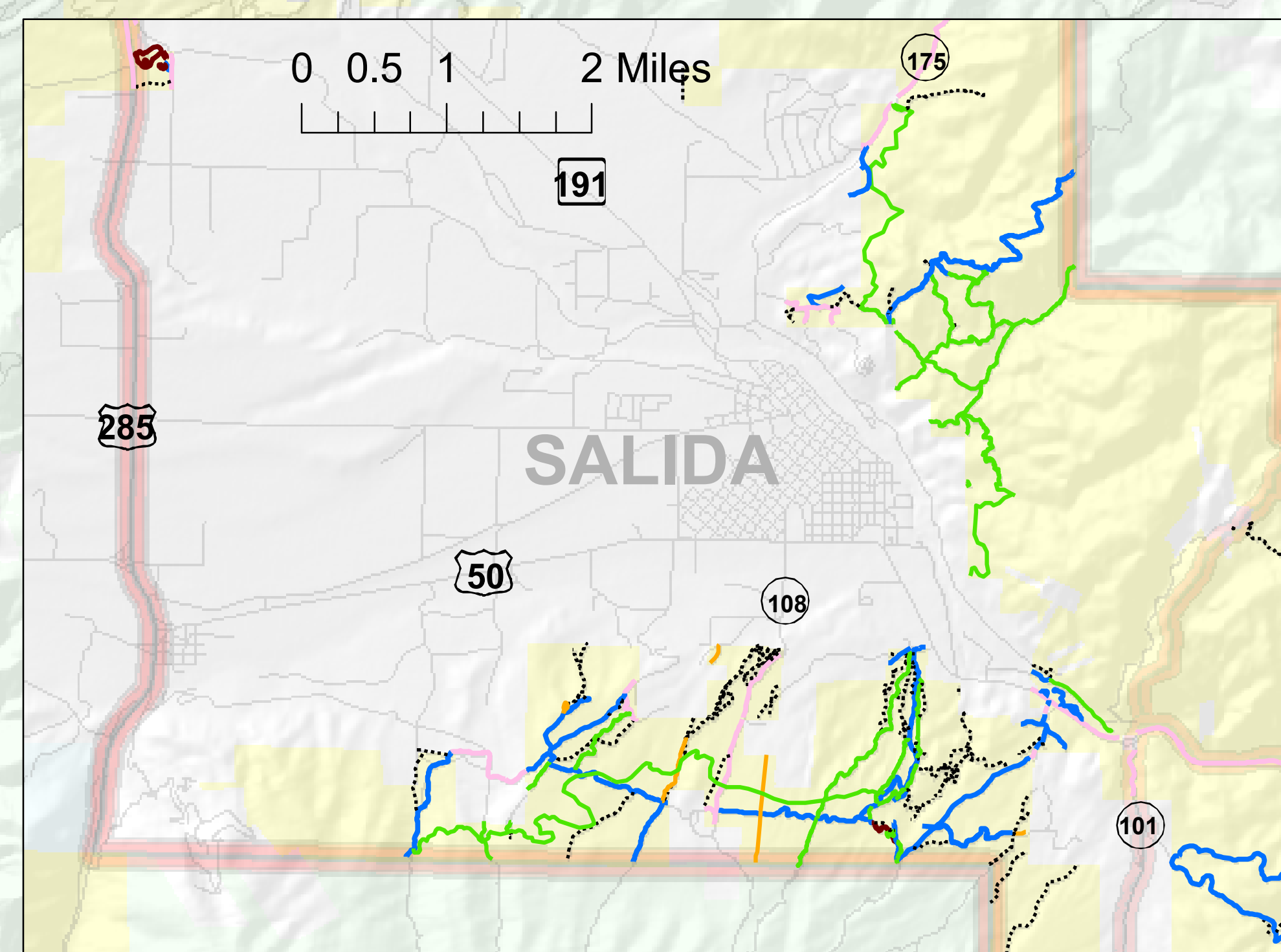
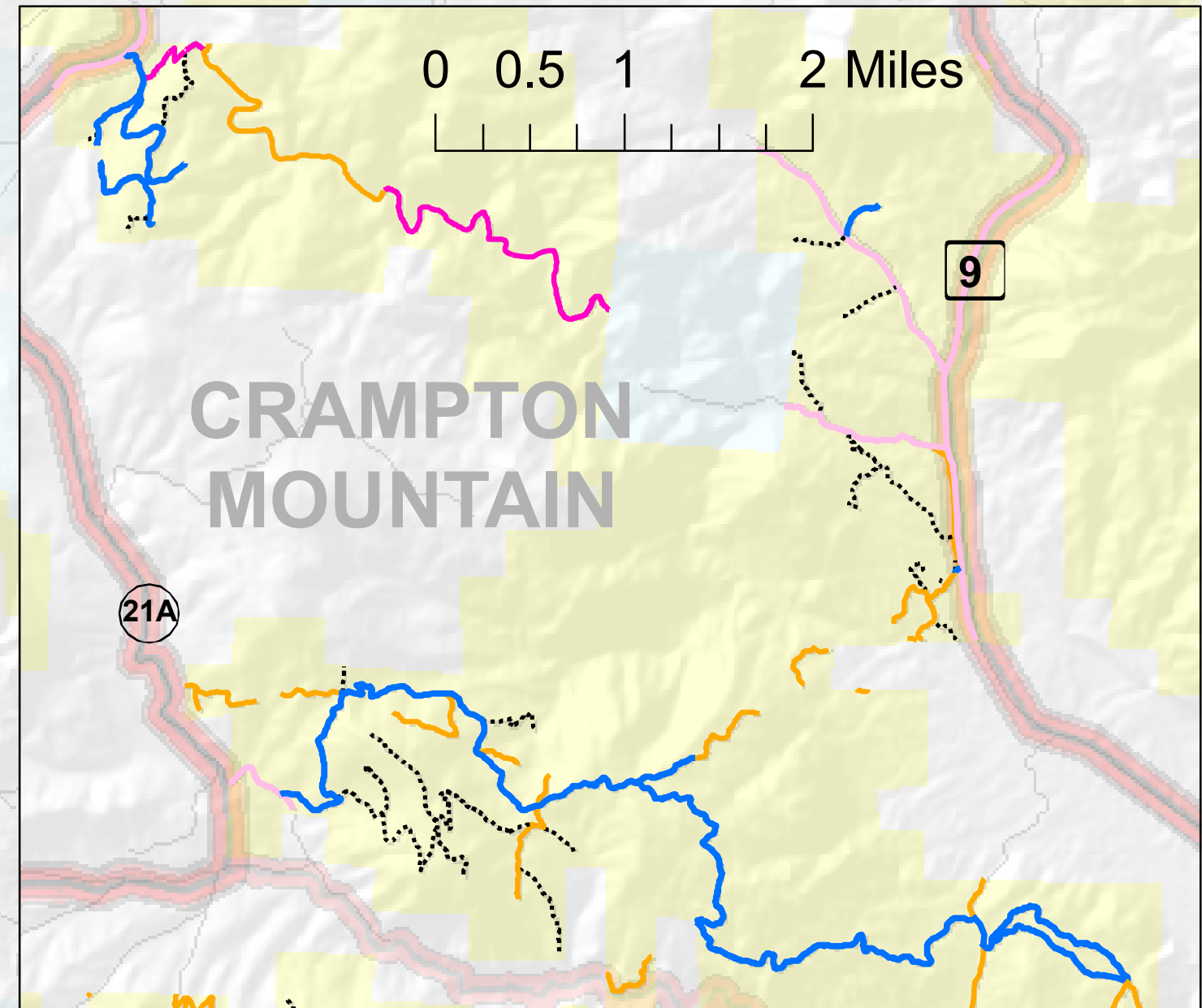
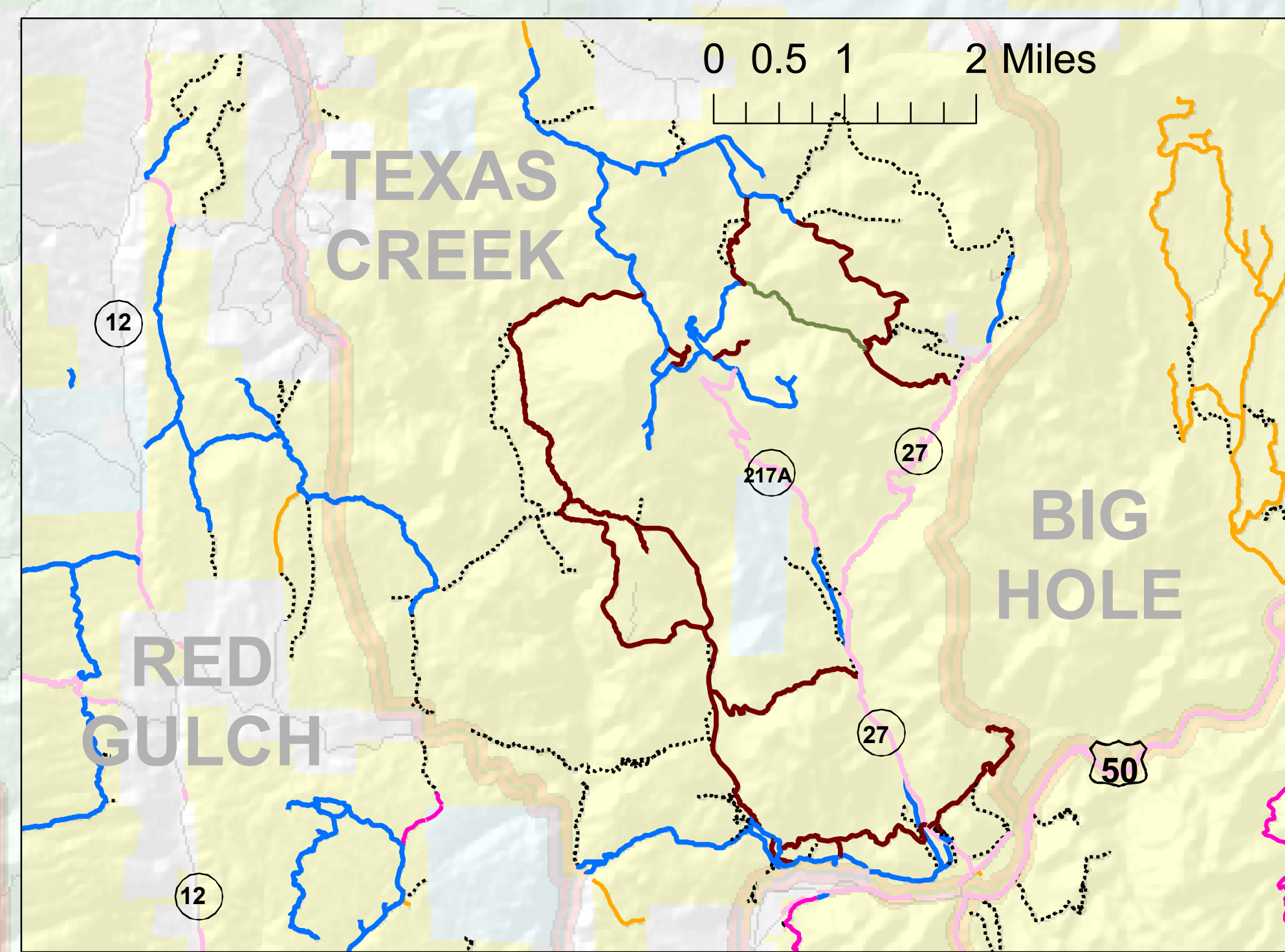
50 US HIGHWAY

9 STATE HIGHWAY

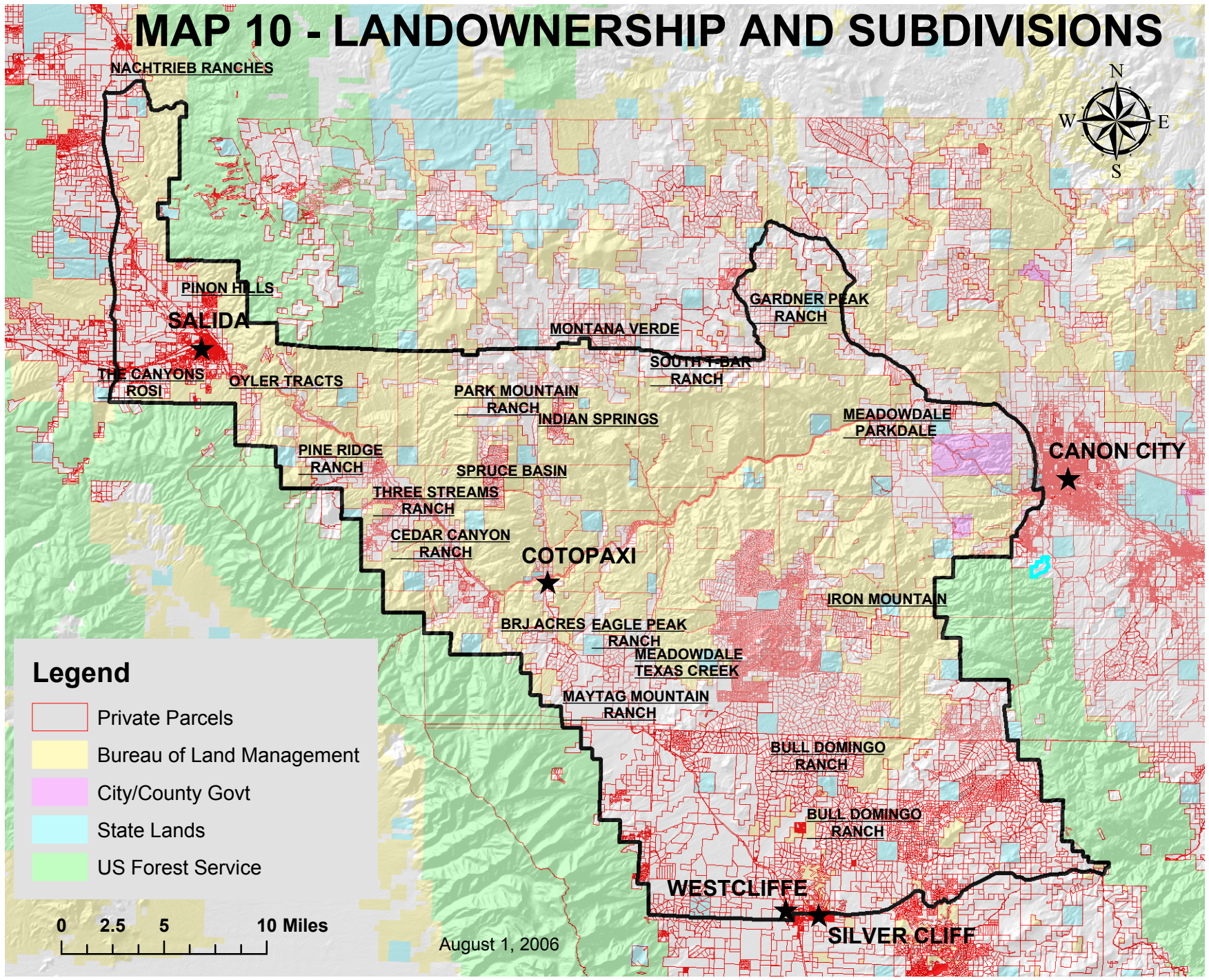
2 COUNTY HIGHWAY

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Map Prepared by N.D. Walker
August 14, 2006



MAP 10 - LANDOWNERSHIP AND SUBDIVISIONS





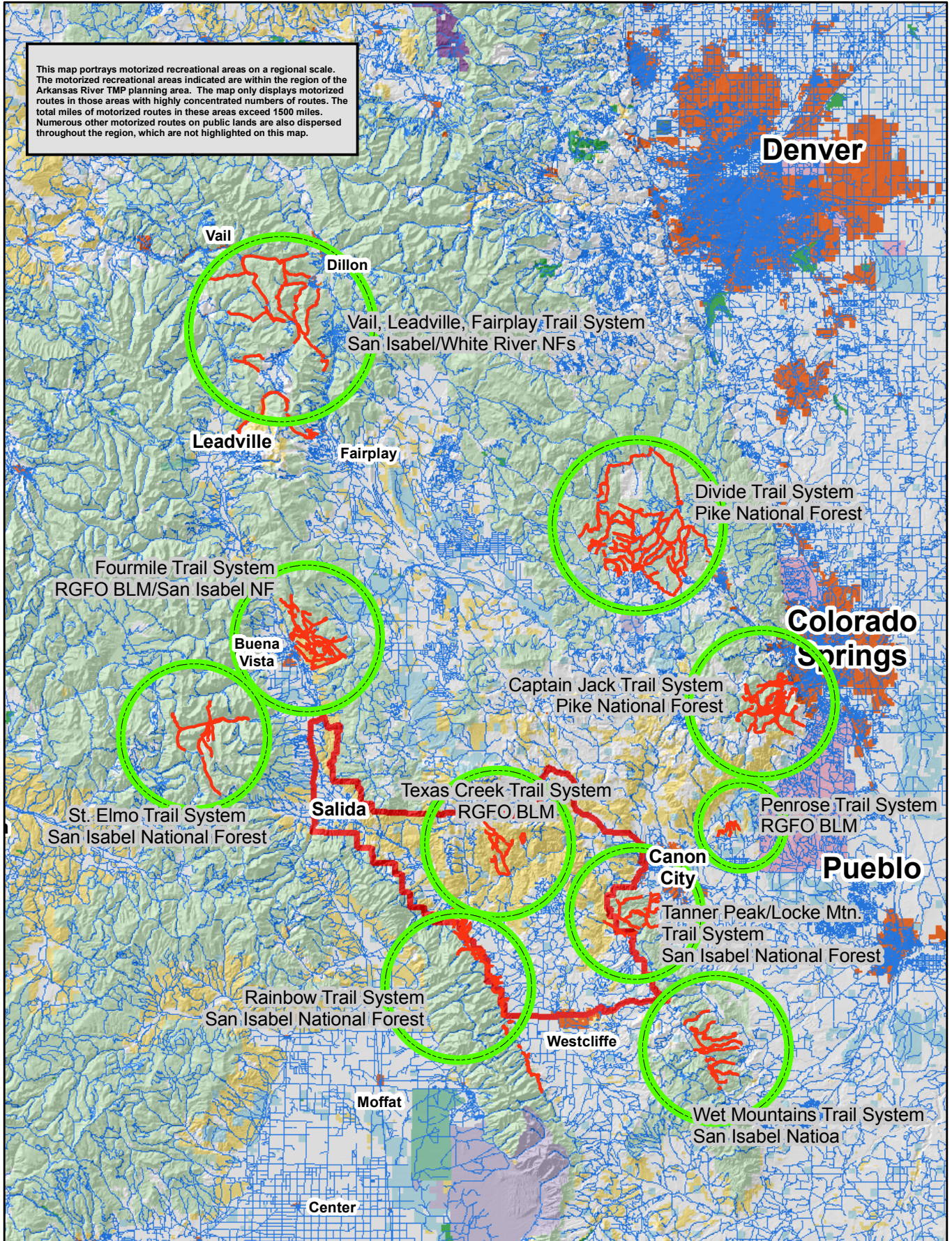
MAP 11

Regional Motorized Recreational Areas

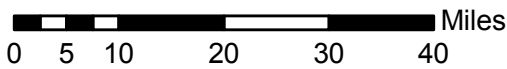
Arkansas River Travel Management Planning Area



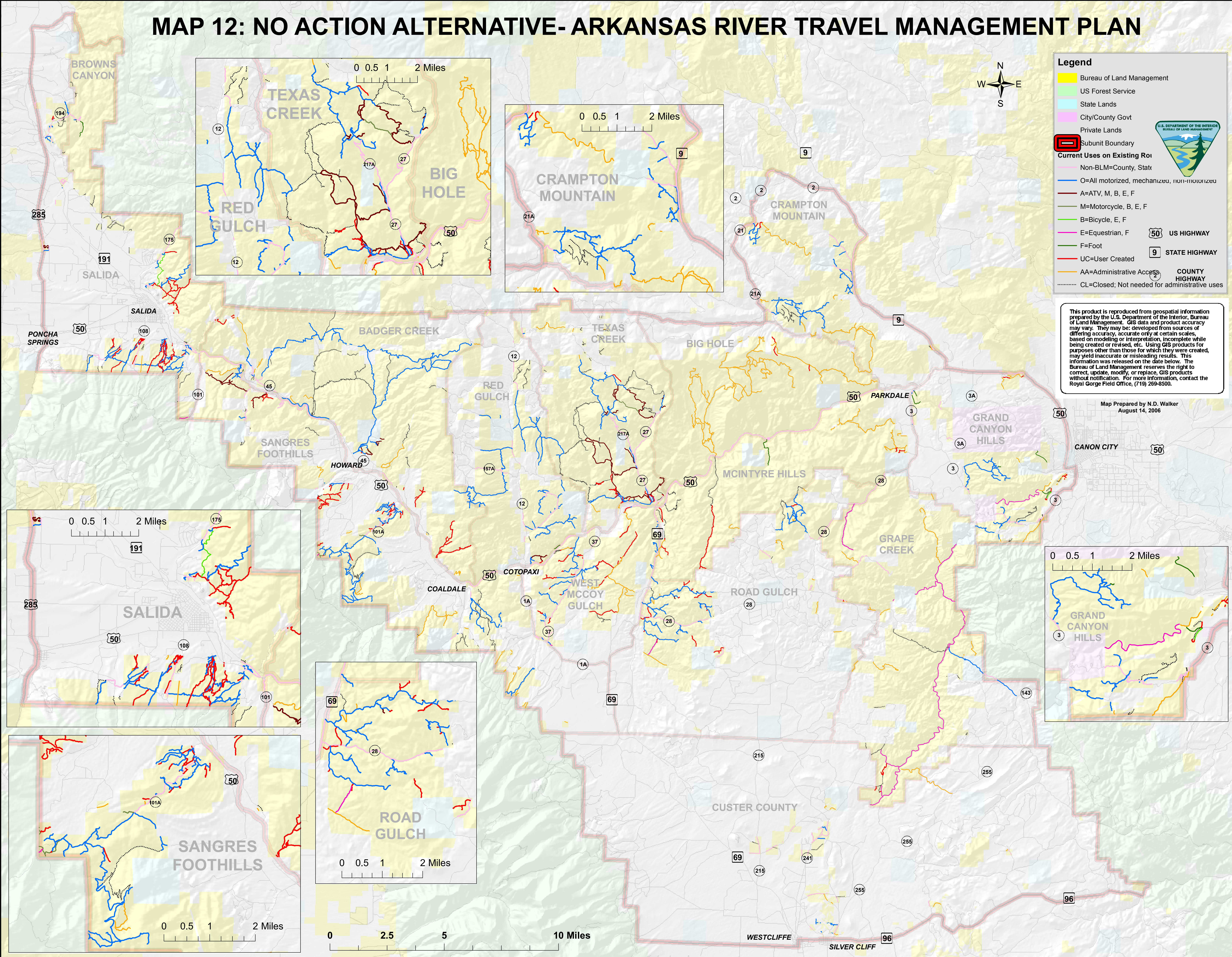
This map portrays motorized recreational areas on a regional scale. The motorized recreational areas indicated are within the region of the Arkansas River TMP planning area. The map only displays motorized routes in those areas with highly concentrated numbers of routes. The total miles of motorized routes in these areas exceed 1500 miles. Numerous other motorized routes on public lands are also dispersed throughout the region, which are not highlighted on this map.



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MAP 12: NO ACTION ALTERNATIVE- ARKANSAS RIVER TRAVEL MANAGEMENT PLAN




Legend

- Bureau of Land Management
- US Forest Service
- State Lands
- City/County Govt
- Private Lands
- Subunit Boundary

Current Uses on Existing Roi

- Non-BLM=County, State
- O=All motorized, mechanized, non-motorized
- A=ATV, M, B, E, F
- M=Motorcycle, B, E, F
- B=Bicycle, E, F
- E=Equestrian, F
- F=Foot
- UC=User Created
- AA=Administrative Access
- CL=Closed; Not needed for administrative uses



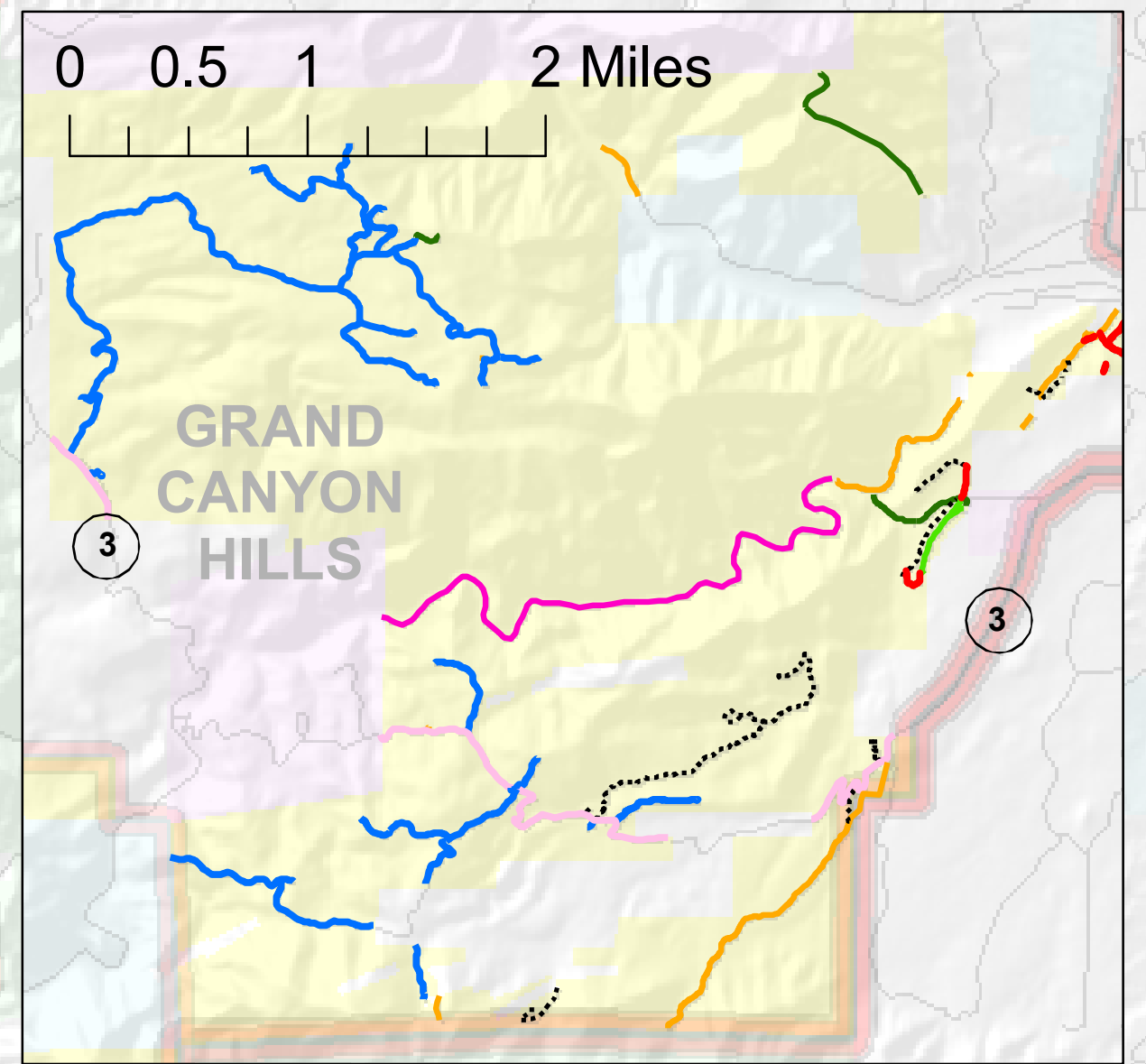
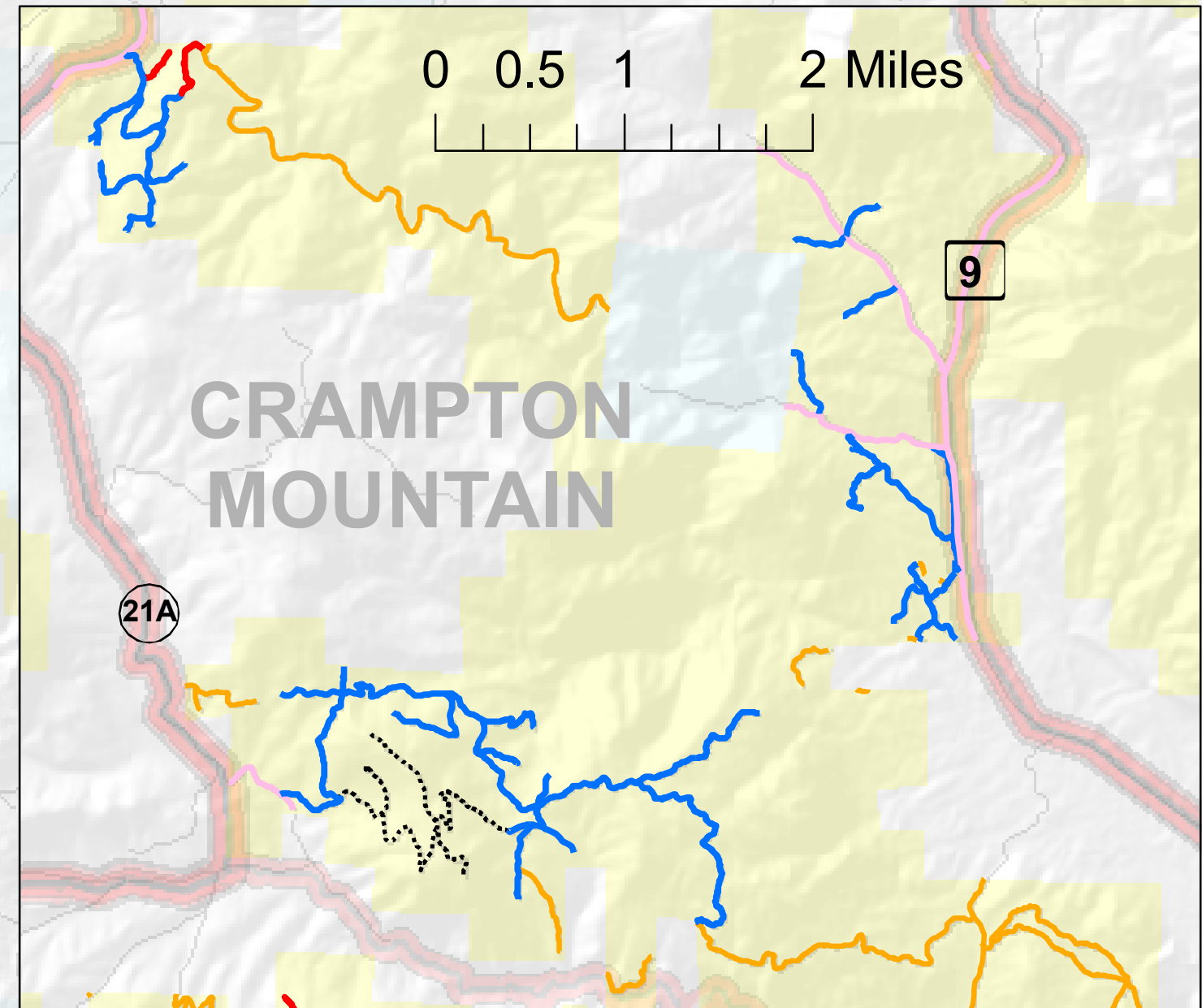
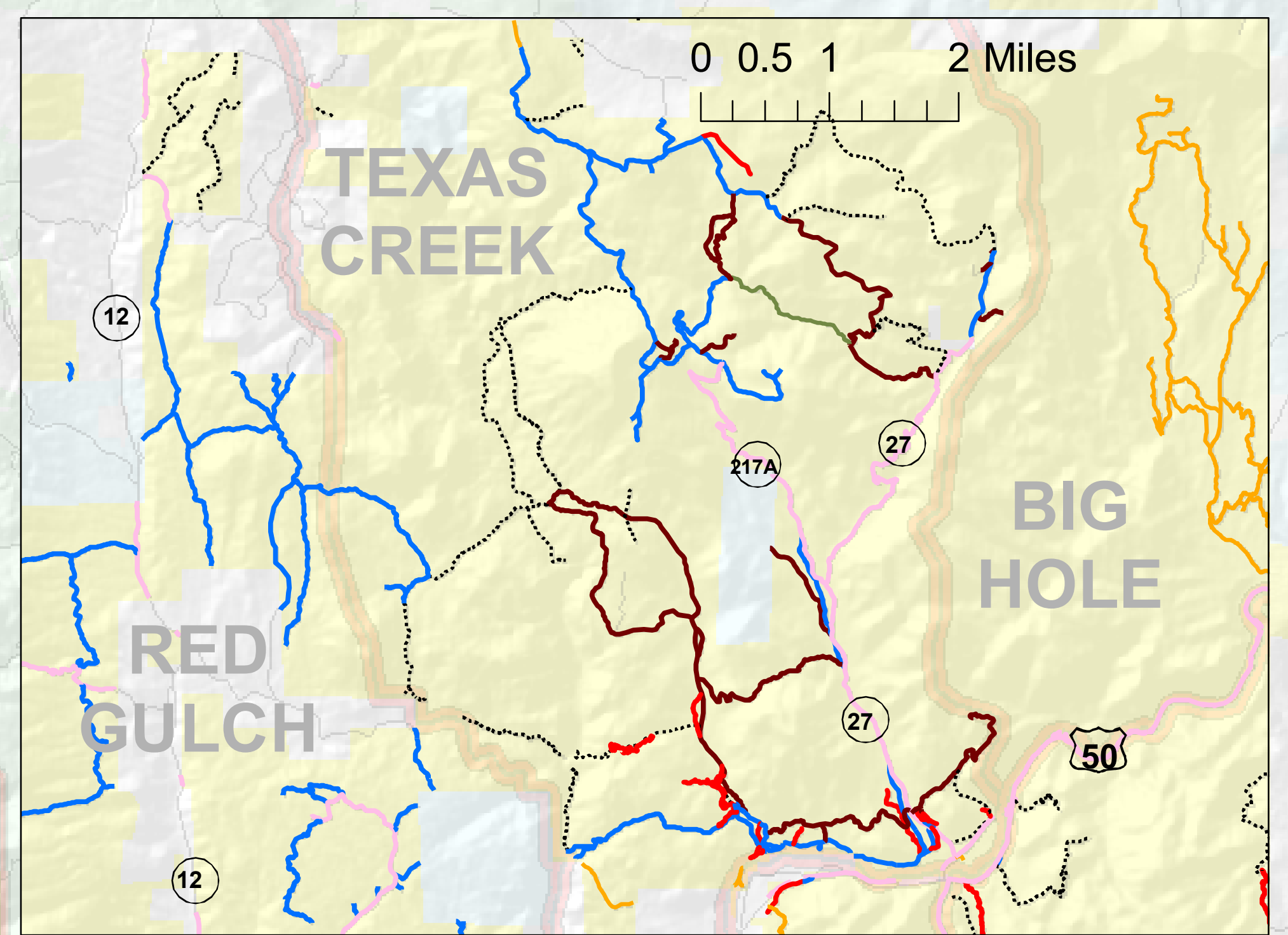
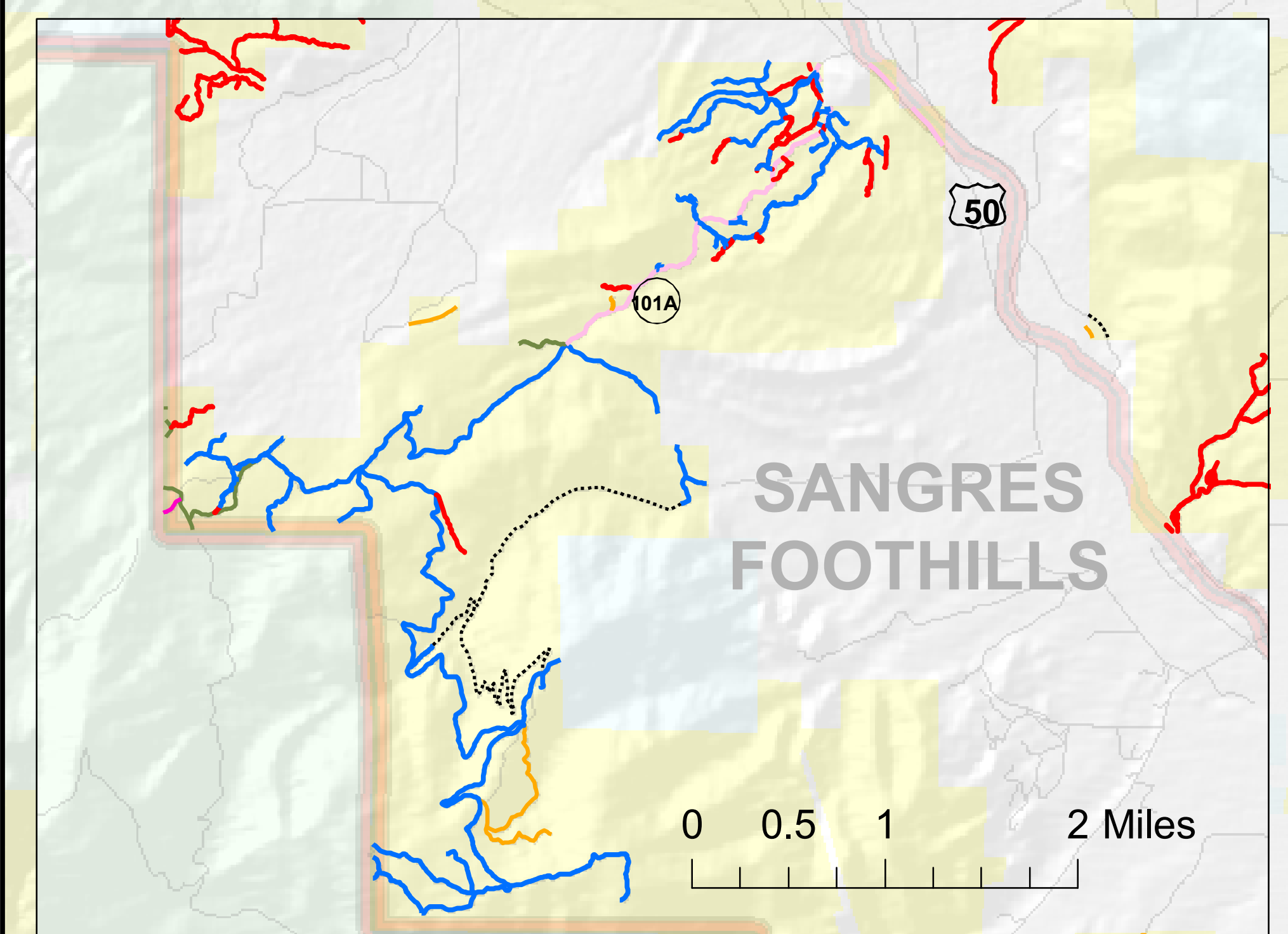
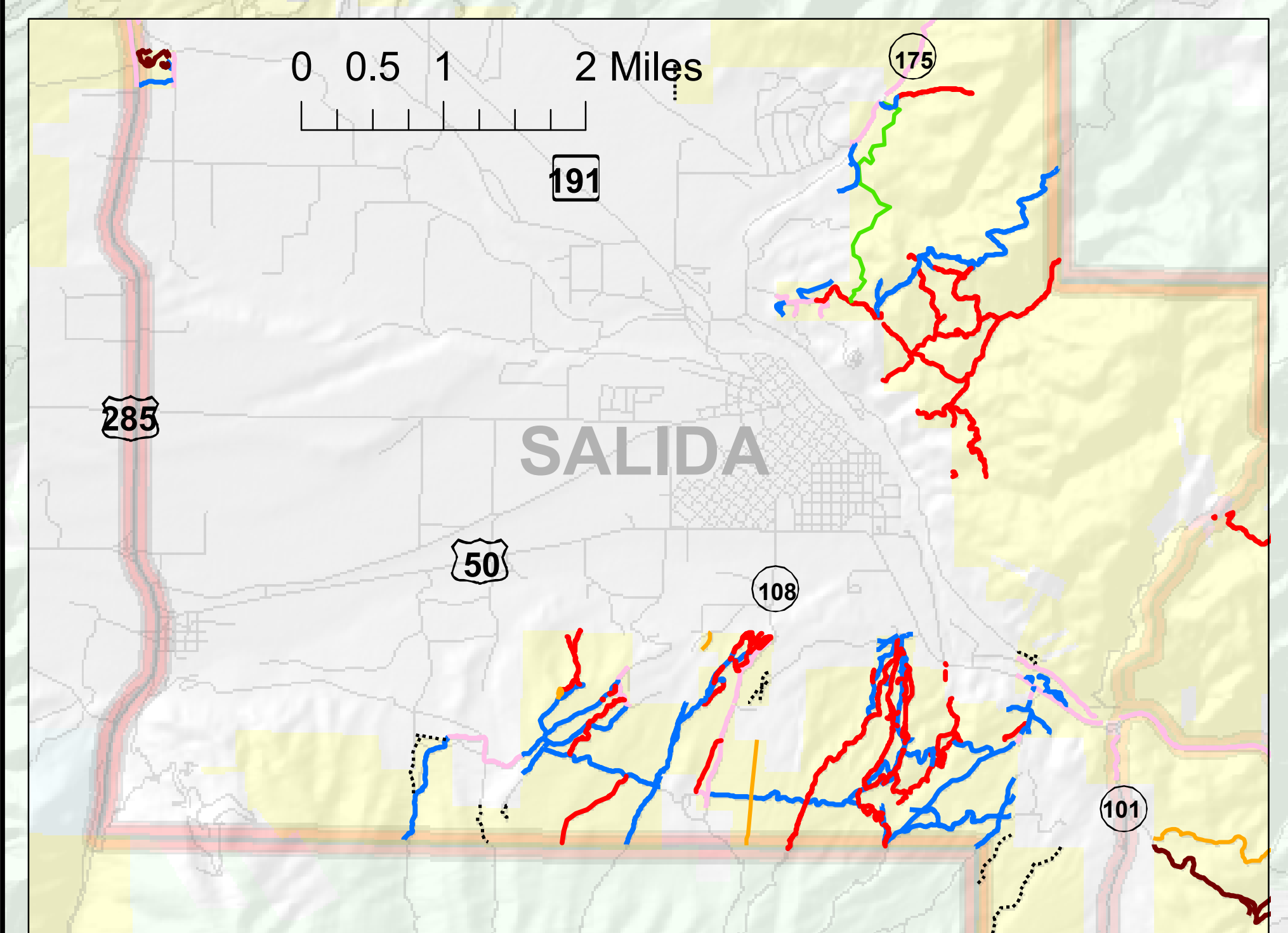
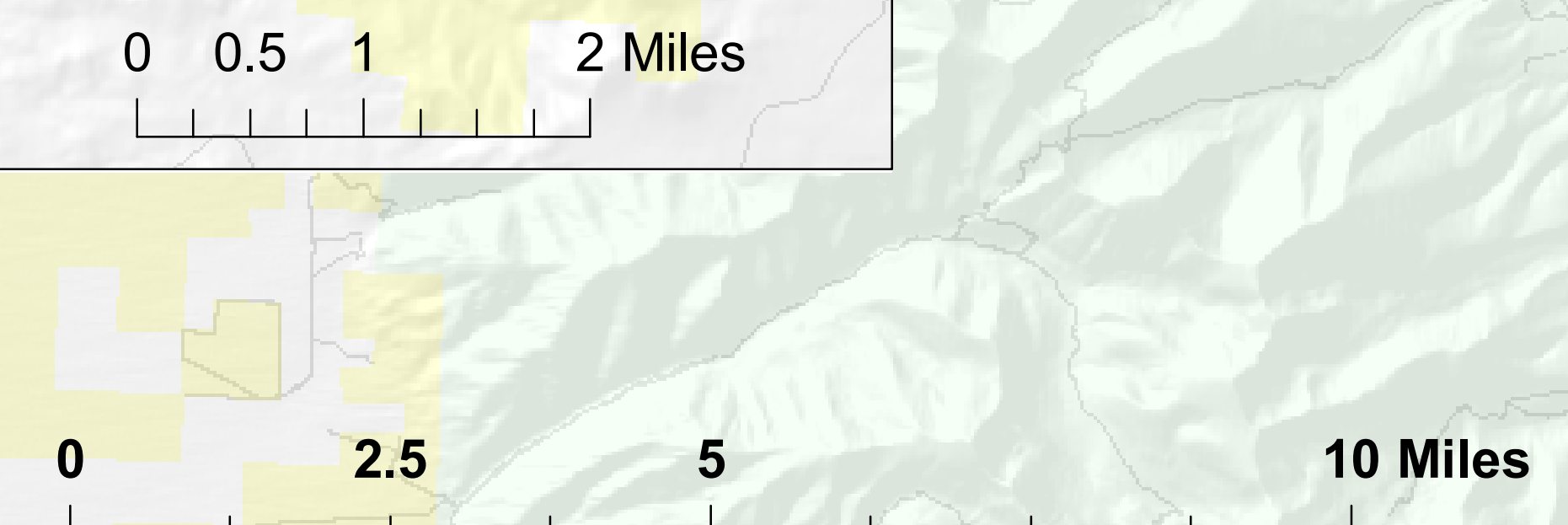
50 US HIGHWAY

9 STATE HIGHWAY

3 COUNTY HIGHWAY

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Map Prepared by N.D. Walker
August 14, 2006



MAP 13: ALTERNATIVE A - ARKANSAS RIVER TRAVEL MANAGEMENT PLAN



Legend

- Bureau of Land Management
- US Forest Service
- State Lands
- City/County Govt
- Private Lands
- Subunit Boundary

Alternative A Route Designat

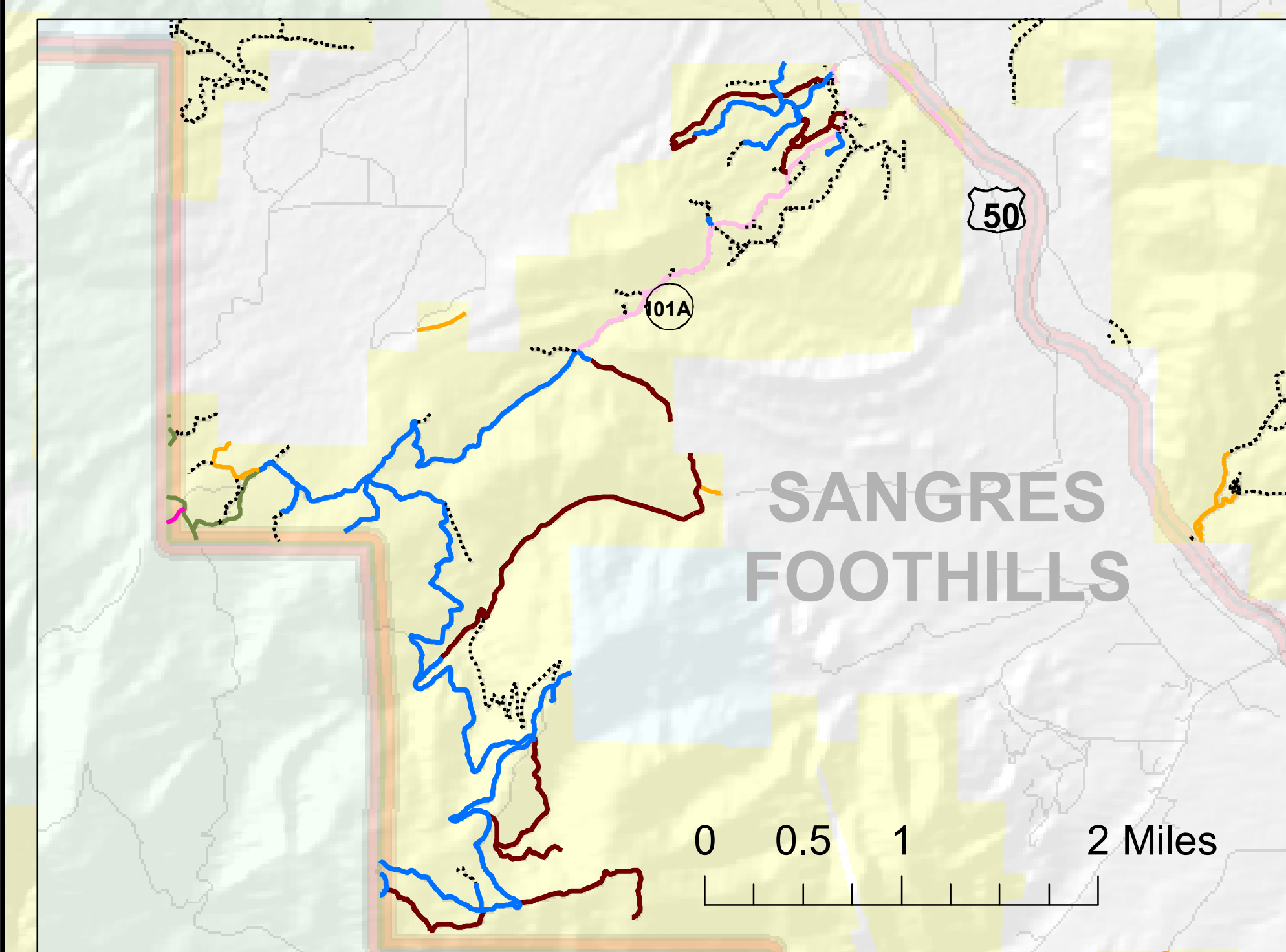
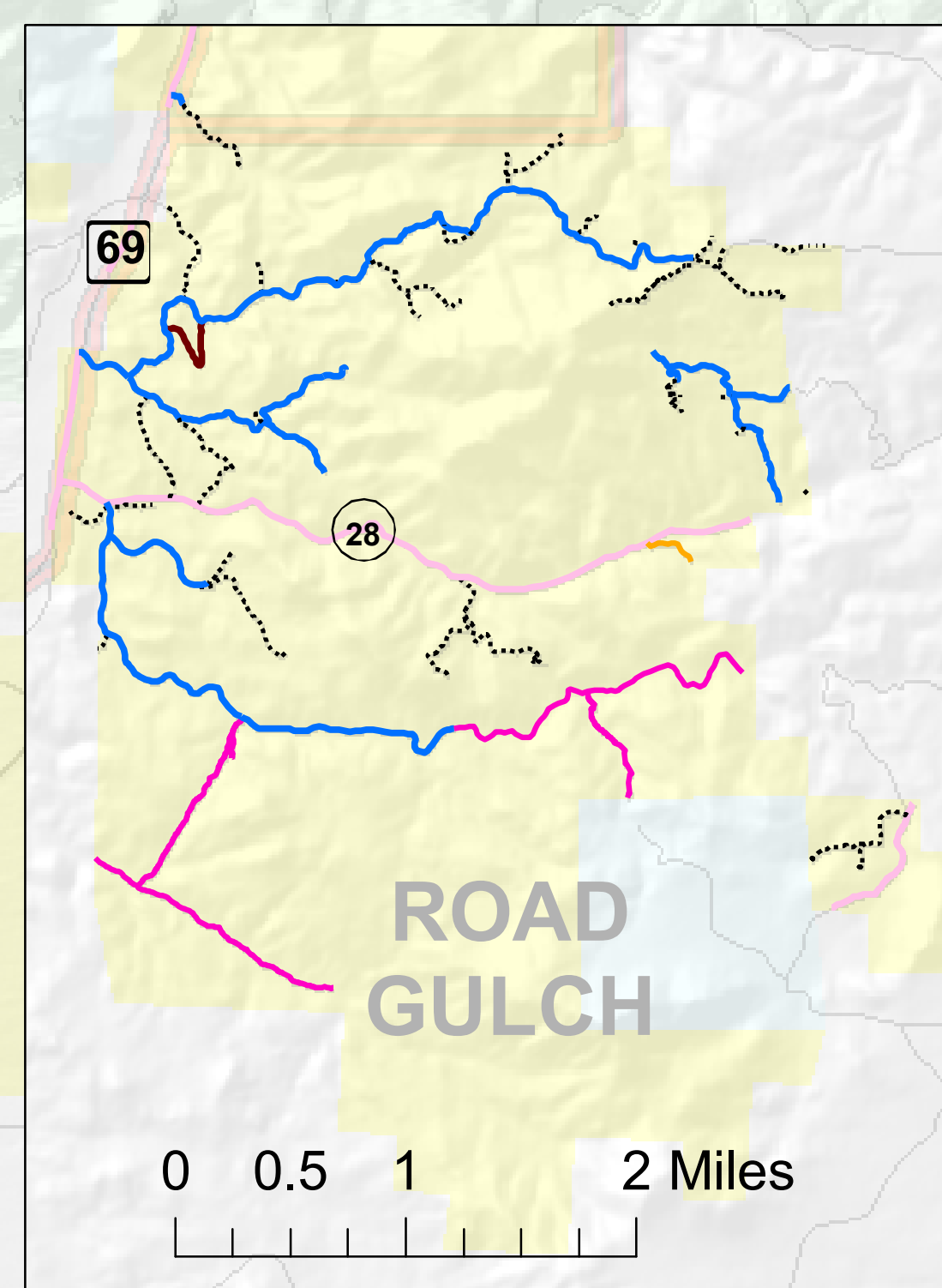
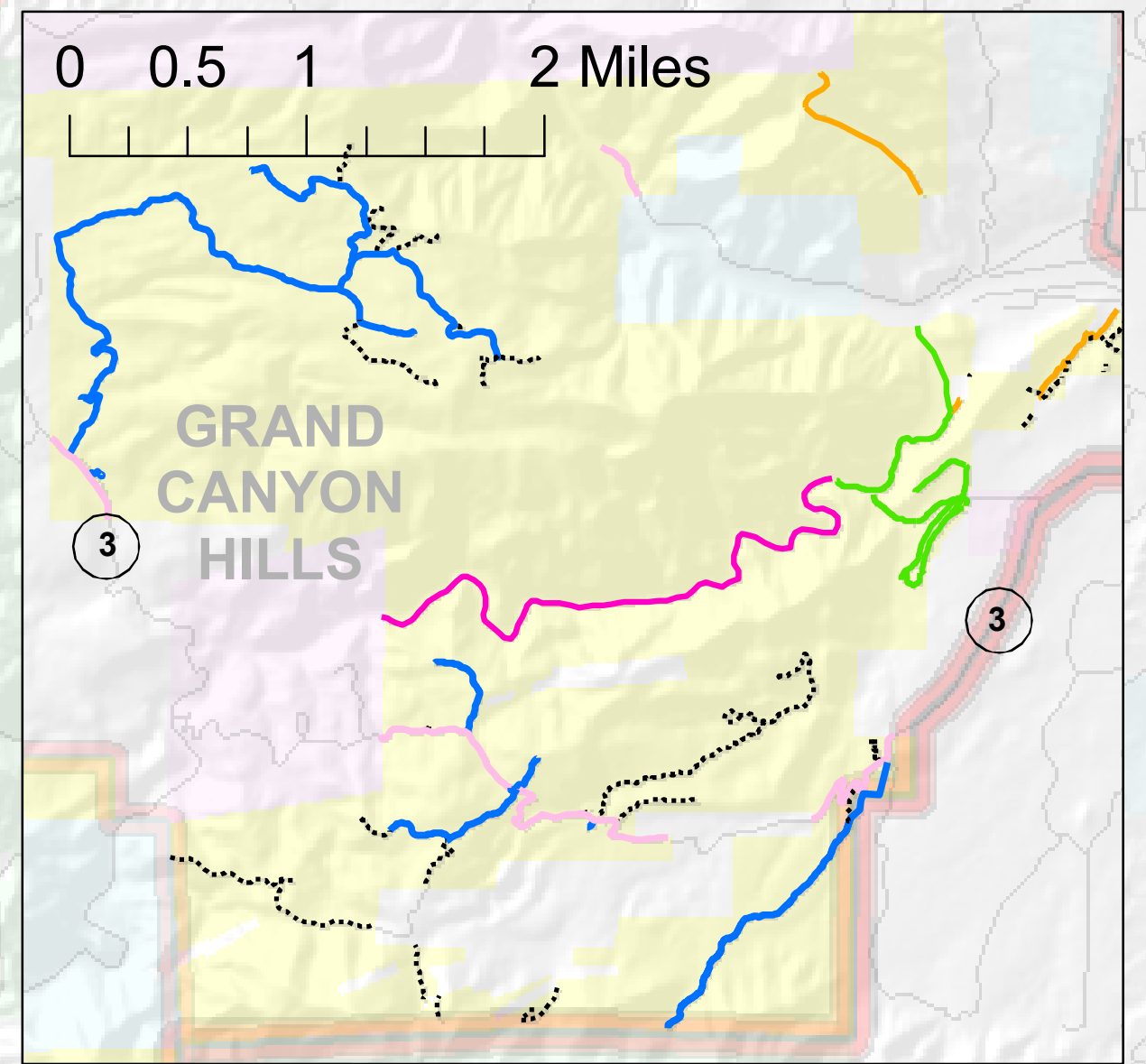
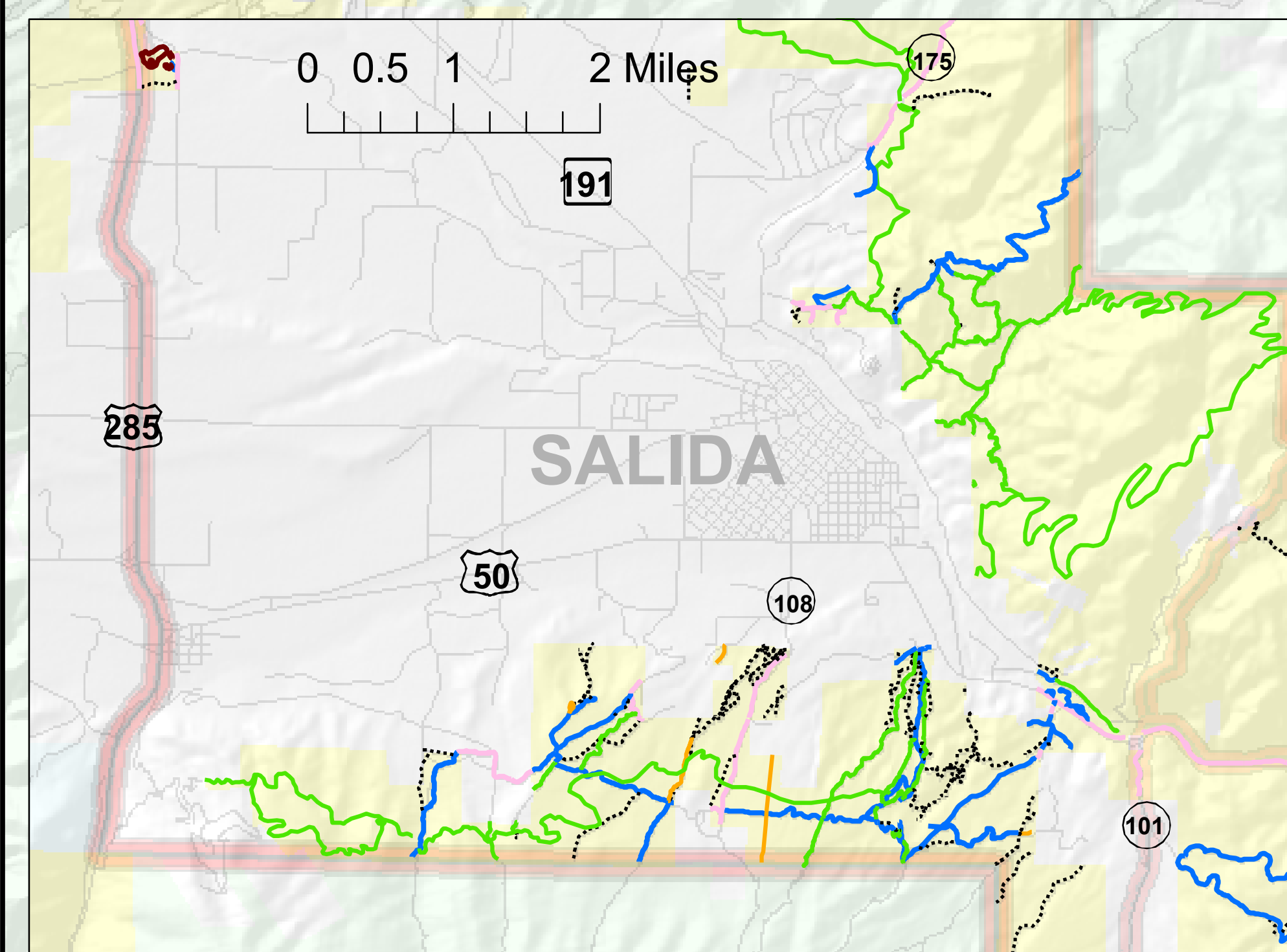
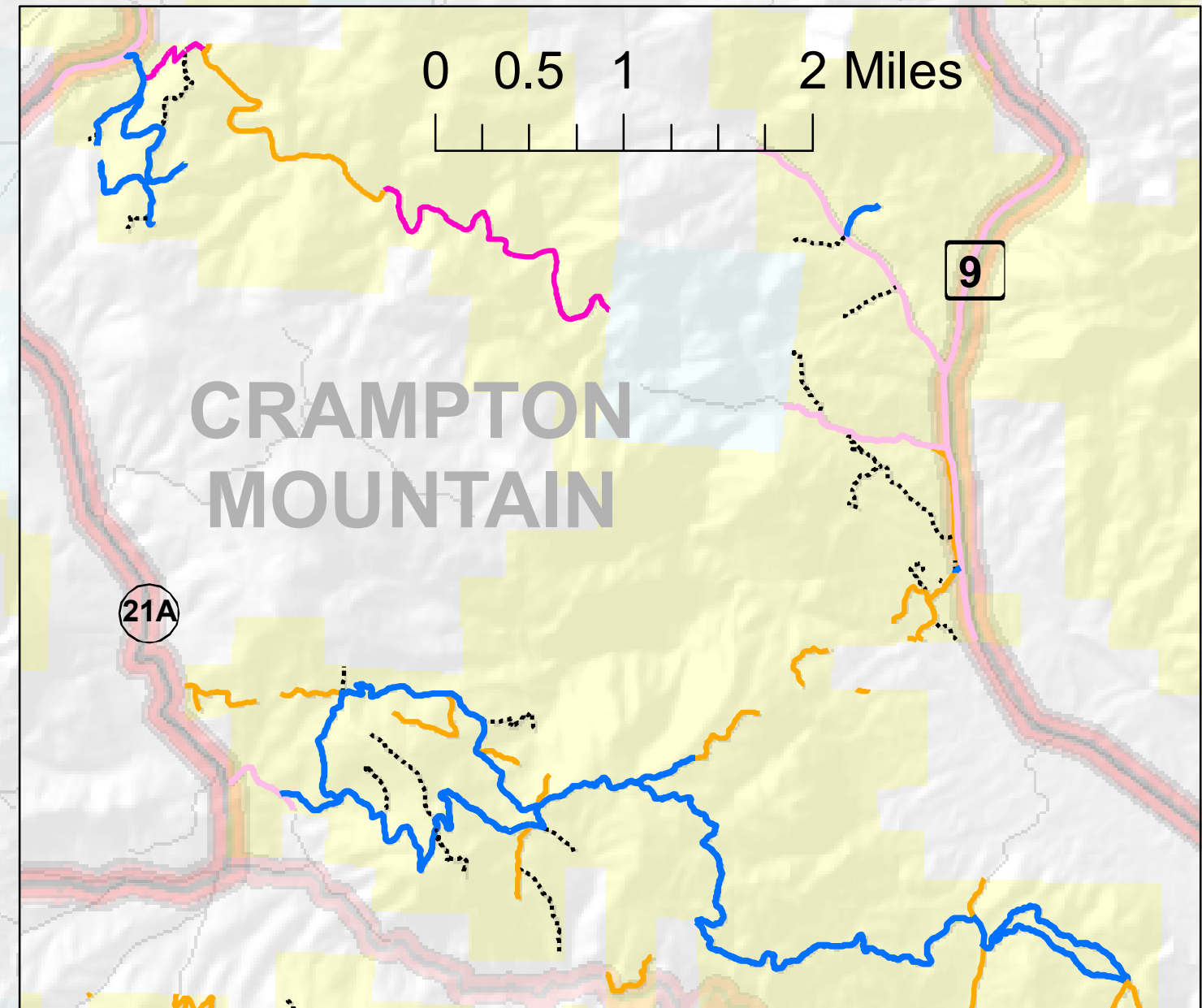
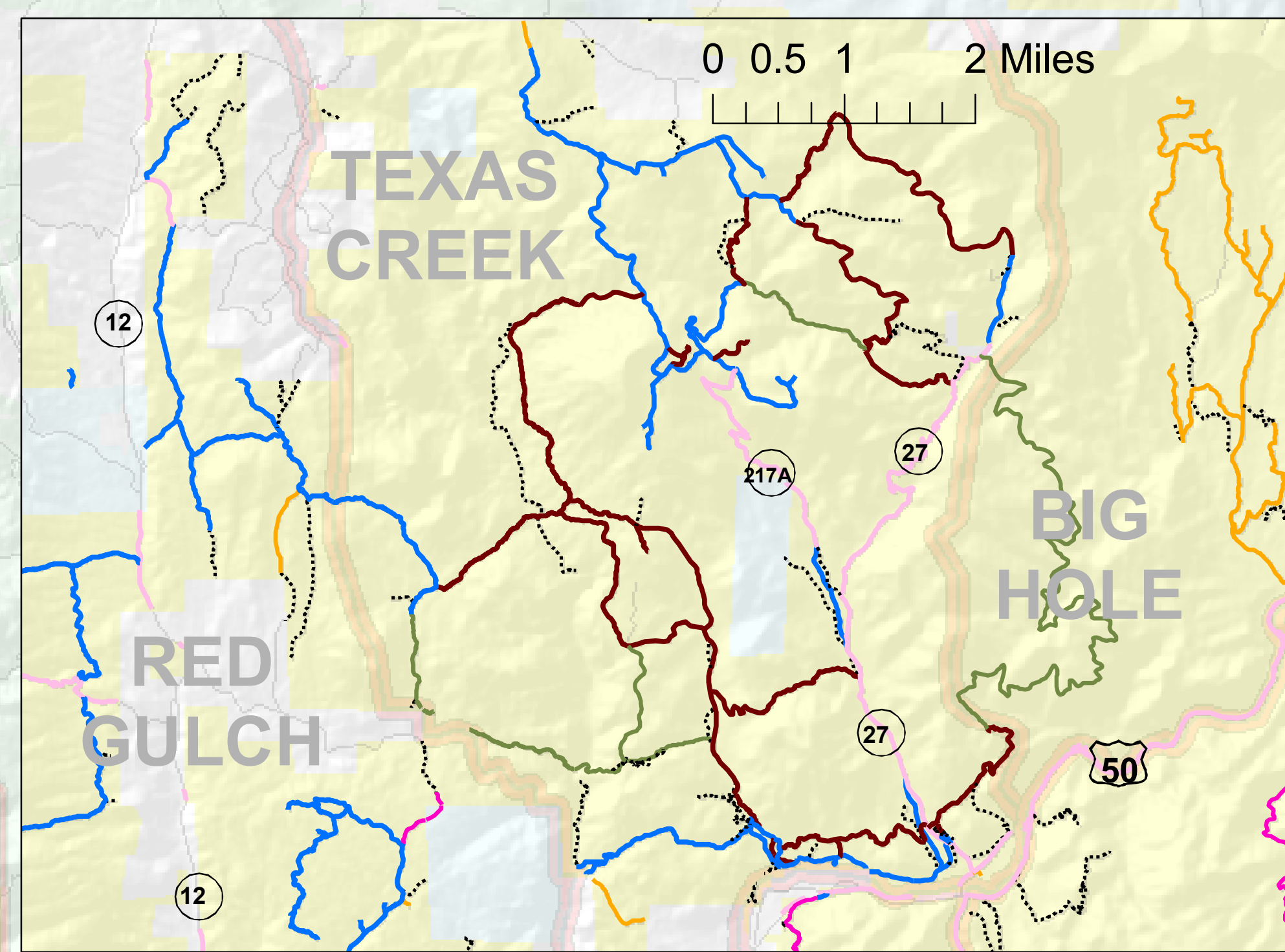
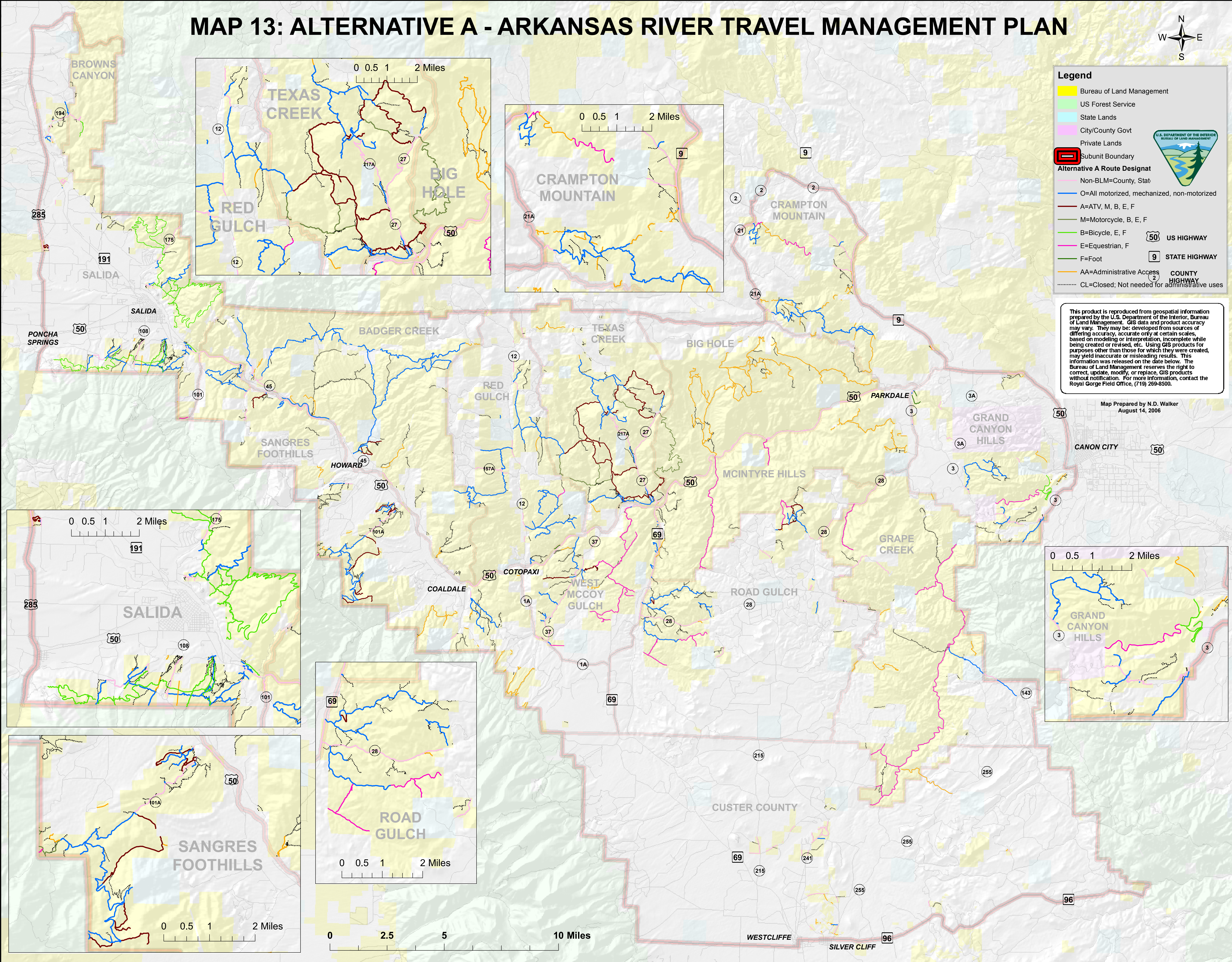
- O=All motorized, mechanized, non-motorized
- A=ATV, M, B, E, F
- M=Motorcycle, B, E, F
- B=Bicycle, E, F
- E=Equestrian, F
- F=Foot
- AA=Administrative Access
- CL=Closed; Not needed for administrative uses

Alternative A Route Designat

- 50 US HIGHWAY
- 9 STATE HIGHWAY
- 2 COUNTY HIGHWAY

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Map Prepared by N.D. Walker
August 14, 2006



MAP 14: ALTERNATIVE B - ARKANSAS RIVER TRAVEL MANAGEMENT PLAN

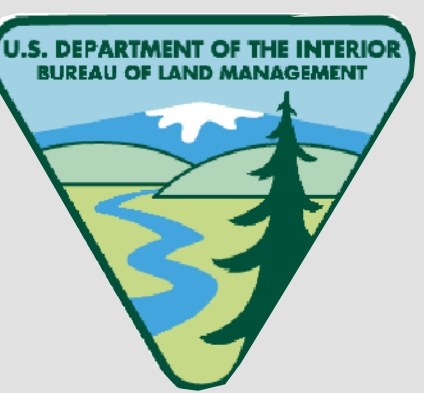


Legend

- Bureau of Land Management
- US Forest Service
- State Lands
- City/County Govt
- Private Lands
- Subunit Boundary

Alternative B Route Designat

- Non-BLM=County, Stat
- O=All motorized, mechanized, non-motorized
- A=ATV, M, B, E, F
- M=Motorcycle, B, E, F
- B=Bicycle, E, F
- E=Equestrian, F
- F=Foot
- AA=Administrative Access
- CL=Closed; Not needed for administrative uses



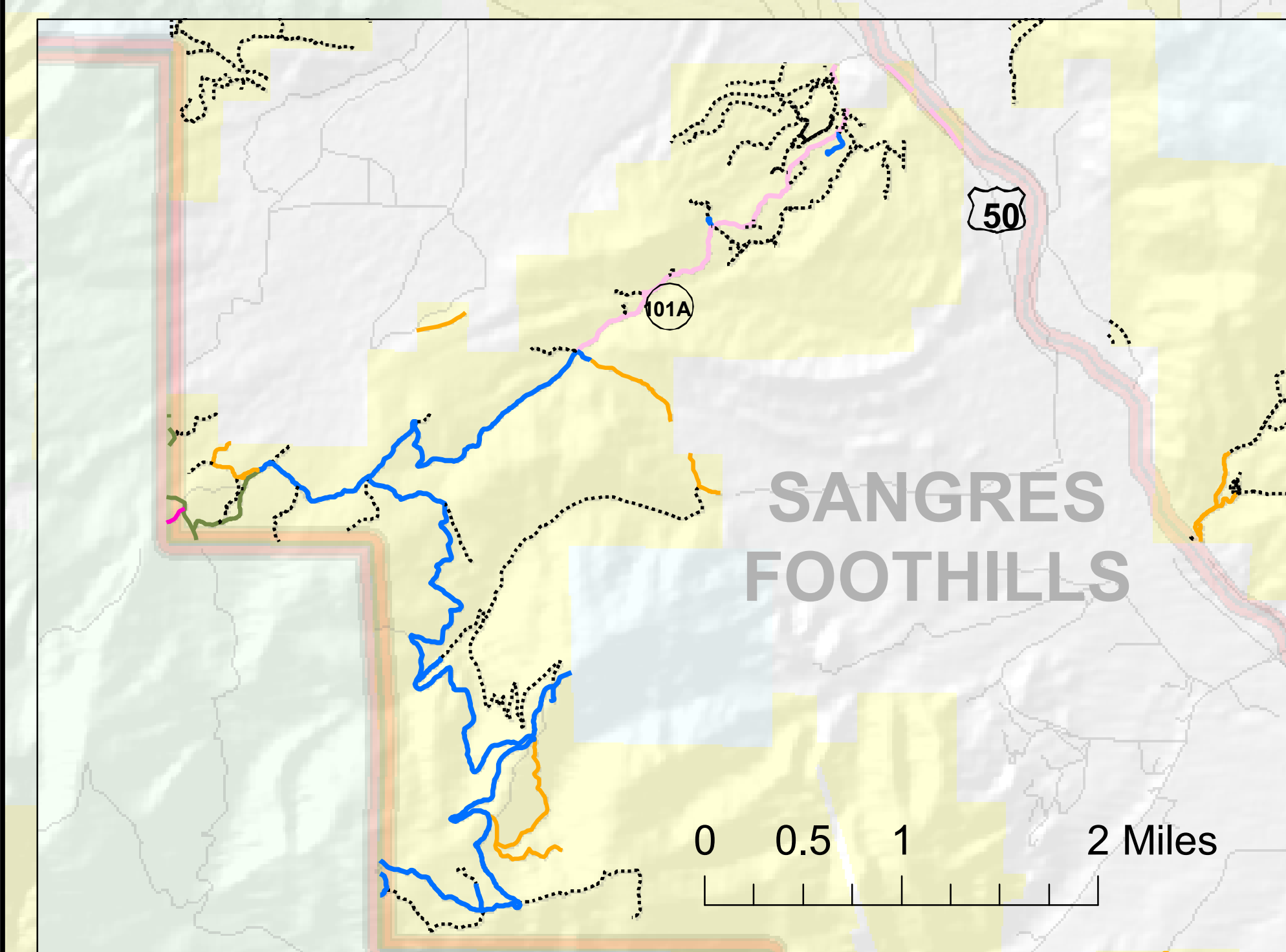
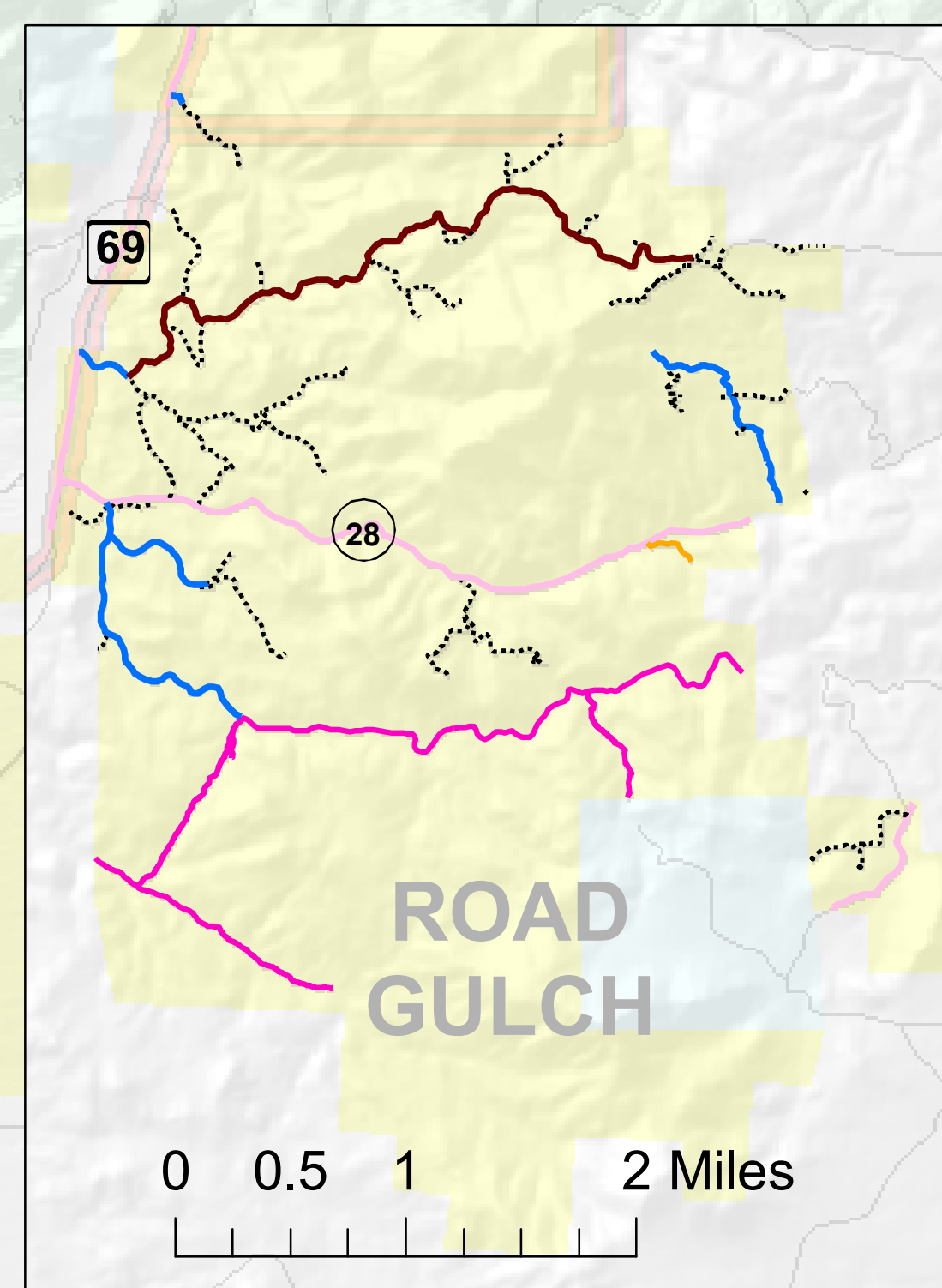
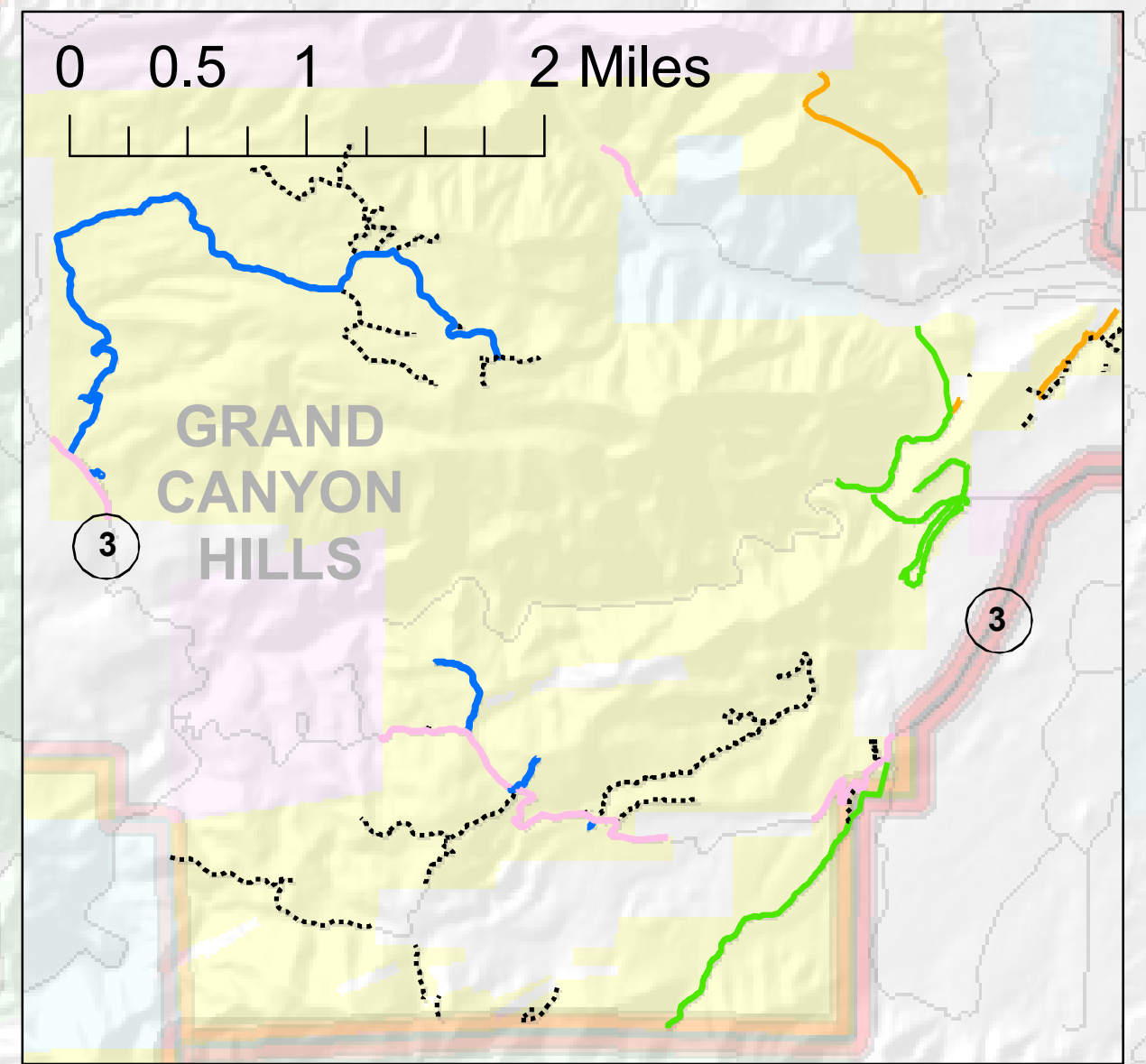
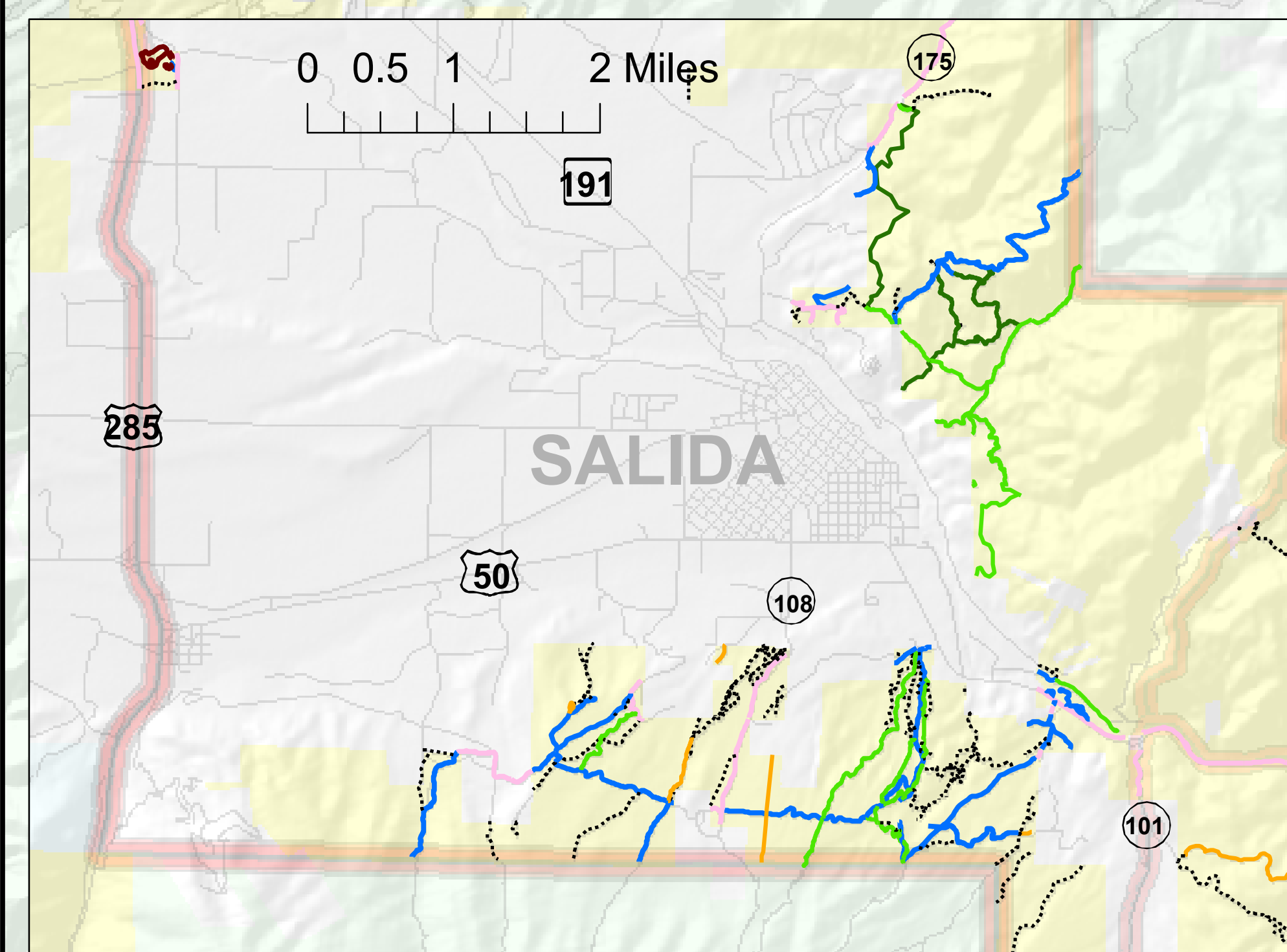
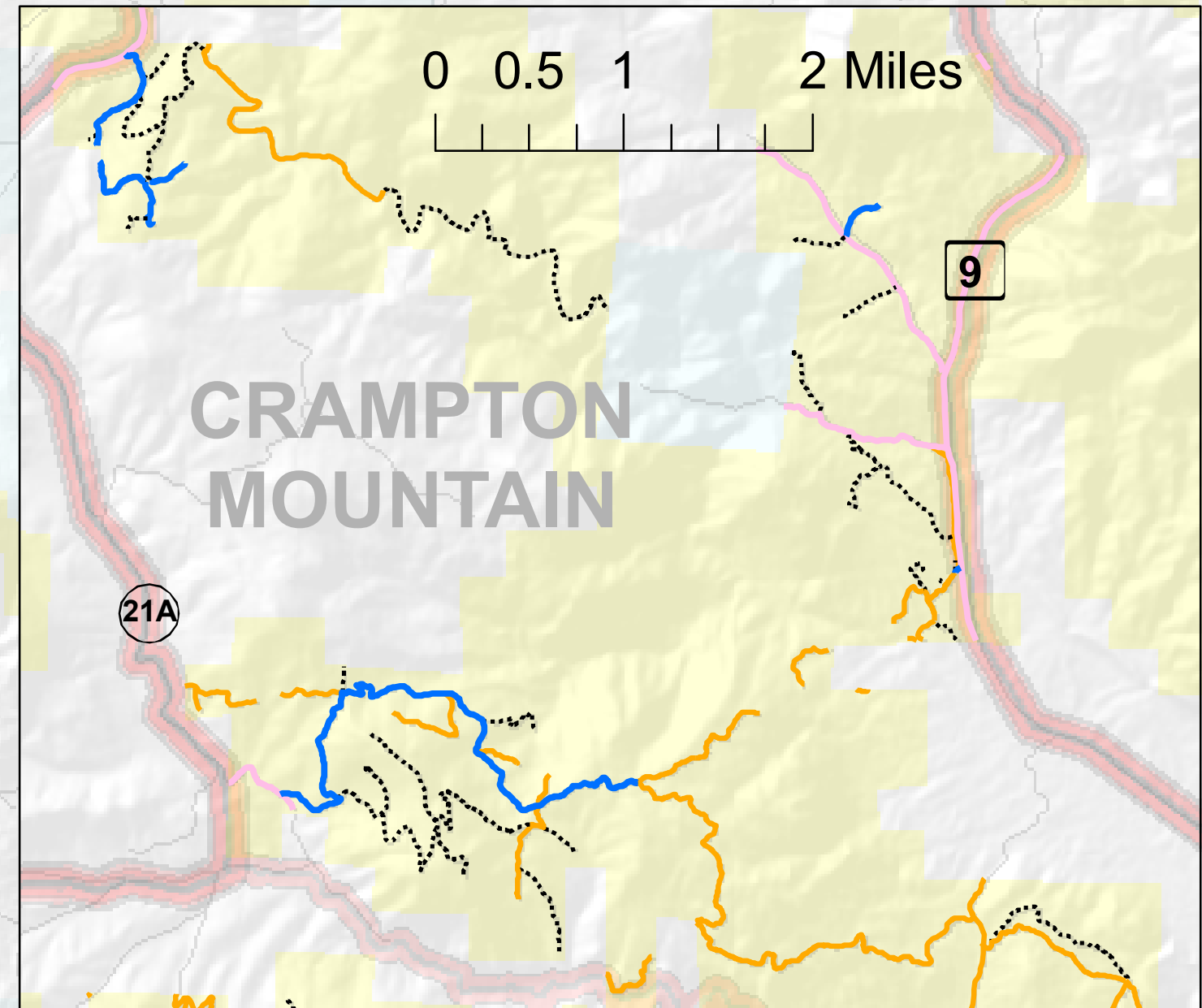
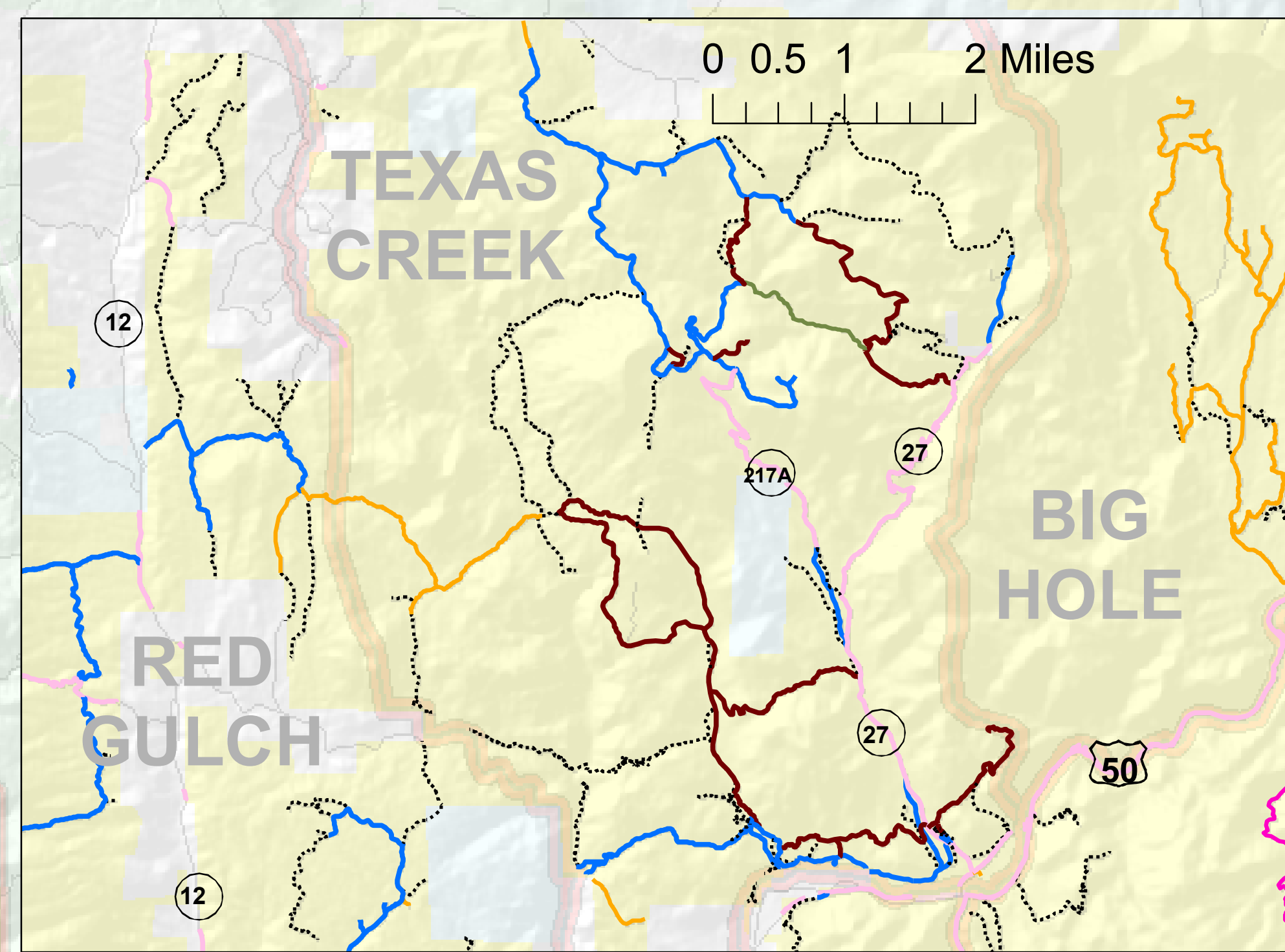
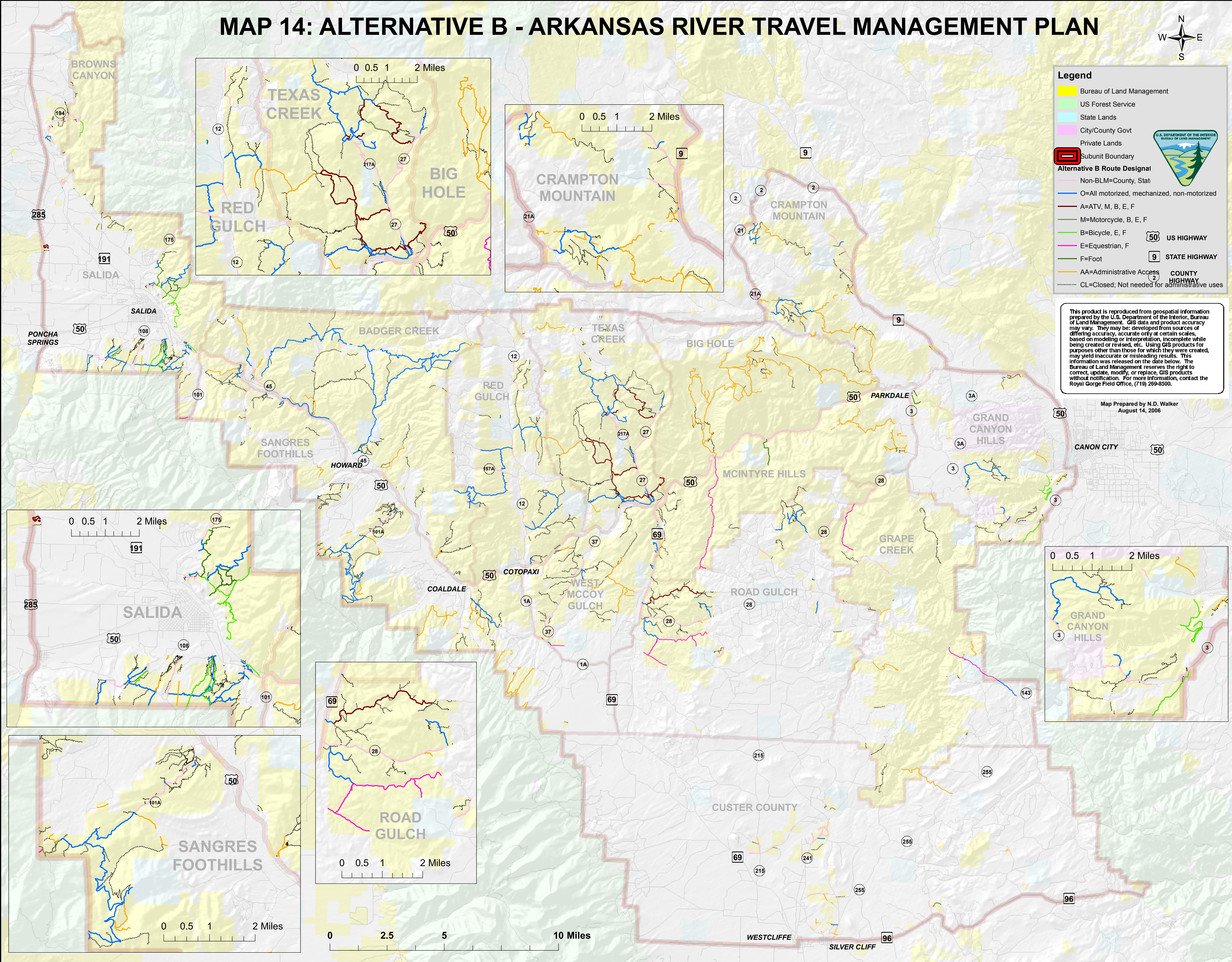
50 US HIGHWAY

9 STATE HIGHWAY

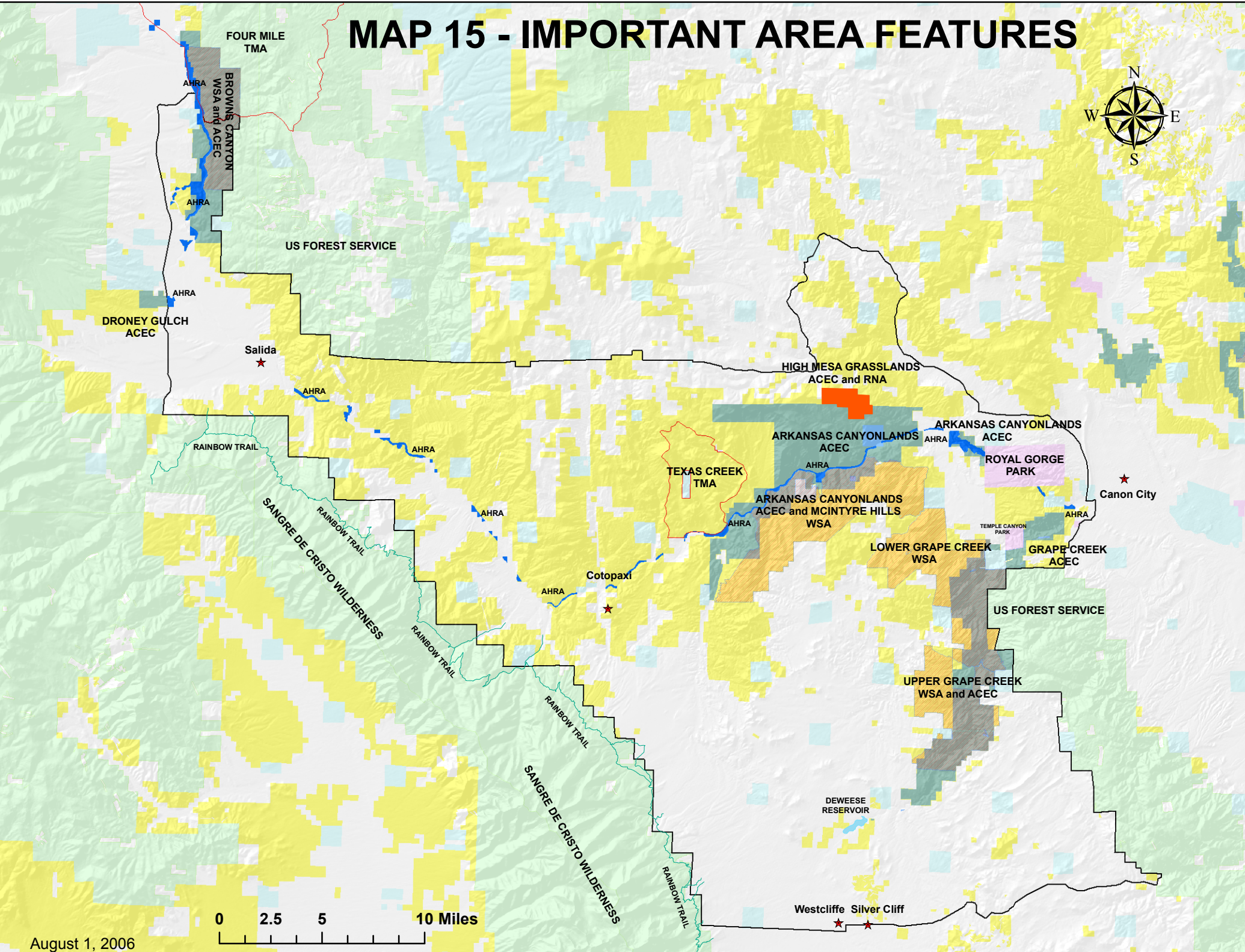
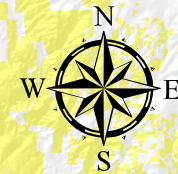
2 COUNTY HIGHWAY

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Map Prepared by N.D. Walker
August 14, 2006



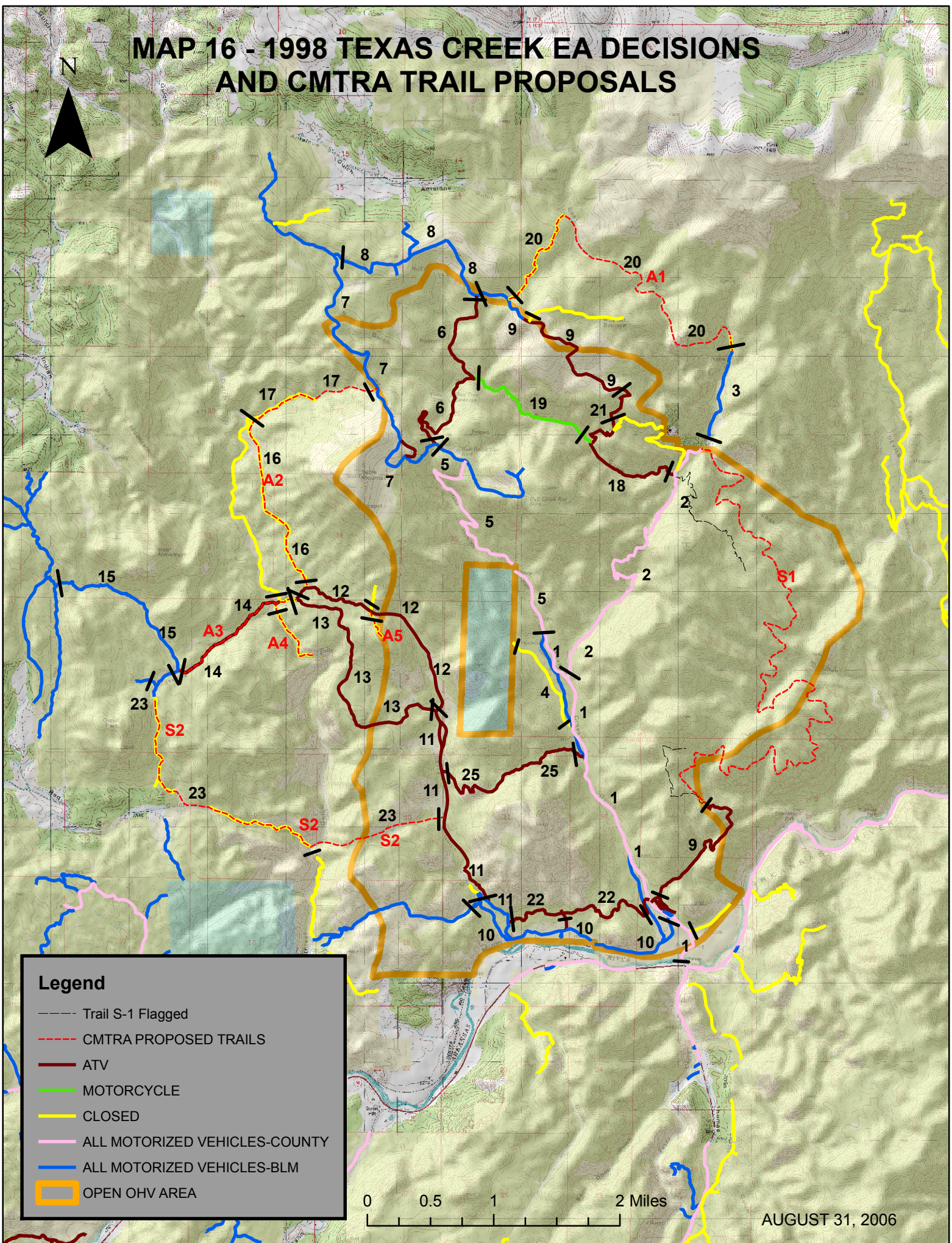
MAP 15 - IMPORTANT AREA FEATURES



August 1, 2006

0 2.5 5 10 Miles

MAP 16 - 1998 TEXAS CREEK EA DECISIONS AND CMTRA TRAIL PROPOSALS



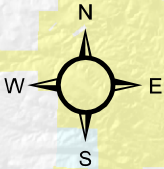
Legend

- Trail S-1 Flagged
- CMTRA PROPOSED TRAILS
- ATV
- MOTORCYCLE
- CLOSED
- ALL MOTORIZED VEHICLES-COUNTY
- ALL MOTORIZED VEHICLES-BLM
- OPEN OHV AREA

0 0.5 1 2 Miles

AUGUST 31, 2006

MAP 17 - BLM ROUTES WITH NO LEGAL PUBLIC ACCESS

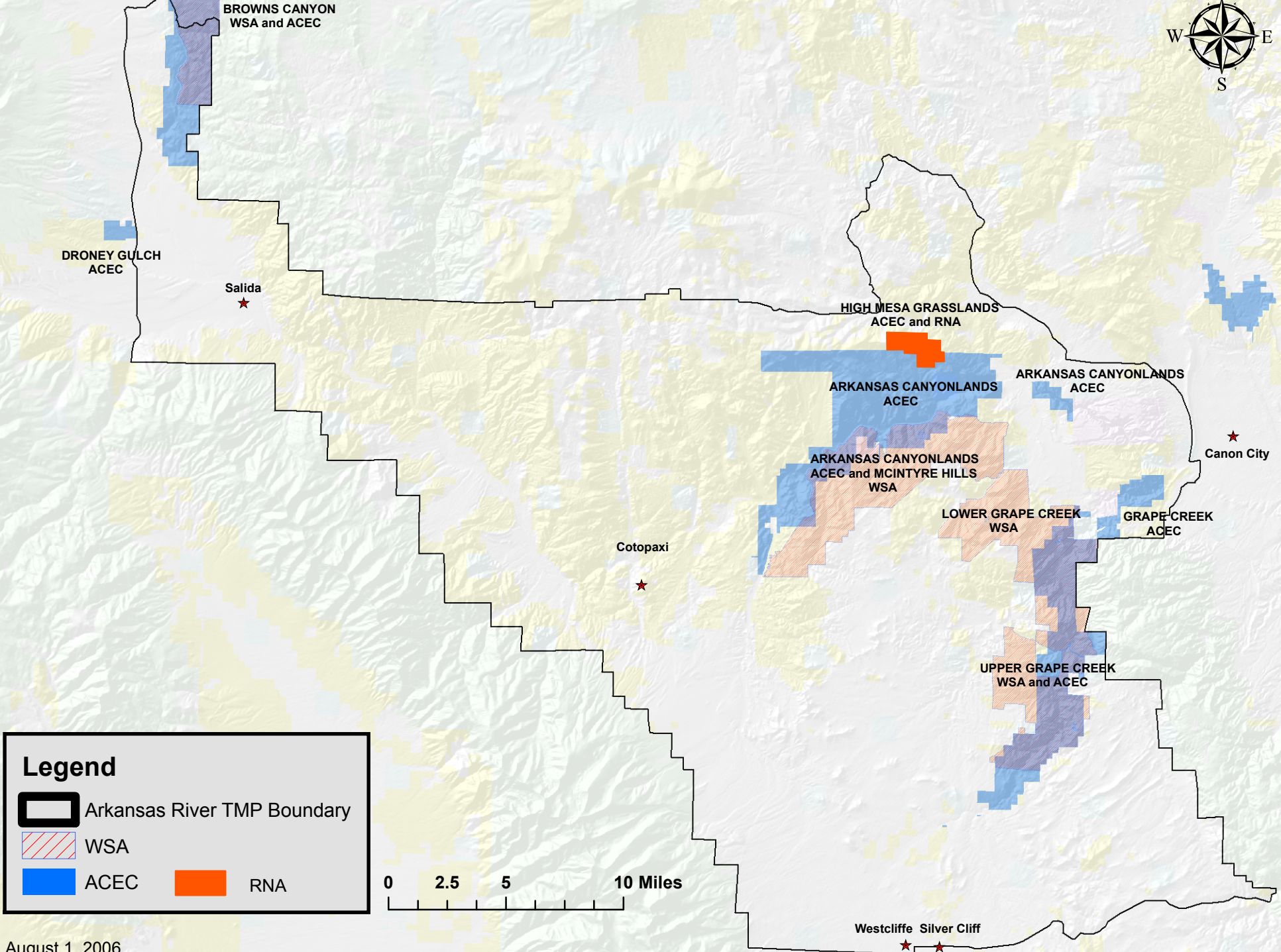


Legend

- CURRENT ROUTES
- CURRENT ROUTES WITH NO LEGAL PUBLIC ACCESS

0 2.5 5 10 Miles

MAP 18 - SPECIAL MANAGEMENT AREAS



Legend

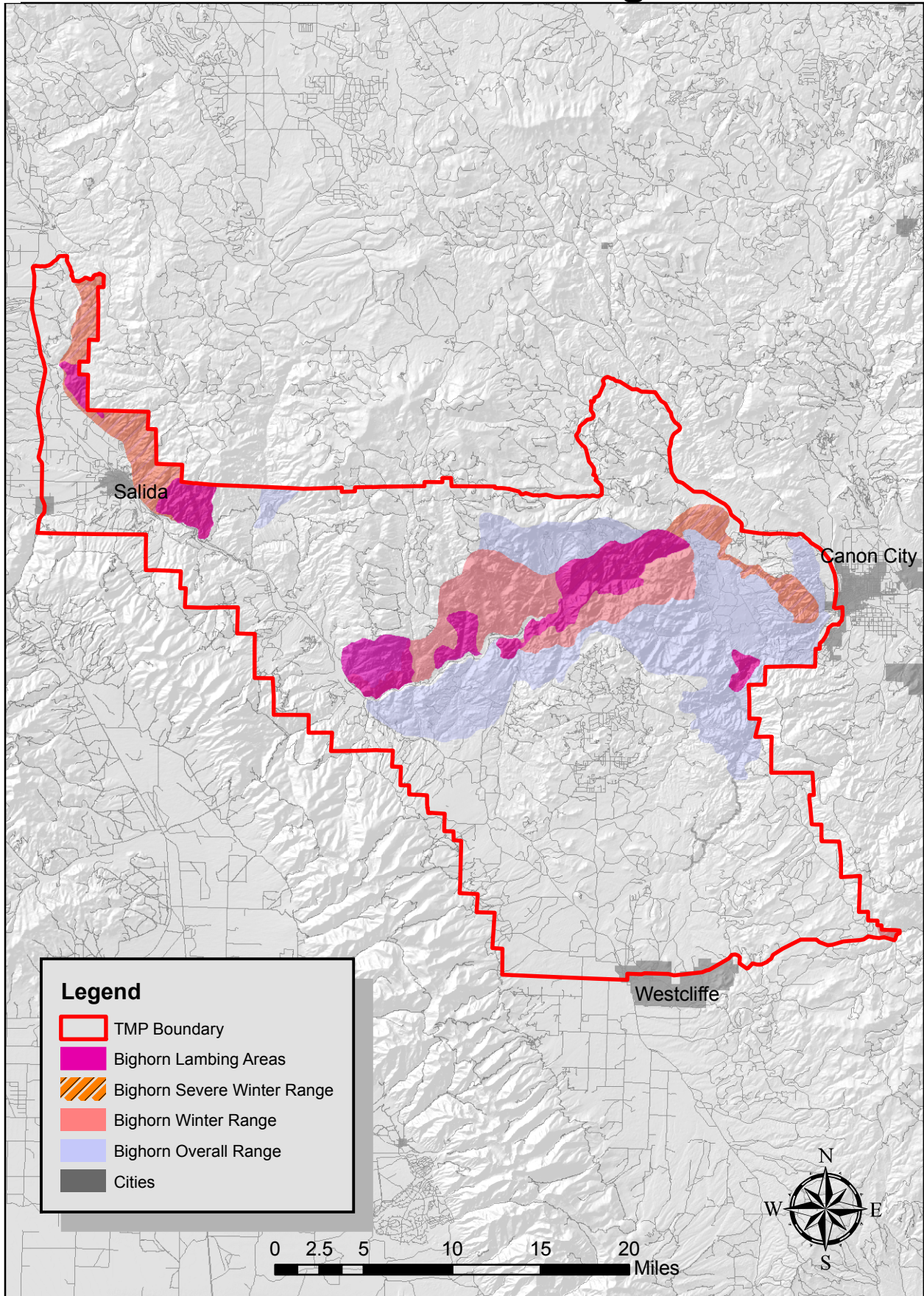
- Arkansas River TMP Boundary
- WSA
- ACEC
- RNA





MAP 19: Bighorn Sheep Habitat Arkansas River Travel Management Plan

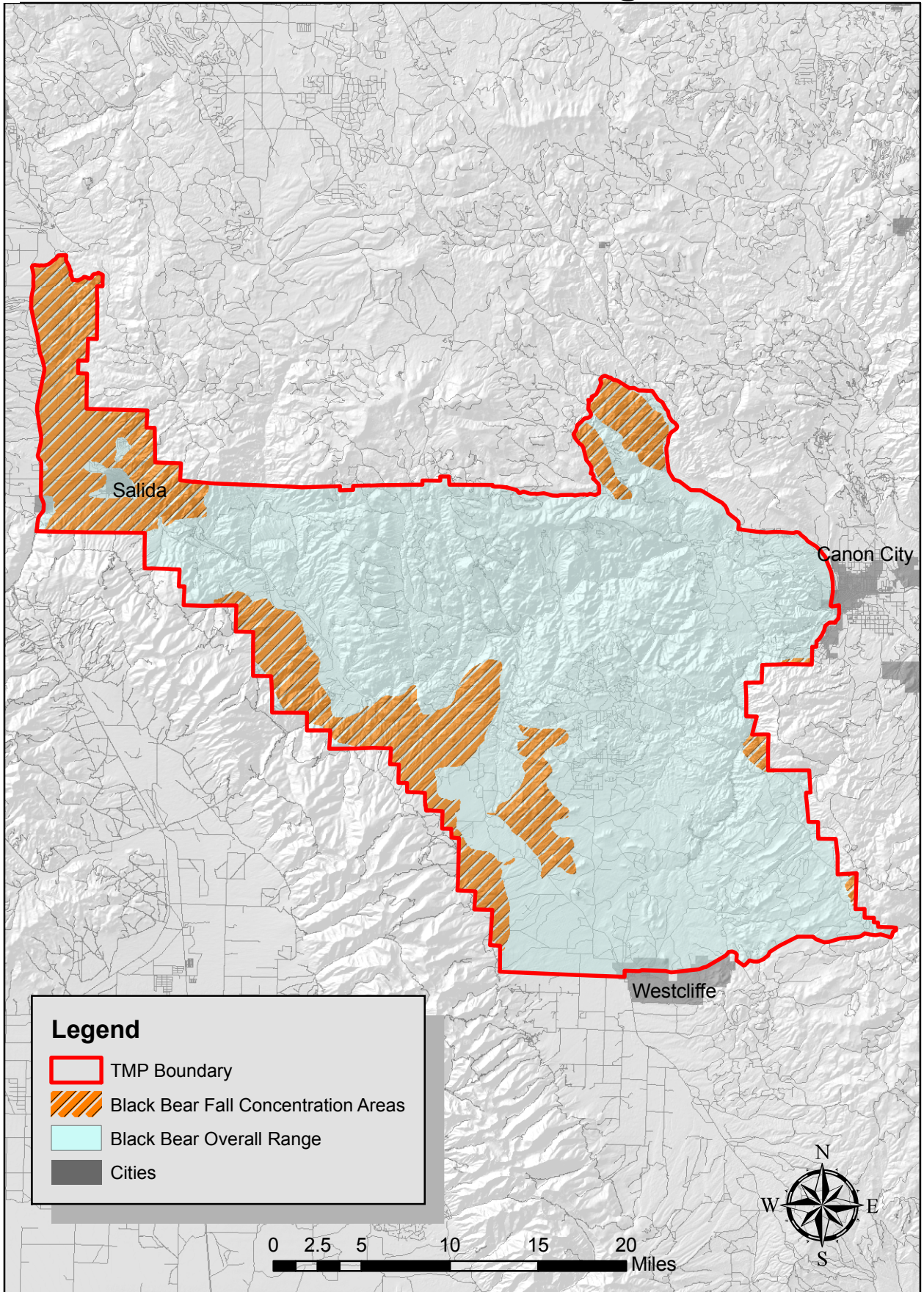
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MAP 20: Black Bear Habitat Arkansas River Travel Management Plan

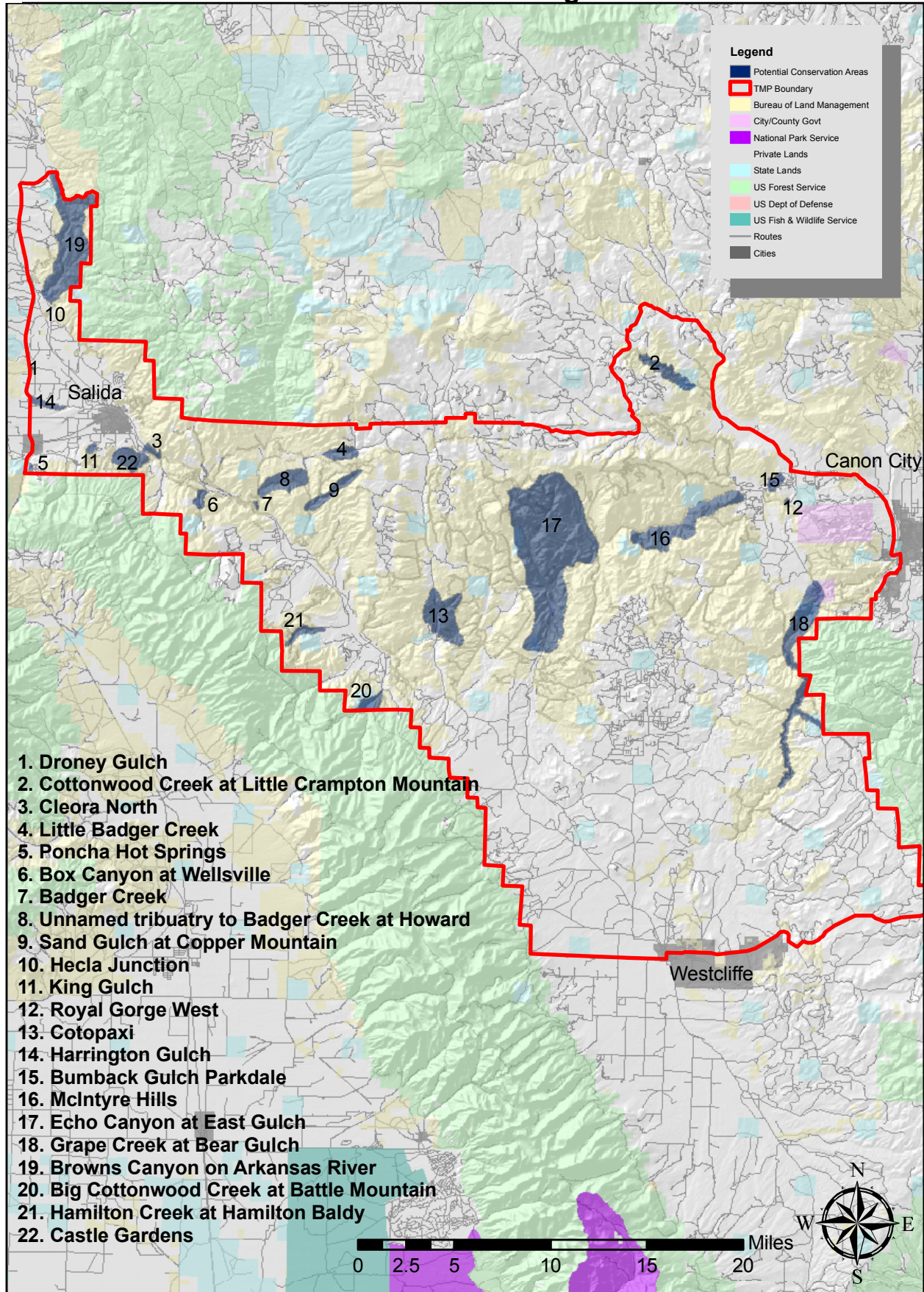
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MAP 21: Colorado Natural Heritage Program Potential Conservation Areas Arkansas River Travel Management Plan

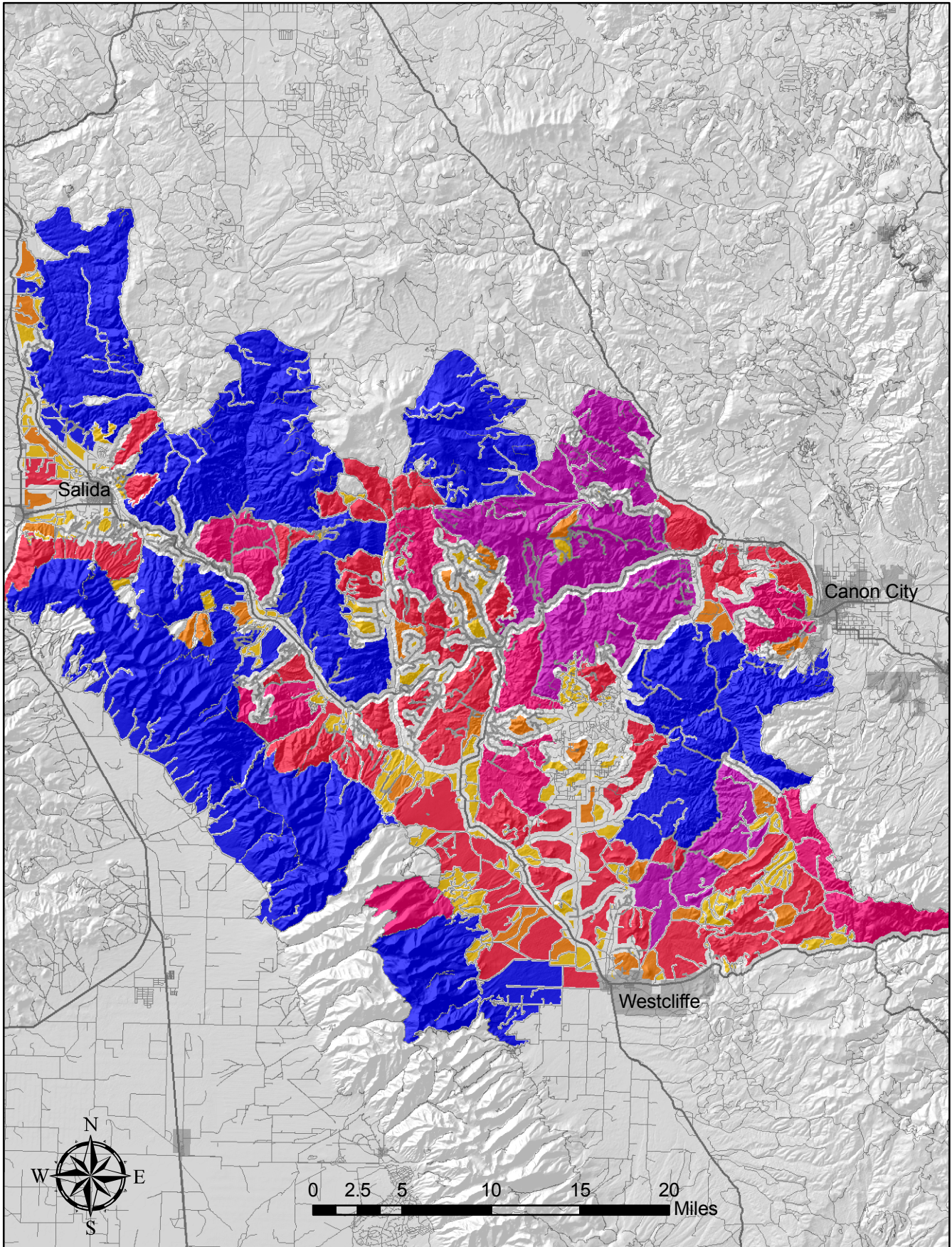
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MAP 22: Core Interior Habitat-Alternative A Arkansas River Travel Management Plan

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Core Area Size (acres)

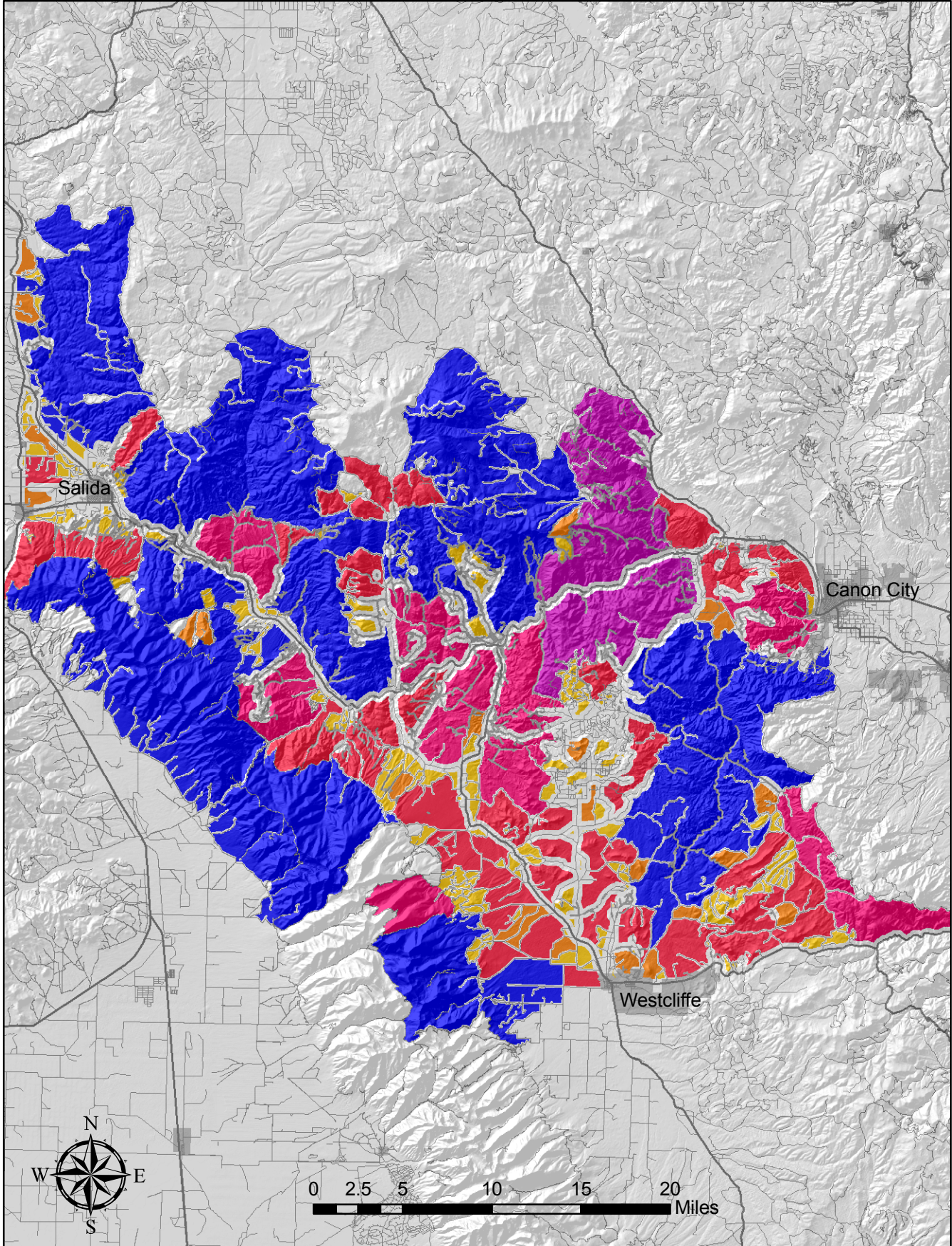
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Royal Gorge Field Office, Bureau of Land Management, Canon City, CO; October 25, 2006



MAP 23: Core Interior Habitat-Alternative B Arkansas River Travel Management Plan

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Core Area Size (acres)

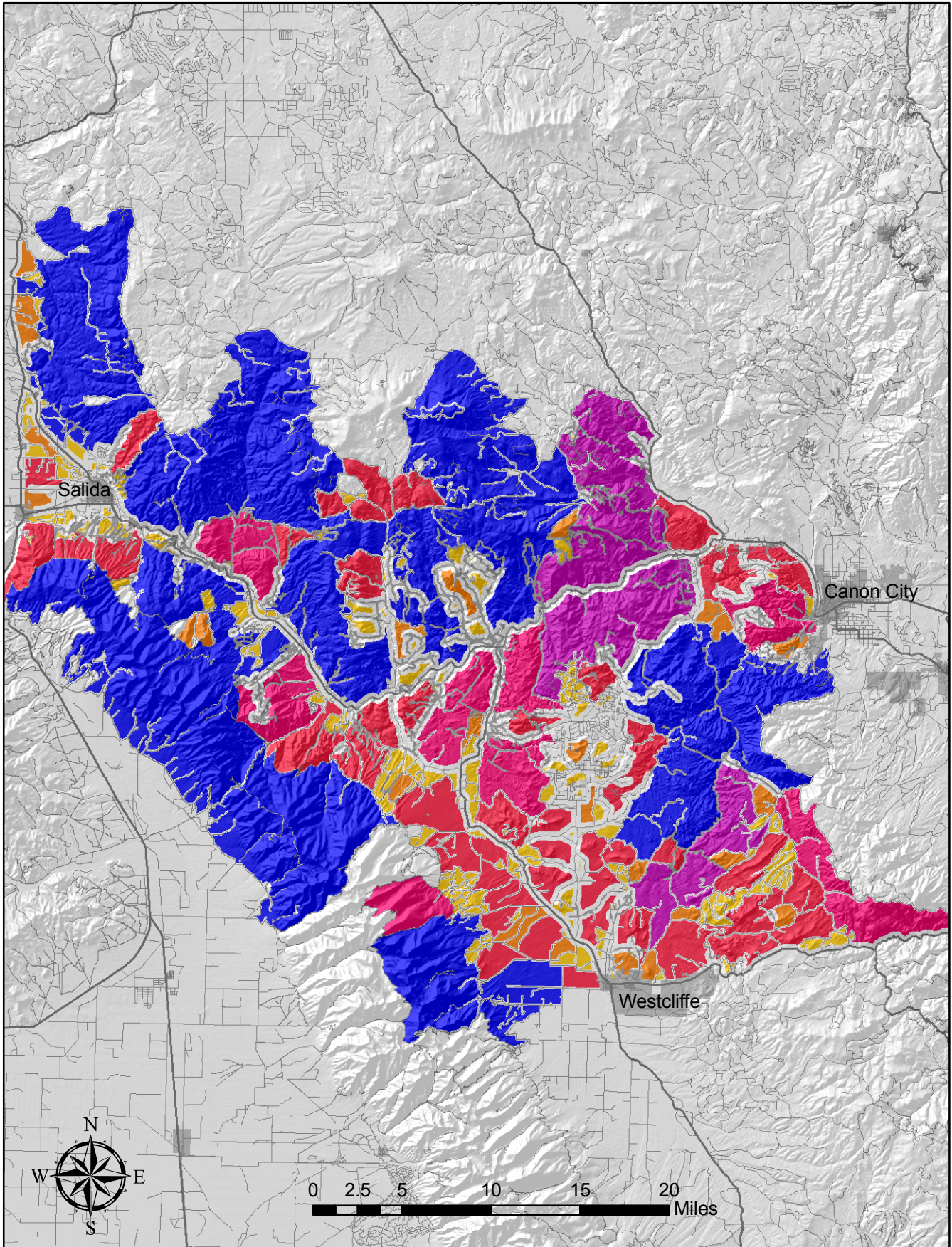
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- 500-1000
- 1000-5000
- 5000-10000
- 10000-20000
- 20000-100000

Royal Gorge Field Office, Bureau of Land Management, Canon City, CO; October 25, 2006



MAP 24: Core Interior Habitat-Alternative C Arkansas River Travel Management Plan

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Core Area Size (acres)

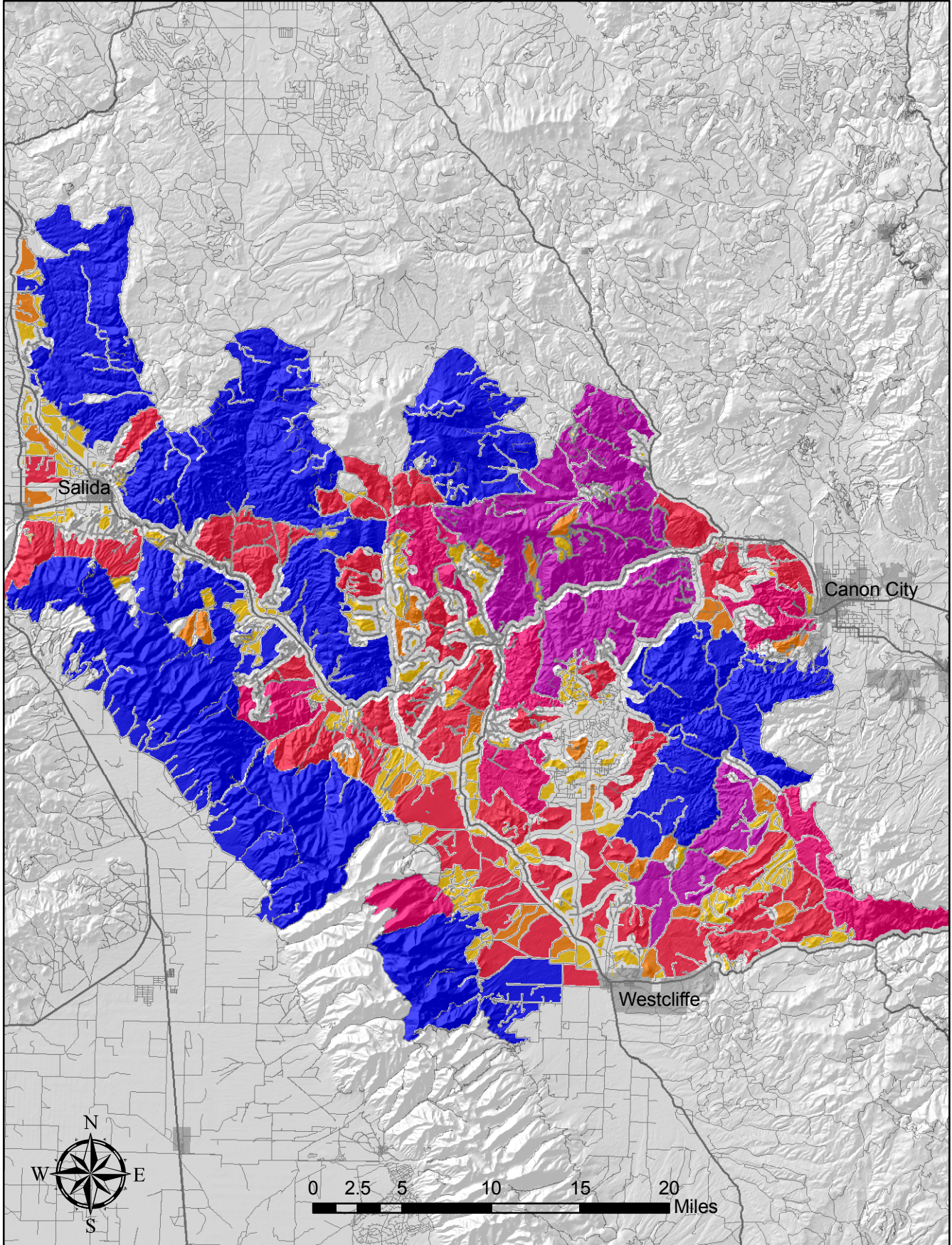
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Royal Gorge Field Office, Bureau of Land Management, Canon City, CO; October 25, 2006



MAP 25: Core Interior Habitat- No Action Alternative Arkansas River Travel Management Plan

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Core Area Size (acres)

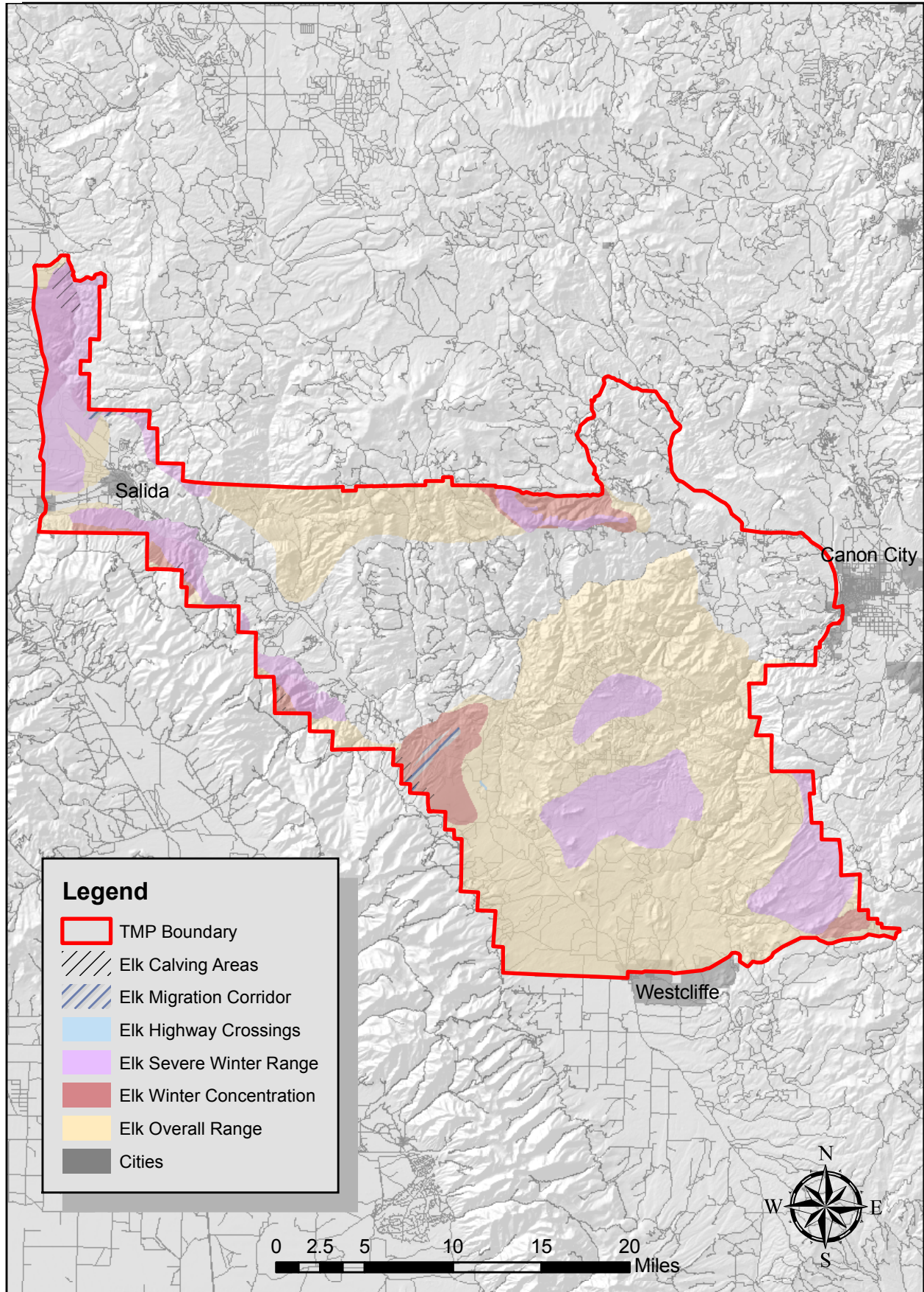
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Royal Gorge Field Office, Bureau of Land Management, Canon City, CO; October 25, 2006



MAP 26: Elk Habitat Arkansas River Travel Management Plan

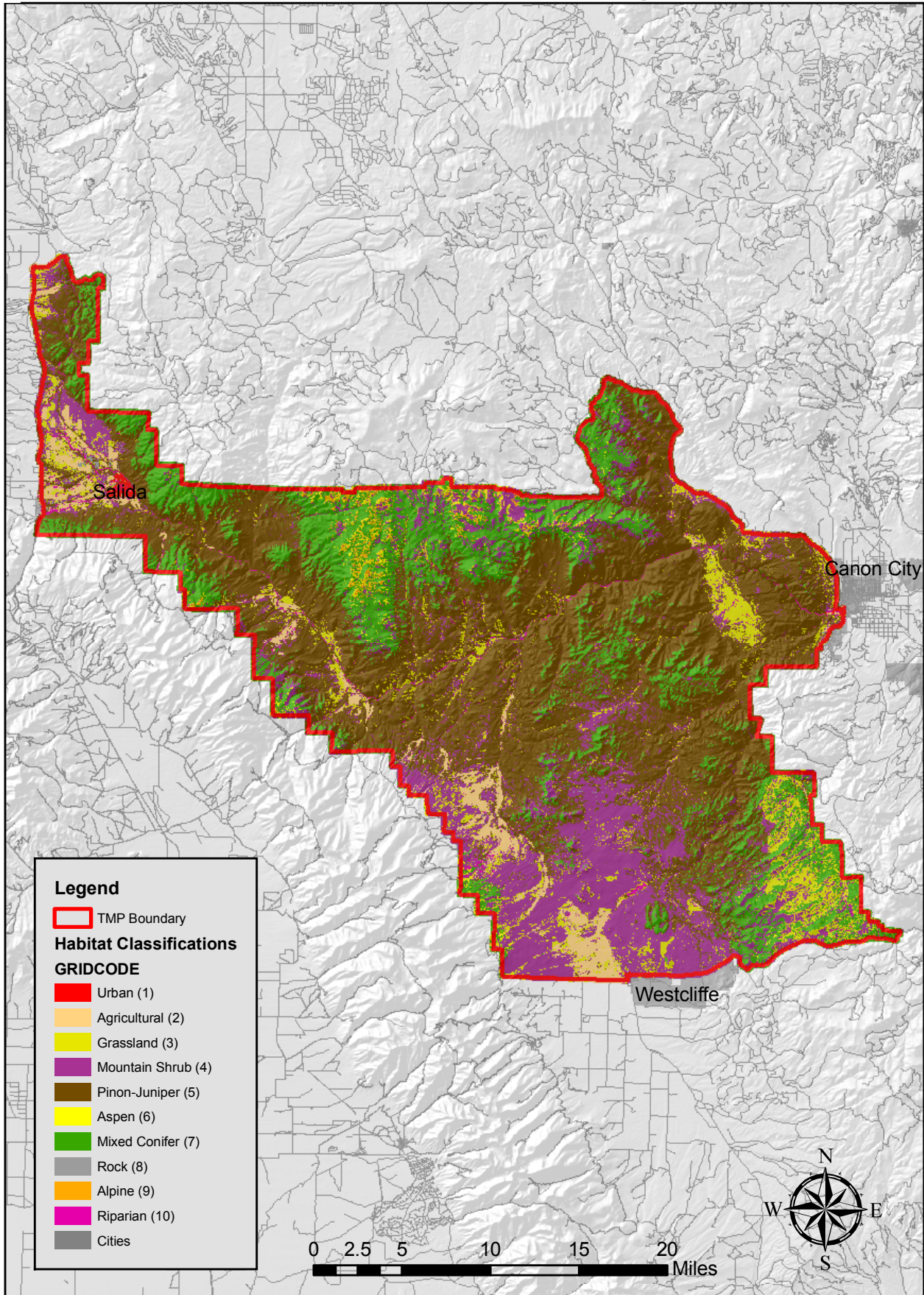
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MAP 27: Habitat Classifications Arkansas River Travel Management Plan

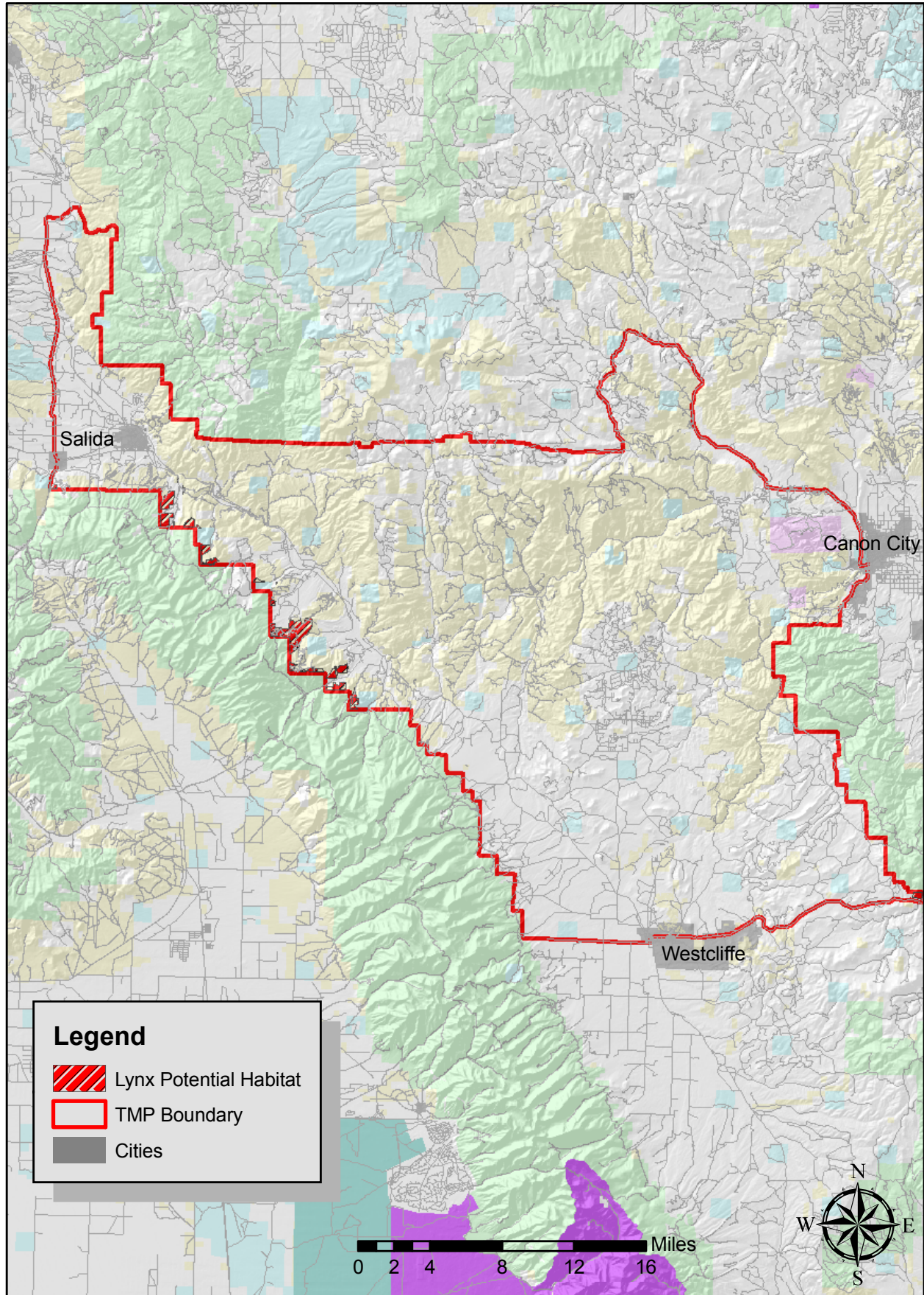
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MAP 28: Lynx Potential Habitat Arkansas River Travel Management Plan

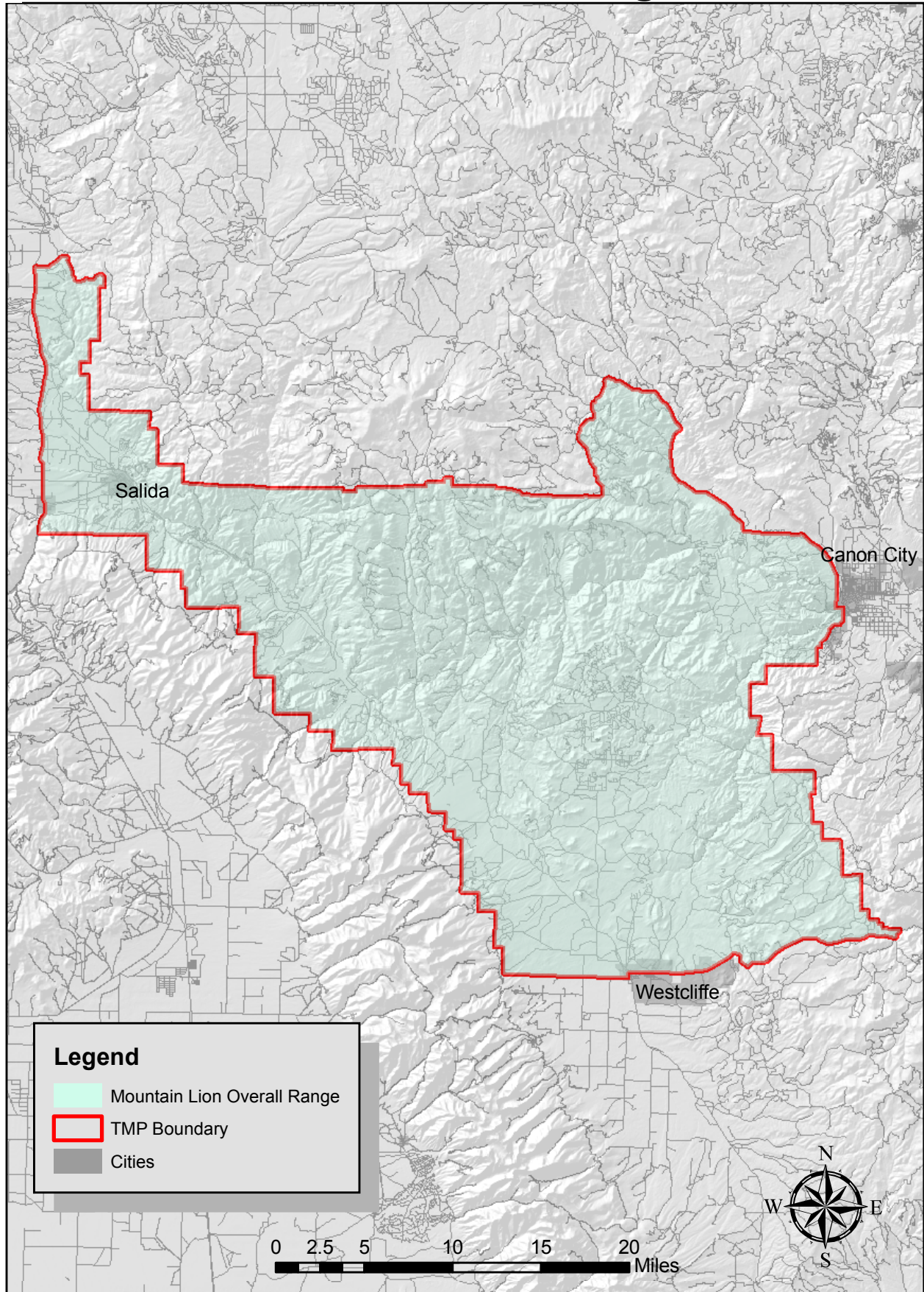
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MAP 29: Mountain Lion Habitat Arkansas River Travel Management Plan

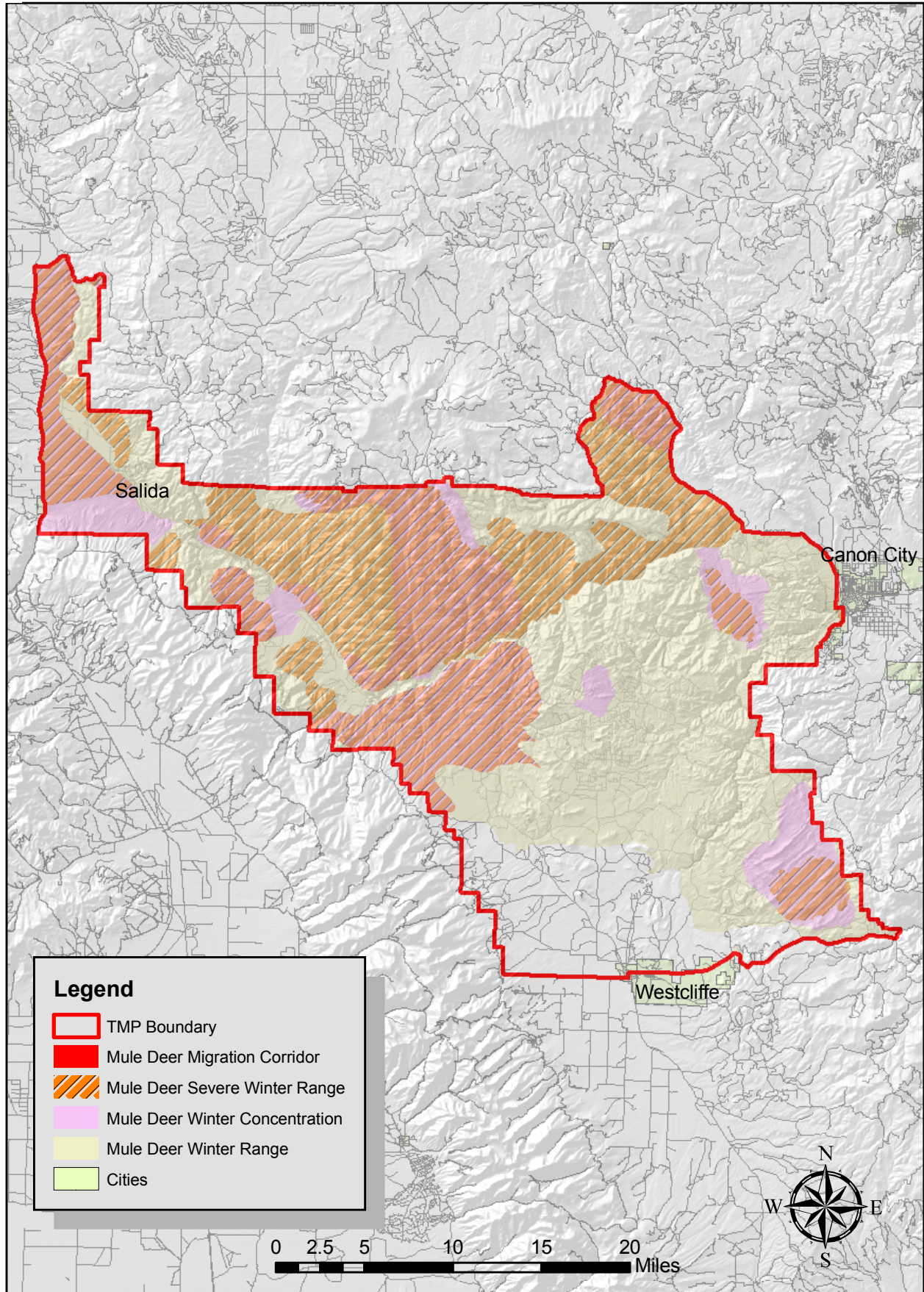
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MAP 30: Mule Deer Habitat Arkansas River Travel Management Plan

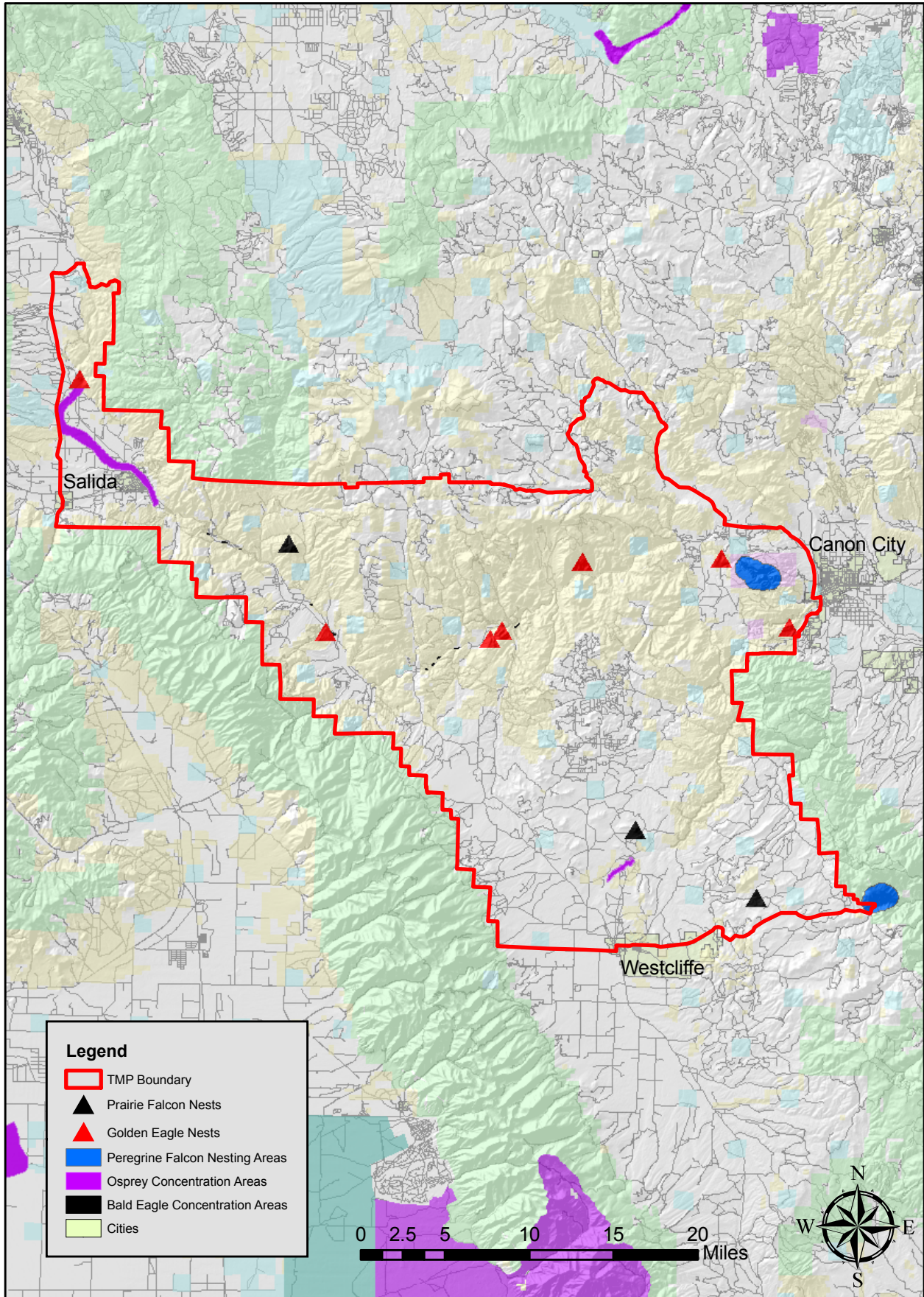
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MAP 31: Raptor Activity Areas Arkansas River Travel Management Plan

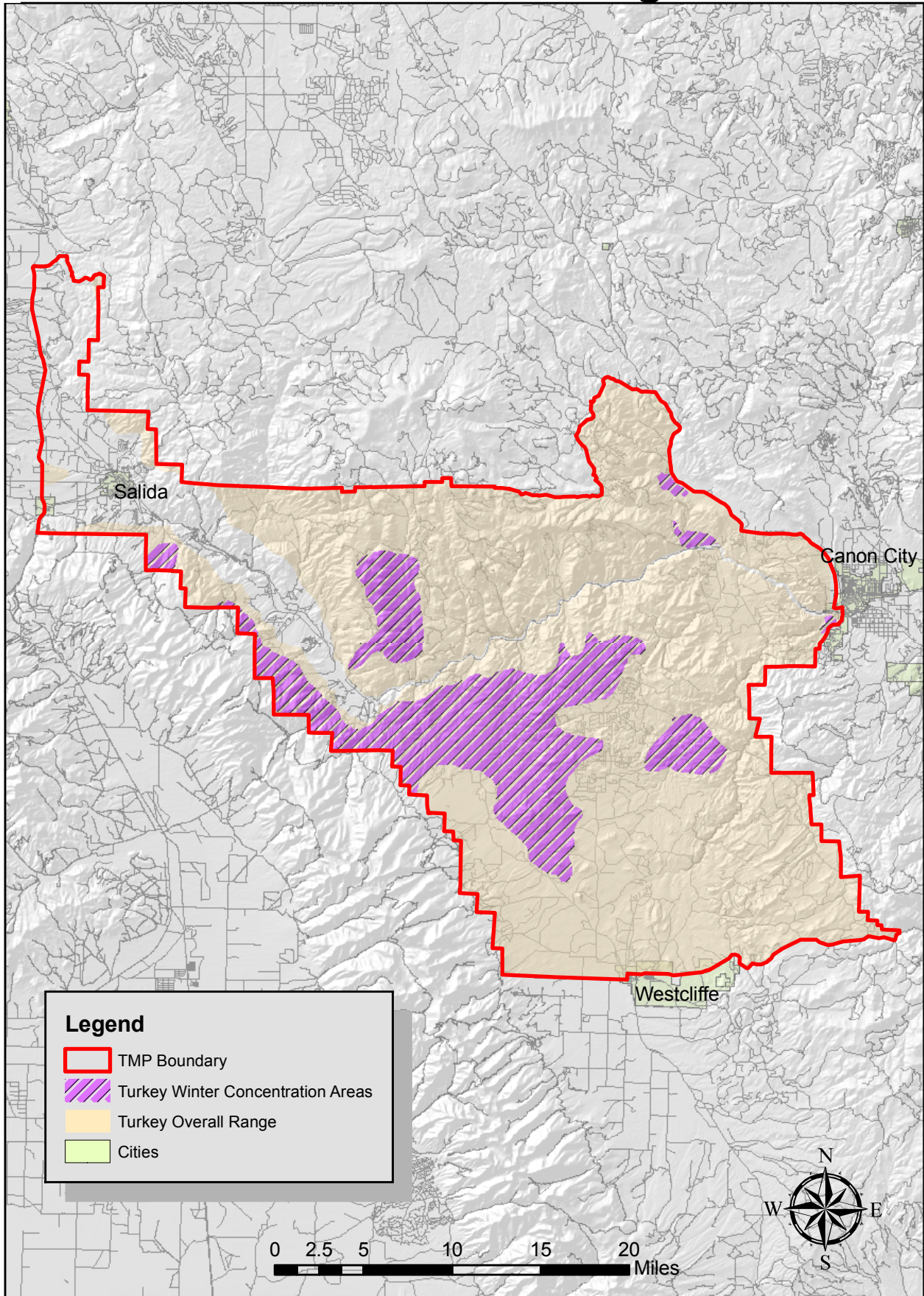
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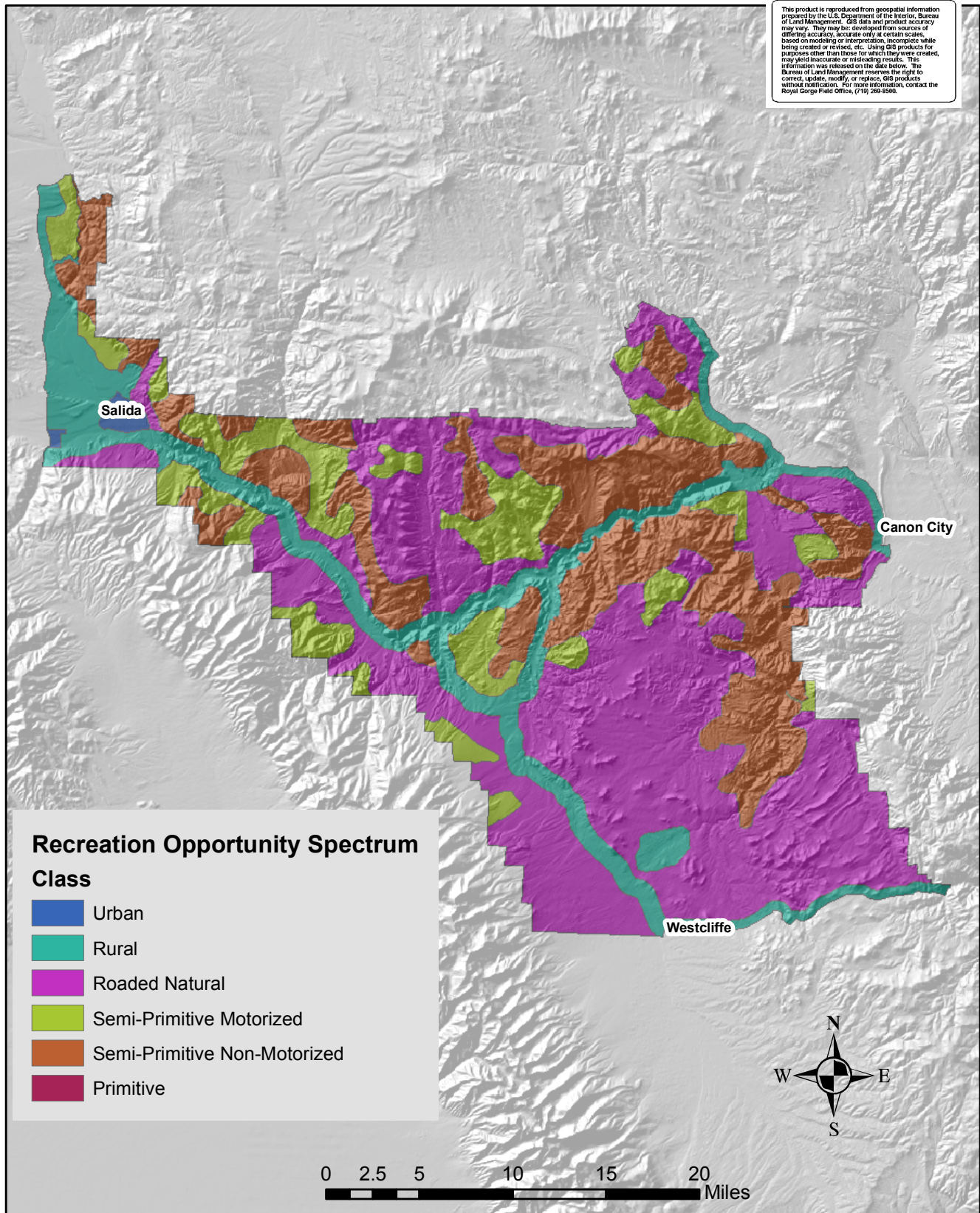
MAP 32: Merriams Turkey Habitat Arkansas River Travel Management Plan

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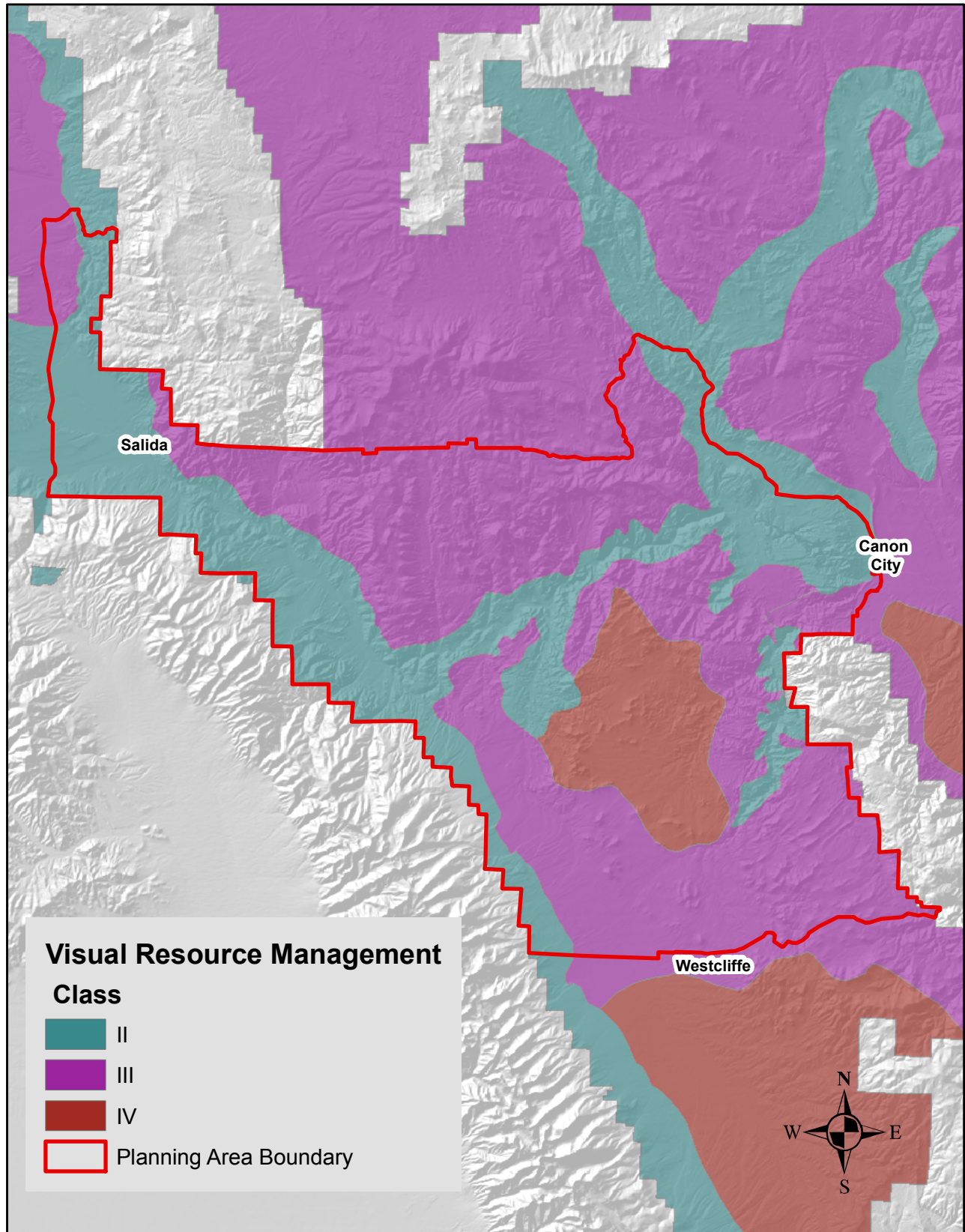
MAP 33: Recreation Opportunity Spectrum Classes Arkansas River Travel Management Plan





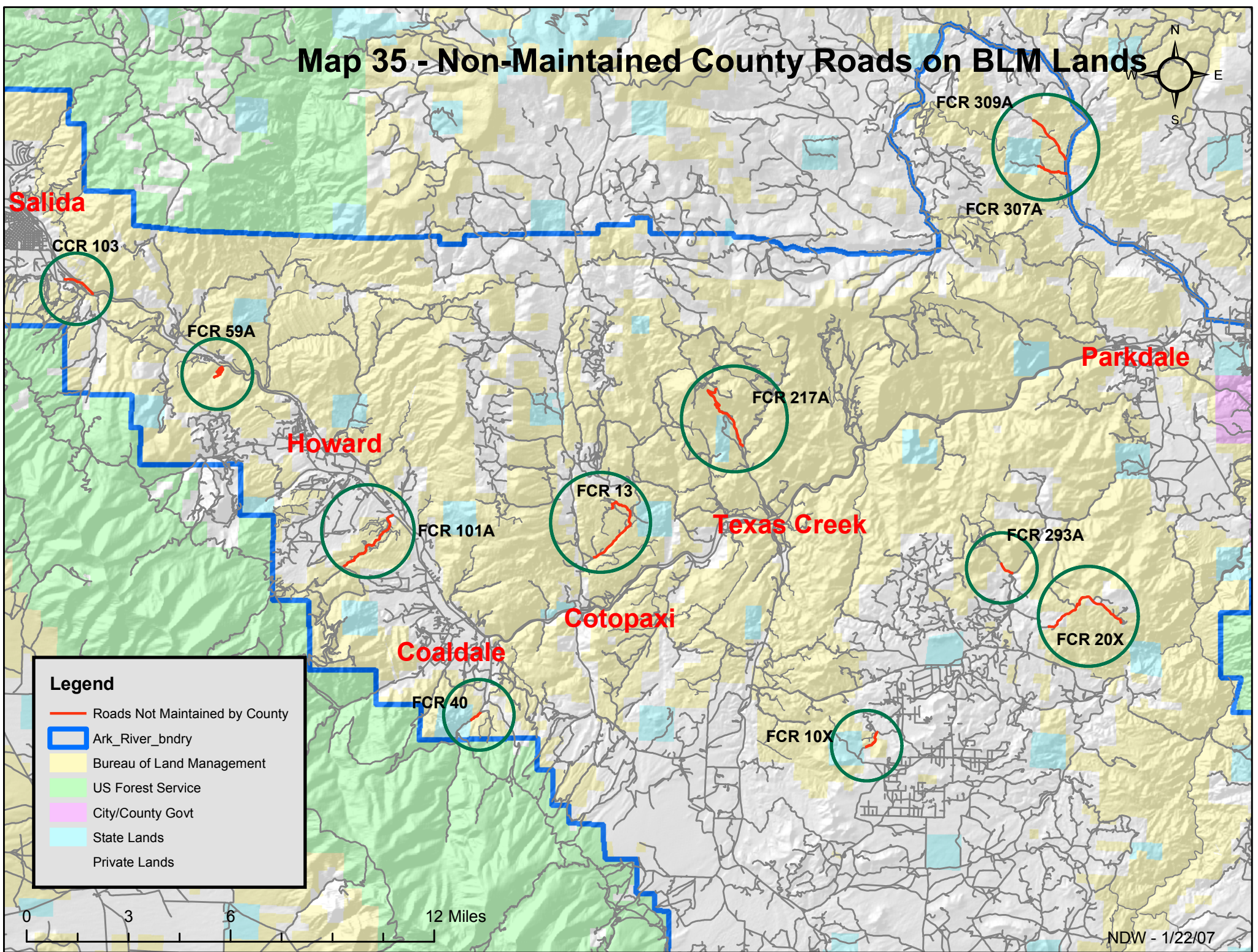
MAP 34: Visual Resource Management Arkansas River Travel Management Plan

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0 2.5 5 10 15 20 Miles

Map 35 - Non-Maintained County Roads on BLM Lands



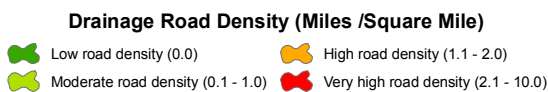
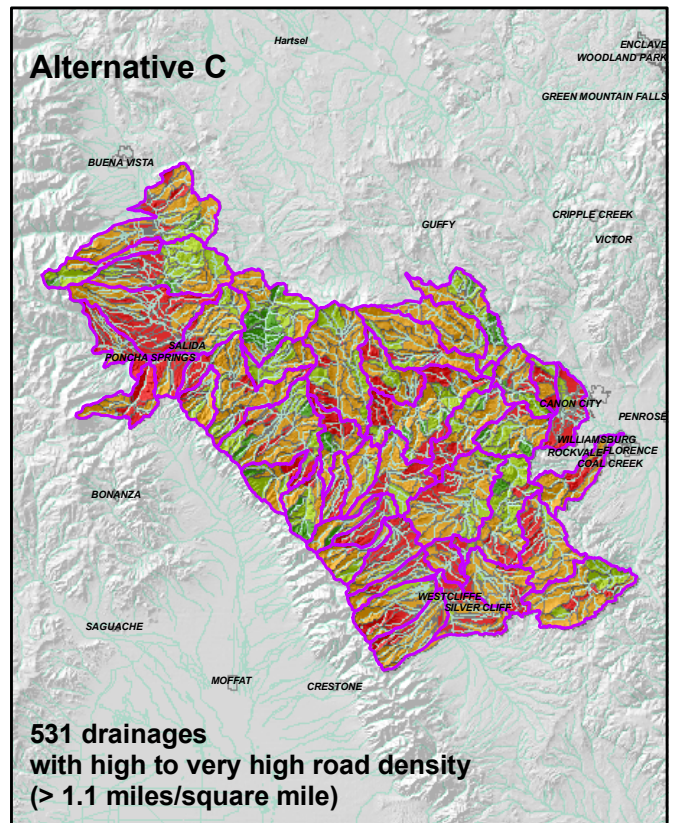
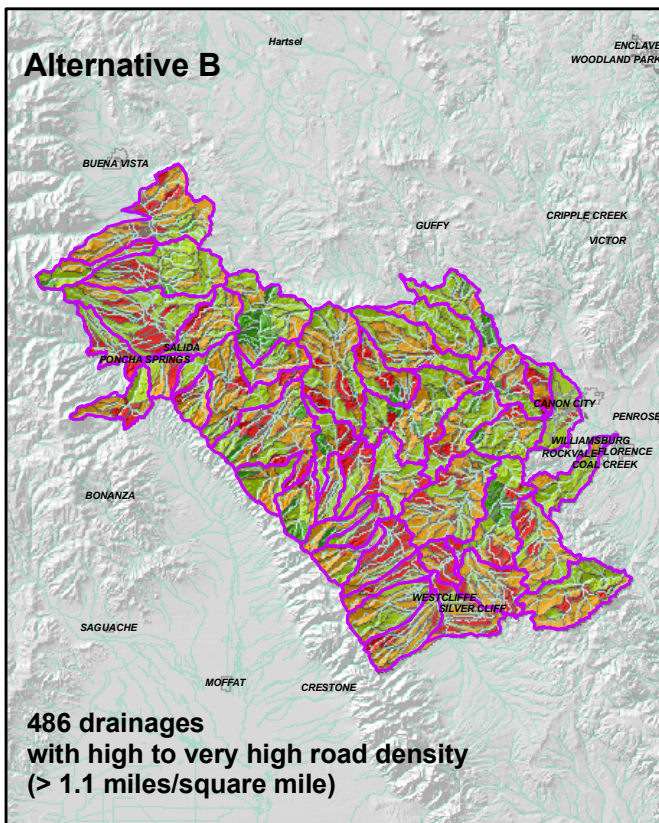
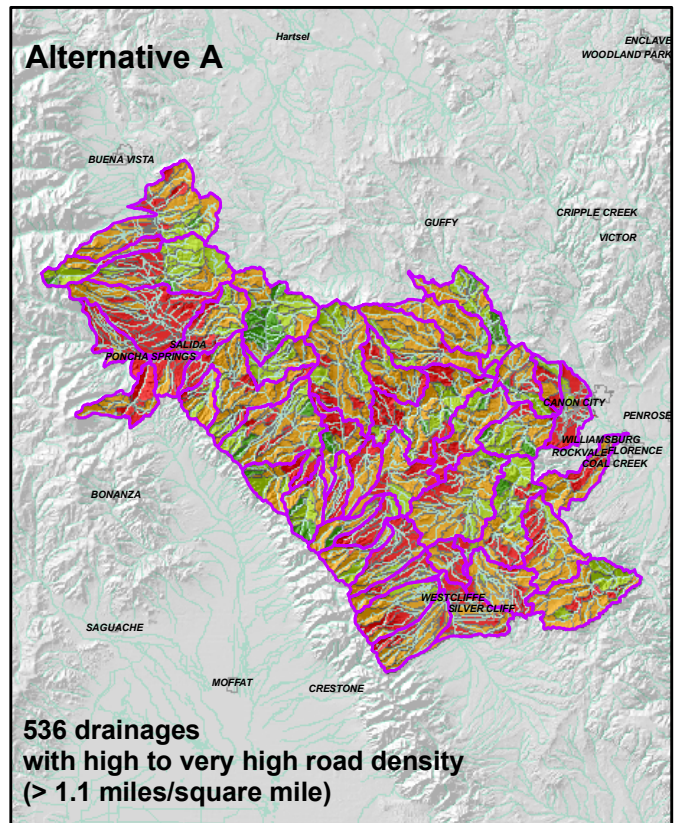
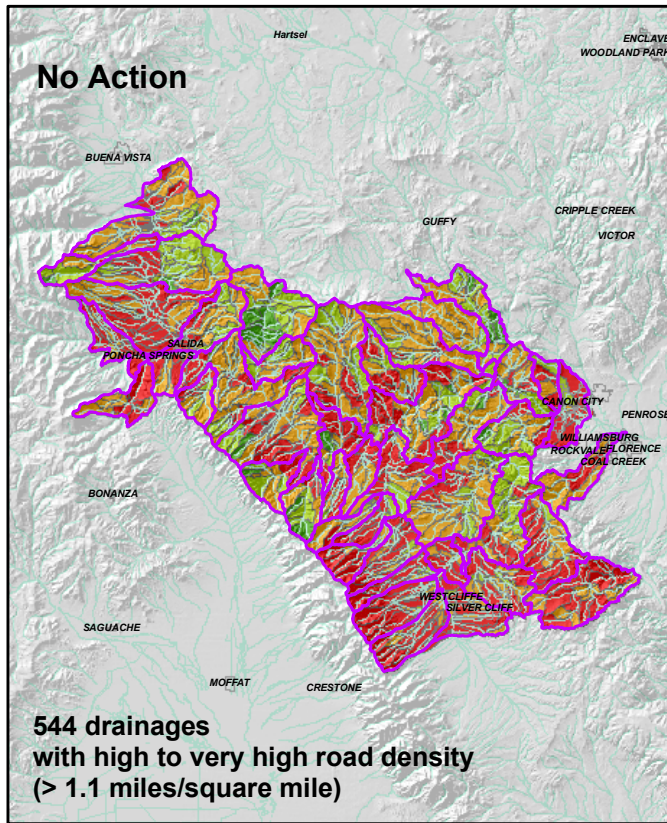
Legend

- Roads Not Maintained by County
- Ark_River_bndry
- Bureau of Land Management
- US Forest Service
- City/County Govt
- State Lands
- Private Lands





MAP 36: Arkansas River Travel Management Plan Comparison of Road Density and Watershed Impacts



USGS 6th Level Watersheds

