

**ENVIRONMENTAL ASSESSMENT  
LIVESTOCK GRAZING AUTHORIZATION**

**EA Number: CO-200-2009-0004-EA  
Allotment Name: Elevenmile Canyon Allotment**

**U.S. Department of the Interior  
Bureau of Land Management  
Royal Gorge Field Office  
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Canon City, CO 81212**

**September 29, 2009**

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## CHAPTER 1: INTRODUCTION

### A. Summary

The Bureau of Land Management (BLM) is proposing to issue a 10 year permit to authorize livestock grazing in accordance with law and policy described in the Purpose and Need section below. The following is a summary of the allotment covered in this EA and their current situation:

The present permittee is the Elk Mountain Cattle Company (Grazing Record #5330). The Elevenmile Canyon Allotment (#5141) is located in Park County, Colorado and lies south of Colorado Hwy 24 and east of Colorado Hwy. 9. (Please see Appendix 1, Allotment Map). The allotment is located within the South Park #4 planning unit. Most of the allotment consists of open, rolling grasslands with a few, small stands of timber. Elevation varies from 8,600 ft. to 9,600 ft. Annual precipitation in the area is averages between 12 and 16 inches.

LEGAL DESCRIPTION: Public Lands in Park County, CO. that include:

T.12S., R.73W., Sections 5, 17, 19

T.12S., R.74W., Sections: 4, 8, 11, 17, 22, 27, 29, 32, 33, 35

T.12S., R.75W., Section 13

T.13S., R.73W., Sections 1, 6, 8, 15 20, 22 27

T.13S., R.74W., Sections 1 6, 8 11, 13 15, 17, 18, 20 23, 26, 27, 29, 30, 34, 35

T.14S., R.74W., Section 2

The existing permit for the Elevenmile Canyon allotment indicates there are 1,093 active AUMs located within the allotment. Also, there are 231 AUMs in suspended use, for a total AUMs of 1,324. The present grazing schedule is depicted in Table 1, below.

Table 1 – Livestock Grazing Schedule

<u>Pasture</u>	<u>Public Acres</u>	<u>Number</u>	<u>Kind</u>	<u>Begin</u>	<u>End</u>	<u>% Public Land</u>	<u>Type Use</u>	<u>AUMs</u>
*Threemile Creek								
Pasture 1	650	76	Cattle	5/1 -	6/1	100%	Improve	80
Pasture 2	810	54	Cattle	6/1 -	8/1	100%	Improve	110
Pasture 3	360	39	Cattle	5/1 -	6/1	100%	Improve	41
Union Creek	760	67	Cattle	9/1 -	11/1	100%	Improve	137
Big Pasture	4285	335	Bison	5/1 -	10/1	21%	Improve	356
" "		135	Bison	10/1 -	5/1	21%	Improve	199
**Unfenced BLM	320	4	Bison	3/1 -	2/28	100%	Custodial	46
***Unfenced BLM	2600	33	Cattle	3/1 -	2/28	100%	Custodial	355
TOTAL	9785							1324

\*Grazing use on Pastures 1, 2 and 3 is currently under suspension as part of the 2006 decision.

\*\*Unfenced BLM – Scattered parcels of public lands.

\*\*\*Includes 360 acres of BLM lands within the Connie Pasture

The permittee has the flexibility to advance or delay the turn-out date by up to two weeks on Pastures 1, 2, and 3 to accommodate annual weather fluctuations (early or late green up, etc.) as long as total grazing use does not exceed 1 month on Pastures 1 and 3; and 2 months on Pasture 2 and the authorized grazing use is not exceeded.

The permittee has flexibility in the Big Pasture to graze a smaller number of bison (approximately 20 head fewer) year-long, as long as the total grazing use does not exceed 2,800 AUMs total on private, state, and public lands in the Big Pasture.

All existing structural range improvements on public lands are maintained in a functioning condition, including all existing fences and cattle guards bordering public lands. These fences have the top wire at/or above 40 inches from ground level.

The permittee continues to post signs at entrances to public land within the Big Pasture advising the public of the presence of bison within the pasture, outlining any necessary precautions.

## **B. BACKGROUND**

In 1998, Elk Mountain Land & Cattle Co. (at that time: Downare Land & Cattle) applied for authorization to graze bison on public land within an area known as the "Big Pasture" on the southwest side of Spinney Mountain Reservoir. This area includes approximately 7,100 acres of the permittee's private land, 4,285 acres of public land, 3,120 acres of state land and 2,340 acres of uncontrolled private land. State land in the area is controlled by Elk Mountain Land & Cattle. Elk Mountain Land & Cattle also applied for and received authorization to graze bison on 320 acres of public land in sections 4, 8, and 17 of T.12S., R74W included in a 6,000 acre pasture between Hwy. 24 and Spinney Mountain Reservoir. They also graze bison outside of the Big Pasture on other tracts of private property that they own or control in the area.

In preparing to analyze Elk Mountain Cattle's 1998 request, BLM solicited public input and received numerous comments, both for and against Elk Mountain Cattle's request. BLM also conducted range inventories and field assessments on the allotment and subsequently prepared Environmental Assessment (EA) No. CO-057-98-088. In 1999, BLM issued a final decision authorizing bison grazing on public land within the Big Pasture and the public land between Hwy. 24 and Spinney Mountain Reservoir. BLM received two appeals to the final decision. In July of 2000, a hearing was held in Colorado Springs, CO. before an Administrative Law Judge from the US Dept. of Interior, Office of Hearings and Appeals. In November of 2000, the Office of Hearings and Appeals issued a Decision upholding BLM's decision on the matter.

Grazing use authorized by BLM's 1999 decision on public lands is managed under both "Improve" and "Custodial" grazing use. Custodial use is generally authorized on public land that is comprised of relatively small, scattered parcels that are unfenced from large amounts of private land, are difficult to manage separately, and have limited resource issues. Under custodial use, the permittee is not restricted to a specific number of livestock, nor restricted to specific grazing dates, as long as the estimated carrying capacity of the public land is not exceeded. The estimated carrying capacity is expected to result in utilization levels of 40% - 60% of the total annual forage production of key forage species. Grazing use that exceeds this level on public land is not authorized. Many of the parcels included in the Elevenmile Canyon

Allotment that are not fenced separately from surrounding lands and are not included in the “Big Pasture” are currently managed under Custodial Use.

“Improve” use generally restricts grazing use to specific grazing dates and livestock numbers designed to improve existing livestock management and/or resource conditions on public land. Grazing use on the Big Pasture is authorized under Active use and limits the number of bison authorized to levels designed to protect public land within the pasture from overuse. BLM’s 1999 decision also extended specific grazing dates and livestock numbers authorized on Pastures 1, 2 and 3 in the Threemile Creek area and on the Union Creek area that were previously developed on the allotment in 1992. These grazing prescriptions were designed to protect and improve riparian habitat and conditions on public land in these areas.

### **C. PURPOSE AND NEED**

The purpose of the proposed action is to complete a site-specific evaluation of grazing that provides information to be analyzed by the BLM in conformance with the implementing regulations for the NEPA (40 CFR Part 1500), FLPMA, and Public Law 106-113 section 325 to determine whether changes are necessary to current management of the allotment to be in accordance with 43 CFR 4100 and consistent with the provisions of the Taylor Grazing Act, Public Rangelands Improvement Act. The purpose of the action is also to ensure that all authorizations implement provisions of, and is in conformance with, the Royal Gorge Resource Management Plan (5-13-1996), and in conformance with the Secretary Approved Rangeland Health Standards for Colorado.

The action is needed to respond to an expired permit. This action involves the analysis of grazing use on public lands comprising the Elevenmile Canyon Allotment, No. 5141, and the possible renewal of the grazing permit for the allotment.

1. This analysis is needed to consider the impacts of livestock grazing use on public lands within the respective allotments in relation to Standards for Public Land Health and Guidelines for Livestock Grazing in Colorado.
2. Secondly, the proposed action is needed to ensure that grazing use continues to help the allotments meet Standards for Public Land Health and future grazing use on the allotment is consistent with Guidelines for Livestock Grazing Management in Colorado.
3. Finally, this analysis is required to complete processing of renewal of the grazing permits in compliance with all applicable laws and regulations. The proposed action is needed in order to comply with BLM Policy IM No. 2003-071 which states “by the end of FY 2009, all carryover grazing permits shall be fully processed using the information from the land health standards evaluations as needed to complete environmental impact analysis”.

### **D. PLAN CONFORMANCE REVIEW**

Name of Plan: Royal Gorge Resource Management Plan  
Final Livestock Grazing EIS Royal Gorge Resource Area

Date Approved: 05/13/96  
01/1995

Decision Number: 4-2, 4-4, 4-6, C-30, C-36, C-41, C-42, C-43, C-44

Decision Language:

- 4-2: Season of use and stocking rates will continue based on the Grazing EIS and vegetation monitoring.
- 4-4: Grazing is authorized on 49 allotments.
- 4-6: Allotments are categorized as 8 improve.
- C-30: Base livestock grazing management on the 1981 Royal Gorge Area Grazing EIS.
- C-36: Grazing systems will be implemented by an IAP. Plans will be prepared in consultation, cooperation, and coordination with the permittee and other affected parties to meet multiple use and land use plan objectives.
- C-41: Adjustments in grazing use will be made by allotment on a case by case basis. Changes in number of livestock, season of use, duration of use, and class of livestock can be made based on monitoring studies and inventory data.
- C-42: The grazing treatment on Improve category allotments will require a rest standard to allow a time period for forage species to recover from the last grazing period before the plants are regrazed.
- C-43: Maximum allowable utilization on allotments with rotational grazing or dormant season grazing will be 80% annual production on grass species and 60% of annual production on shrub species. These percentages may have to be adjusted on specific allotments because of conflicts with wildlife, watershed condition, or riparian habitat.
- C-44: On single pasture allotments with season long spring/summer grazing, utilization will be held to the 40 to 60 percent range on forage species in lieu of a rest standard. This requirement will be on high elevation allotments where deferment or dormant season use is impractical because of deep snow and fencing the allotment into smaller units is uneconomical.

## **E. SCOPING ISSUES AND CONCERNS**

BLM began seeking public input into the renewal of the current grazing permit in 2009. On February 25, 2009 Royal Gorge field office mailed 430 scoping letters. The field office also posted the announcement on their web site. To date BLM has received several comments regarding the renewal of the current grazing permit for Elk Mountain Land & Cattle. The following issues and concerns have been identified through soliciting public input and internal scoping and are addressed within this analysis:

1. Current health and condition of public lands comprising the allotment.
2. Control of bison drift onto private land not owned by the permittee, public lands where they are not authorized, and onto public roadways and highways.
3. Unauthorized grazing violations on public land.
4. Permittee's request to utilize additional public land for bison grazing in areas or pastures where they are not currently authorized.
5. Public safety.

Several other issues were identified in 1998 and were addressed in the previous EA (No. CO-057-98-088) conducted for this permit.

1. Current health and condition of public lands: Public Land Health Assessments were conducted on the Elevenmile Canyon Allotment in 1998, 2006, and 2009.

In 1998 the assessments indicated that several upland areas on public land were not meeting standards related to "healthy and productive plant & animal communities". The EA noted that, over time, improper grazing practices had led to decreases in the amount of highly productive and desirable cool season grass species on these sites, resulting in less diverse and productive plant communities. The EA indicated that authorizing bison in the Big Pasture could be expected to improve the condition of public land in this area. This improvement would be achieved by limiting the number of bison in the pasture to the estimated carrying capacity of the pasture and through the natural grazing behavior and forage selection of bison.

In 1998, proper functioning condition assessments noted that several of the riparian areas on public land within the allotment were not meeting standards related to properly functioning riparian areas. In 1992 BLM had implemented grazing dates and limited livestock (cattle) numbers on the Union Creek and Threemile Creek Pastures 1, 2 and 3 (See Appendix 1, Allotment Map) in an effort to improve riparian conditions in these areas. The EA stated that while there was “evidence that the changes implemented under the 1992 management plan are improving riparian conditions on public land on Threemile Creek”, “instances of unauthorized grazing use on the creek have slowed the improvement.” BLM’s 1999 decision extended the management practices implemented on the Union Creek and Threemile Creek Pastures 1, 2 and 3 in 1992.

Unauthorized livestock grazing use occurring again in late December of 2001 and early January of 2002 on public land in the Union Creek and Threemile Creek areas caused impacts to the riparian area on public land along Threemile Creek. In addition to monetary fines for these violations, grazing use on the Threemile Creek Pastures was suspended for 5 years (1/22/02 – 1/22/07). Additionally, grazing use was suspended for 3 years on the Union Creek Pasture.

In 2006, the assessment evaluations on the allotment determined that, while most upland portions of the allotment were found to be meeting applicable Standards for Public Land Health, on-going drought conditions and additional unauthorized grazing use have slowed the recovery of riparian areas on public land within the Threemile Creek area. The evaluation noted that “...standards are not being met due to trespass livestock grazing....there is an extensive record of trespass on this stream and conditions continue to be suppressed....the stream, needs continued rest to protect it from eroding back to cobble as frequent summer rains erode banks....”. In response to these findings, BLM issued a Final Decision in December of 2006 suspending all grazing use on public land in Pastures 1, 2 and 3 in the Threemile Creek area for an additional 5 years (5/1/2007 – 5/1/2012) or until a determination prior to that time is made that further grazing use is not likely to cause further damage to public land.

Again in 2009, a BLM Inter-disciplinary (ID) team conducted Rangeland Health Evaluations on the Elevenmile Canyon Allotment. Most of the upland areas within the allotment were determined to be meeting standards. However, the ID team identified approximately 0.5 miles of riparian along Three Mile Creek not meeting public land health Standard 2 and 5 (Riparian and Water Quality) within the Connie Pasture. It was determined by the team that livestock grazing under current management was the casual factor.

2. Control of bison drift onto private land not owned by the permittee, public lands where they are not authorized, and onto public roadways and highways. Since BLM authorized bison use on public land within the “Big Pasture” in 1999, BLM has received numerous reports or complaints from a small number of local residents that bison have drifted onto private land or public land where they are not currently authorized. Between 2000 and 2008, BLM has received 7 reports of bison on private land located just west of Pasture 3 near CO Hwy. 9. Six of the seven reports were received from 1 individual and 1 was from Park County Sheriffs Dept. Between 2000 and the fall of 2007, BLM has 14 reports

of bison on private or state parks land in the Union Creek area or near Spinney Mountain Reservoir. Thirteen of the fourteen reports were received from a single residence and 1 from another landowner.

BLM has issued unauthorized grazing use violations in several instances where bison drifted onto public land and BLM felt that administrative actions were appropriate. In cases where BLM received complaints that bison were drifting onto private land, BLM has taken no formal action since BLM has no jurisdiction over bison on private land. Control of the bison remains solely the permittee's responsibility. However, in most cases where BLM received complaints regarding bison on private land, BLM has helped contact the permittee and the bison were removed in a timely manner. Additionally, many of the complaints that BLM has received involved bison drifting off of the permittee's private land in areas separate from the "Big Pasture". Again, BLM has no jurisdiction over bison grazing legally on the permittee's private property and is not responsible for bison drifting off of these areas. Again, in these instances BLM has helped contact the permittee and most times the bison were removed in a timely manner.

However, beginning in December of 2007 substantial numbers (up to 150 head) of bison began to get out of a pasture containing the permittee's private land (outside of the Big Pasture) and drift onto private land near the Southeast corner of the allotment and onto public land in the Union Creek Pasture. (Cattle only are authorized on the Union Creek Pasture.) Despite repeated attempts by the permittee to remove and confine the bison, they continued to escape from the permittee's land and drift back onto private and the Union Creek Pasture. Problems continued to occur over several months during the winter. During this time, BLM monitored bison drift onto the Union Creek Pasture and contacted the permittee each time the bison drifted onto public land. In each instance the bison were removed from public land in a timely manner and no trespass violation notices were issued. The problems continued on private land into late February and eventually a lawsuit was filed by one of the neighboring landowners to recover damages allegedly caused by the bison to private property in the area. A short time after the lawsuit was filed the neighboring landowner allegedly authorized a group of shooters to kill bison in the area. In early March of 2008, Park County Sheriff's Department discovered 32 head of the permittee's bison shot to death on the neighbor's and surrounding properties (including US Forest Service and BLM land). The neighboring landowner was charged with cruelty to animals, criminal mischief and theft. In November of 2008 a plea agreement was reached between the landowner and the permittee.

3. Unauthorized grazing violations on public land. Since 1986 the permittee has been issued 9 unauthorized grazing violations on public land and 1 violation notice for the construction of an unauthorized range improvement on public land. The unauthorized improvement involved the construction of an earthen stock pond partially on property which the permittee thought was private but was later determined to be public land. The permittee reclaimed the project and no further action was taken by BLM. The unauthorized grazing violations include 5 violations for "Non-Willful" grazing use, 2 violations for "Willful" grazing use and 2 for "Repeated Willful" use. Over time there also have been several instances where a small number of the permittee's livestock were discovered on public land and removed in a timely manner without a violation notice

being issued. All of the unauthorized grazing use violations were issued on public land that was included in a pasture with specific grazing dates and/or livestock numbers. None of the violations were related to parcels of public land that are unfenced from large amounts of private property or were under “custodial” use.

4. Permittee’s request to utilize additional public land for bison grazing in areas or pastures where they are not currently authorized: This issue is addressed in the analysis within this document.
5. Public Safety: Since BLM authorized bison use on public land in 1999, there have been no reports of direct human and bison conflict through this office. The previous EA (CO-057-98-088) extensively analyzed the potential for bison and human conflict and it was determined the likely hood of injury to humans resulting from bison/human encounters is very small. In 1999, the use of information or warning signs to advise the public of the presence of bison in the area was implemented. These signs are still in place.

**F. RANGELAND 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 in the effected environment.

During the summer of 2009, the Royal Gorge Field Office conducted public land health assessments within the Elevenmile Creek Allotment. Public land within the assessment area was evaluated to determine the health of upland soils, plant and animal communities, riparian systems, threatened and endangered species, and water quality. The Assessment Determination was completed and approved on August 11, 2009. Table 2 – Rangeland Health Standards - depicts the five rangeland health standards and whether each are met, or not met.

Table 2 – Rangeland Health Standards

<b>Rangeland Health Standard</b>	<b>Meets Standard</b>	<b>Does Not Meet Standard</b>	<b>Livestock are the causal factor for not meeting Yes or No</b>	<b>Remarks (locations, etc.)</b>
<b>Standard 1</b>	<b>9,785 Acres</b>	<b>0 Acres</b>	<b>0 Acres</b>	<b>See Soils Sections Page ##</b>
<b>Standard 2</b>	<b>1.3 Miles</b>	<b>2.31 Miles</b>	<b>2.31 Miles</b>	<b>*See Riparian Section</b>
<b>Standard 3</b>	<b>9,785 Acres</b>	<b>0 Acres</b>	<b>0 Acres</b>	<b>See Vegetation and Terrestrial Wildlife Sections Page’s ##</b>
<b>Standard 4</b>	<b>9,785 Acres</b>	<b>0 Acres</b>	<b>0 Acres</b>	<b>See Threatened and Endangered Species Section Page ##</b>
<b>Standard 5</b>	<b>1.3</b>	<b>2.31 Miles</b>	<b>2.31 Miles</b>	<b>See Water Quality Section Page ##</b>

\*Riparian standard met in Union and Balm of Gilead Creeks (1.3 miles within Union Creek pasture). Not met in 1.56 miles of upper Three Mile Creek, (Pastures 1 and 3) but with improvement strategy implemented, and 0.5 mile on two unfenced parcels in lower Three Mile Creek / Connie Pasture (grazed custodial).

## **G. Tiering to Existing Land Use Plan/Environmental Impact Statement**

This EA is tiered to the Royal Gorge RMP/ Final EIS of (May, 1996) as well as the previous grazing permit renewal EA for this allotment ( No. CO-057-98-088, Date Approved: March 12, 1999) and provides site-specific analysis on the allotment level as well as providing specific analysis for bison grazing.

Tiering helps focus this EA more sharply on the significant issues related to grazing on this allotment while relying on the RMP/EIS and previous EA analysis for background. Analysis of environmental issues previously considered and addressed in the RMP and EA will be incorporated by reference but will not be analyzed in detail. The site-specific issues analyzed for this allotment are addressed in the Affected Environment/Environmental Effects. Those issues that are incorporated by reference are identified in Issues and Concerns, Background Information and the Affected Environment/Environmental Effects of this EA.

A summary of the analysis tiered in this EA is as follows:

The Royal Gorge RMP established conservation strategies for those resources within the multiple use context required for the planning area by section 302 (a) of the Federal Land Management and Policy Act (FLPMA). As part of the conservation strategy BLM determined which public lands will be available or unavailable for livestock grazing. Livestock grazing in the Royal Gorge resource area is provided for in allocation decisions for Eco-Subregion 4 (South Park) of the RMP. In addition to designating lands available or unavailable for grazing, the RMP, as amended January 1997, established regional land health standards and guidelines for grazing management.

This EA analyzes the range of alternatives for grazing consistent with the RMP, including a proposed action, continuation of current management (No Action) and cattle only alternative. A no grazing alternative is considered but dismissed from detailed consideration since this alternative was fully analyzed and no information has been brought forth to warrant reconsideration. The Alternatives section of this EA describes the alternatives analyzed in detail and identifies the alternatives considered but dismissed from detailed consideration.

Impacts of livestock grazing were addressed at a regional level in the Royal Gorge RMP/EIS. Analysis addressed the impacts of livestock grazing on a wide range of resource topics, including impacts to air quality, soil, vegetation, wildlife, cultural resources, wilderness, and socio-economic impacts. Bison grazing in general was analyzed in the previous EA (CO-057-98-088) and found to be compatible with goals and objectives of the RMP. Beyond permit renewal, this EA analysis will focus on the specific environmental issues associated with adding BLM acreage to bison grazing in the Connie pasture.

The RMP balances conservation with public use, occupancy, and development on a regional level. BLM is proposing specific permit terms and conditions to ensure that an appropriate

multiple use balance is maintained on this allotment while providing for conservation in accordance with the RMP/FEIS. In addition, BLM may use its authority to close an area of the allotment to grazing use or take other measures to protect resources if needed. Therefore, issuance of a fully processed grazing permit with such applicable terms and conditions is necessary to manage the public's use, occupancy, and development of the public lands and prevent unnecessary or undue degradation of the lands. (43 USC 1732(b)).

DRAFT

## CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES

Four Alternatives are addressed in this Environmental Assessment.

1. **Proposed Action** – includes the applicants request to authorize new bison grazing on public lands and renew permit for ten years with new terms & conditions.
2. **No Action** – Renew permit as currently scheduled.
3. **Cattle Only Alternative** – authorize cattle only and renew permit for ten years.
4. The **No Grazing Alternative** was considered but not carried forward.

### A. PROPOSED ACTION

This alternative was developed after a review of resource issues and conditions found on the Elevenmile Canyon Allotment. Monitoring requirements, mitigation measures, and permit terms and conditions developed in the resolution of issues are being incorporated into this alternative to minimize potential impacts to resources while continuing to provide forage for livestock grazing. The proposed action consists of authorizing cattle and bison grazing on the Elevenmile Canyon Allotment, under a grazing permit, for a term of 10 years. In addition, the current season of use and permitted use, including management actions and stipulations stated below would also be included in this grazing permit.

#### 1. Livestock Numbers and Season of Use

Under this alternative, there would be 1,093 AUMS active, 231 AUMs in suspended use, for a total of 1,324 AUMs.

Table 3 - Livestock Numbers and Season of Use

<u>Pasture</u>	<u>Public Acres</u>	<u>Number</u>	<u>Kind</u>	<u>Begin</u>	<u>End</u>	<u>% Public Land</u>	<u>Type Use</u>	<u>AUMs</u>
<b>*Threemile Creek</b>								
Pasture 1	650	76	Cattle	5/1	- 6/1	100%	Improve	80
Pasture 2	810	54	Cattle	6/1	- 8/1	100%	Improve	110
Pasture 3	360	39	Cattle	5/1	- 6/1	100%	Improve	41
Union Creek	760	67	Cattle	9/1	- 11/1	100%	Improve	137
Big Pasture	4285	335	Bison	5/1	- 10/1	21%	Improve	356
Big Pasture		135	Bison	10/1	- 5/1	21%	Improve	199
Connie Pasture	280	3	Bison	3/1	- 2/28	100%	Custodial	36
**Unfenced BLM	320	4	Bison	3/1	- 2/28	100%	Custodial	46
**Unfenced BLM	<u>2320</u>	<u>30</u>	<u>Cattle</u>	<u>3/1</u>	<u>- 2/28</u>	<u>100%</u>	<u>Custodial</u>	<u>319</u>
<b>TOTAL</b>	<b>9785</b>							<b>1324</b>

\*Grazing use on Pastures 1, 2 and 3 of Threemile Creek would remain under suspension as part of the 2006 decision and re-evaluated in 2012.

\*\*These areas of public land occur as small isolated parcel of public lands, unfenced from surrounding private lands and are managed as Custodial.

The Proposed Action is similar to the No Action Alternative except for expanding the area authorized for bison grazing and modifying the terms and conditions. Historically, bison have been restricted to the Big Pasture and isolated parcels of public lands north of Spinney Mountain Reservoir (See Appendix 1, Allotment Map). The permittee has approached BLM and requested

to expand the bison grazing area to include the Connie Pasture, located to the southeast and adjacent to the Big Pasture.

As stated in the Issues & Concerns section, approximately 0.5 miles of riparian along Three Mile Creek was determined to be not meeting public land health Standard 2 (Riparian) and Standard 5 (Water Quality) within the Connie Pasture as a result of livestock grazing. As stated under CFR subpart 4180.1, BLM shall take appropriate action in grazing management no later than the next grazing season to make progress towards meeting public land health standards. As part of the Proposed Action, BLM would change the class of livestock in the Connie Pasture from cattle to bison use. Based on research cited in the previous EA (CO-057-98-0088), introducing bison use in the Connie Pasture would improve grazing distribution, better grazing use of the uplands, and reduce grazing pressure on the unhealthy riparian areas through the bison's natural grazing patterns. If future monitoring dictates that riparian trend is not improving, BLM will fence those BLM parcels and exclude livestock grazing completely.

The Connie Pasture includes approximately 360 acres of isolated parcels of public lands surrounded by approximately 4,380 acres of private lands, of which the vast majority (70%) is owned and/or controlled by the permittee. The BLM surface area within the Connie Pasture makes up 8% of the total surface acreage. There would be a 36 AUM increase in bison AUMs with a corresponding decrease of 36 AUMs for cattle associated with this change. The Connie Pasture would continue to be managed under “custodial management” and bison use would not be restricted to certain dates or numbers as long as the estimated carrying capacity of the public land (36 AUMs) is not exceeded and the rangeland meets public land health standards. Bison use on the Connie Pasture would be integrated with use on the Big Pasture by keeping the gates open between the two pastures. Due to the roaming nature of the bison, it would not be feasible to restrict bison to the Connie Pasture alone for long periods of time. On the other hand, permanently integrating the two pastures by removing existing fences eliminates the potential for control features. A stipulation is included that allows for cattle use within the Connie Pasture for short periods of time. There are gathering corrals located on the permittees’ deeded land portion of the Connie Pasture. These corrals are used to gather and ship cattle trailed in from the adjacent unfenced BLM areas that are authorized for cattle grazing. The Connie Pasture would serve as a holding pasture for short periods of time while these activities occur. Cattle use would not be authorized in the Big Pasture.

The following Terms & Conditions would be included in the new permit:

1. Utilization within the “Custodial” pastures would be limited to 40% - 60% of the total annual forage production on grass forage species during the growing season and 80% of previous growth during the dormant season. Utilization on woody riparian species such as cottonwoods, aspen and willows will be limited to 40% of the current year’s growth. Grazing use that exceeds these levels is not authorized. Livestock would be moved prior to the maximum utilization levels being exceeded.
2. On “Improve” management pastures, maximum utilization levels on upland vegetation would be limited to 40 - 60% during the growing season (5/1 – 8/31) and 80% during the dormant season. Maximum utilization levels on riparian vegetation would be limited to 60% of the riparian grass and riparian grass like forage species and annual growth of woody riparian species.
3. Cattle may be authorized in the Connie Pasture for short periods of time as long as utilization levels as described are not exceeded.

4. All structural range improvements on public lands (including all existing fences bordering public lands) would be maintained in a functioning condition and in accordance with signed cooperative agreement or range improvement permit.
5. The permittee would continue to post signs (minimum 2 signs) at entrances to public land within all bison pastures advising the public of the presence of bison within the pasture and outlining any necessary precautions.
6. The permittee and all persons associated with the allotment operations would not damage, destroy, remove, move or disturb any objects or sites of cultural, paleontological or scientific value, such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils and artifacts. If in connection with allotment operations under this authorization any of the above resources are encountered, the permittee would protect such resources and immediately notify the BLM authorized officer of the findings.

In addition, there is concern that some of the existing fences on public lands may restrict antelope movement. BLM fences within the allotment would be modified by removing sections of the mesh wire in areas where there are low spots or gullies to improve antelope movement within the allotment. BLM staff will be responsible for this modification and would be done as staff time and funding allow.

**B. NO ACTION ALTERNATIVE**

Under this alternative, livestock grazing management would remain unchanged from what is currently authorized (as described in the Background section) and the permit would be renewed for ten years. Cattle would be the only authorized use in the Connie Pasture.

**C. CATTLE ONLY ALTERNATIVE**

Under this alternative, the grazing permit would be limited to cattle grazing only and not authorizing bison grazing. Over the past ten years while the permittee has been grazing bison throughout much of the Elevenmile Canyon Allotment, there have been a number of circumstances that have led to bison moving to locations they were not authorized to graze. BLM has received complaints from landowners and the public about bison trespassing onto their property and raising concerns over their safety. Through evidence uncovered during BLM’s investigation into these situations, it was determined, for the majority of cases, the bison moved from private lands owned and/or controlled by the permittee onto other private lands, outside of the allotment. Although the permittee has no desire to switch back to cattle only, this alternative is reasonable and therefore will be fully analyzed. Under the Cattle Only Alternative, livestock use would be authorized as follows:

Allotment Summary (AUMs)		
Authorized Livestock Grazing Use		
<u>Active</u>	<u>Suspended</u>	<u>Total</u>
1093	*231	1324

The permit would be renewed for ten years and grazing use would be scheduled as follows:

Table 4 – Livestock Numbers and Season of Use

Pasture	Number	Kind	Grazing Period Begin / End	%Public Land	Type Use	AUMs
*Threemile Creek						
Pasture 1	76	Cattle	5/1 - 6/1	100%	Improve	80
Pasture 2	54	Cattle	6/1 - 8/1	100%	Improve	110
Pasture 3	39	Cattle	5/1 - 6/1	100%	Improve	41
Union Creek	67	Cattle	9/1 - 11/1	100%	Improve	137
Big Pasture	140	Cattle	5/1 - 10/1	21%	Improve	147
Big Pasture	278	Cattle	10/1- 5/1	21%	Improve	409
**Unfenced BLM	37	Cattle	3/1 -2/28	100%	Custodial	401

\*Grazing use on Pastures 1, 2 and 3 would remain under suspension as part of the 2006 decision and re-evaluated in 2012.

\*\*These areas of public land occur as small isolated parcel of public lands, unfenced from surrounding private lands and are managed as Custodial.

The following terms and conditions would be included in the permit:

1. Utilization within the “Custodial” pastures would be limited to 40% - 60% of the total annual forage production on grass forage species during the growing season and 80% of previous growth during the dormant season. Utilization on woody riparian species such as cottonwoods, aspen and willows will be limited to 40% of the current year’s growth. Grazing use that exceeds these levels is not authorized. Livestock would be moved prior to the maximum utilization levels being exceeded.
2. On Improve management pastures, maximum utilization levels on upland vegetation would be limited to 40 - 60% during the growing season (5/1 – 8/31) and 80% during the dormant season. Maximum utilization levels on riparian vegetation would be limited to 60% of the riparian grass and riparian grass like forage species and annual growth of woody riparian species.
3. All structural range improvements on public lands (including all existing fences bordering public lands) would be maintained in a functioning condition and would meet BLM specifications.
4. The permittee and all persons associated with the allotment operations would not damage, destroy, remove, move or disturb any objects or sites of cultural, paleontological or scientific value, such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils and artifacts. If in connection with allotment operations under this authorization any of the above resources are encountered, the permittee would protect such resources and immediately notify the BLM authorized officer of the findings.

#### **D. ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD**

NEPA requires federal agencies to explore and evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). As also required by NEPA, the range of alternatives considered in detail includes only those alternative that would fulfill the purpose and need for the Proposed Action.

**No Grazing Alternative** - This alternative would not renew the permit on the Elevenmile Canyon Allotment. As a result, grazing would not continue in these areas and this would be a permanent change. The BLM would initiate a process in accordance with the 4100 regulations to permanently eliminate grazing on the allotment. This alternative is eliminated from detailed

study because it is not a realistic, implementable alternative, and nor does it meet the requirements of the Federal Land Policy and Management Act of 1976. When the RMP was approved, it was determined that livestock grazing was an appropriate use of this land. Eliminating grazing is not analyzed because no new issues or concerns have been identified that would require this action.

DRAFT

## CHAPTER 3 ENVIRONMENTAL ANALYSIS

### A. AIR QUALITY

Affected Environment: Project area is undeveloped land utilized for forage production by livestock. Residences and industry are uncommon in the area, dust from un-surfaced county and private roads are probably the largest contributor to degraded air quality in the area.

Environmental Effects: The listed alternatives would not foresee ably contribute to degraded air quality.

### B. GEOLOGIC AND MINERAL RESOURCES

Affected Environment: The project area is located in the southeastern portion of South Park. South Park is a high intermontane grassland basin. The basin is a wide-faulted syncline sitting between the Front Range to the east and the Sawatch Uplift to the west. The eastern side of the basin is underlain by the Pierre Shale which has been covered with volcanic flow and glacial deposits. Glacial deposits are commonly mined for construction materials. There are 3 active sand and gravel pits within the allotment boundary located on private property. The permits were issued and are monitored by the Colorado Division of Reclamation, Mining, and Safety. These permits were issued in 1977, 1980, and 1984 indicating that the activity has been ongoing in the area.

Environmental Effects None; Active mineral development is not taking place on the proposed BLM allotments.

### C. SOILS (includes a finding on Standard 1)

Affected Environment: Due to the large area covered in this analysis and the number of various detailed soil mapping units, the dominant soils in the area will be described in this analysis. A more detailed description of the soil data associated with the allotment can be located from the NRCS Soil Survey of Teller and Park Counties.

The following information was derived from the Natural Resource Conservation Service, on-line Soil Survey for the area in 2009. The primary soils on the allotment consist of Betemer very gravelly loam and Gebson Sandy Loam. The Betemer very gravelly loam occurs on gentle to steep slopes of no more than 40 percent slope. The soils are generally 10 -20 inches thick, well drained and the water holding capacity is low. The hazard of soil erosion is moderate. The Gebson Sandy Loam occurs on the flatter areas that are generally less than 10% slope and consist of a depth of more than 80 inches. These soils are generally well drained and have a low water holding capacity. The hazard for soil erosion is rated as slight.

#### Environmental Effects

##### Proposed Action Alternative

*Direct and Indirect Impacts:* Having sufficient and desirable vegetative cover to protect the soil surface during precipitation events and to slow and allow infiltration of runoff is critical. The Proposed Action alternative includes target forage utilization levels that would allow sufficient

vegetative and litter cover to provide these functions. As a result, both direct and indirect negative effects would be minimal.

*Cumulative Impacts:* See Vegetation section Page 26.

*Mitigation:* The Proposed Action alternative contains conservation measure to protect the soil resource. No mitigation measures are recommended.

#### No Action Alternative

*Direct and Indirect Impacts:* The No Action alternative renews the permit as currently scheduled. Under current management, Public Land Health Standards for soils are being met and no other issues concerning soils are known at the time of this analysis. Renewing the permit as currently scheduled would not produce any new impacts (both direct and indirect) above and beyond what has already been incurred.

*Cumulative Impacts:* See Vegetation section Page 26.

*Mitigation:* Include Utilization restrictions for upland forage in the terms and conditions of the permit.

#### Cattle Only Alternative

*Direct and Indirect Impacts:* Under this alternative, the grazing permit would be limited to cattle grazing only and not authorize bison grazing. In 1998, prior to authorizing bison grazing, Rangeland Health Assessments were conducted on the Elevenmile Canyon Allotment. The assessments indicated that several upland areas on public land were not meeting standards related to soil health. The determination was attributed to improper grazing practices that had led to decreases in the amount of highly productive and desirable vegetation species on these sites, resulting in more bare ground than expected. These issues were addressed in EA No. CO-057-98-088 and one objective in authorizing bison grazing was to improve the condition of public lands in this area. In 2006 and again in 2009, Health Assessments were conducted on the Elevenmile Canyon Allotment. It was determined at that time most of the upland areas within the allotment were meeting standards. This improvement was attributed to limiting the number of bison and through the natural grazing behavior and forage selection of bison.

*Cumulative Impacts:* See Vegetation section Page 26.

*Mitigation:* The grazing schedule should allow for rest and recovery during the growing season to allow for the physiological needs and vigor on forage species. In addition, better livestock distribution practices should be implemented.

**Finding on the Public Land Health Standard for Upland Soils:** Standard 1: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geological processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor and minimizes surface runoff. Based on the recent health assessment, the allotment is currently meeting Public Land Health Standards for upland soils.

#### **D. WATER QUALITY, SURFACE AND GROUND** (includes a finding on Standard 5)

### Affected Environment:

In addition to the South Platte River, the Elevenmile Canyon Allotment contains many ephemeral and intermittent drainages, as well as one perennial stream. On BLM administered lands within the elevenmile allotment, the only perennial stream is Balm of Gilead Creek in the Union Creek Pasture. Dry Gulch, Cross Creek, Threemile Creek, Pruden Creek, and Union Creek are the other main drainages within the allotment and are intermittent, flowing in the spring and early summer. The allotment also contains Soda Pop Spring on BLM administered lands within the Big Pasture.

Surface water in the allotment has been designated by the State of Colorado as having the following designated uses: Aquatic Life Cold 1, Recreation 1a, Water Supply, and Agriculture. None of the waters within the allotment have been listed on the Colorado 303(d) or M&E list as being water quality impaired; however sediment has been an issue in the past.

Water quality data within the allotment is limited and none exists on BLM lands. Sediment impacts to the South Platte River from Threemile Creek have been well documented and in the past there was an effort made to control sediment. This effort apparently never materialized and has had little influence on the landscape. On this allotment, water quality is very closely tied to the condition of riparian vegetation. Based on the condition of the riparian areas within the allotment, the BLM believes that water quality in the Connie Pasture is impaired by sediment and coliform; however management on public lands is not a significant causal factor due to the amount of private lands within the allotment. Water quality in Pastures 1 and 3 specifically is likely impaired, but is making some improvement as riparian areas improve. This improvement has been limited by trespass grazing that has occurred. Within the Union Creek pasture, water quality is probably good based on riparian area condition. Other factors effecting water quality within the watersheds contained in the allotment include roads and recreation around the South Platte River; however grazing is currently having the biggest impact

### Environmental Effects:

Livestock grazing can potentially have several negative effects on water quality including increased nutrients, such as nitrogen and phosphorus, increased fecal bacteria, increased temperatures and increased sediment production. All of which can cause water to not meet state standards. Most of these impacts may result from livestock spending large amounts of time in and near water sources due to poor distribution and lack of water sources. One of the biggest factors influencing the amount of impact is the condition of the riparian vegetation. The riparian areas along drainages serve to decrease velocity and increase roughness of flow leading to more infiltration and less runoff entering the waterway. Riparian vegetation also stabilizes the stream channel resulting in less sediment production. The riparian section of this document discusses the riparian area condition and impacts. In this case riparian condition can be used as a surrogate for water quality. In addition to riparian areas, upland condition can also have a large role in water quality by stabilizing soils and lessening runoff.

### Proposed Action Alternative

*Direct and Indirect Impacts:* The Proposed Action alternative would continue the recovery of water quality in the Union Creek pasture and Pastures 1 and 3 by allowing the riparian areas to further recover. Water quality in the two small parcels within the Connie Pasture would continue to be degraded due to the probable continued degradation of the riparian area. This degradation

would be difficult to mitigate due to the very small influence that the public lands have in the landscape. It is debatable whether bison, rather than cattle, would have less or more impact on water quality due to distribution characteristics; however based on research done for the previous EA (CO-057-98-0088) the distribution patterns of bison may lead to slightly better water quality as bison tend to use the uplands more. Overall, water quality in the allotment would meet standards or continue to improve in most areas, except Threemile Creek within the Connie Pasture.

*Cumulative Impacts:* The watershed is a mixture of public and private lands; within the allotment, public lands make up a small portion of the landscape, especially in the larger pastures. In addition to current and historic grazing, the watershed is affected by subdivisions, roads, pipelines and other infrastructure. All these activities have a negative effect on water quality to some degree. This area has historically been grazed and no new impacts would be added to water quality on a watershed wide scale from the Proposed Action.

*Mitigation/Residual Effects:* Except for the Connie Pasture, water quality throughout the allotment would continue to improve as riparian areas continue to improve. Water quality in Threemile Creek within the Connie Pasture would continue to be poor and not meet standards, mostly from private land influences. Due to the very small influence that BLM lands have in the Connie Pasture, there is very little mitigation that would be practical to improve water quality.

#### No Action Alternative

*Direct and Indirect Impacts:* Overall, impacts to water quality would be similar to the Proposed Action with the exception that cattle remaining in the Connie Pasture would not change the distribution of livestock. This would not allow for the possibility of water in Threemile Creek within the Connie Pasture to improve.

*Cumulative Impacts:* Cumulative impacts would be similar to the Proposed Action.

*Mitigation/Residual Effects:* Residual effects would be similar to the Proposed Action

#### Cattle Only Alternative

*Direct and Indirect Impacts:* Overall, impacts to water quality would be similar to the No Action Alternative.

*Cumulative Impacts:* Cumulative impacts would be similar to the Proposed Action.

*Mitigation/Residual Effects:* Residual effects would be similar to the Proposed Action.

### **E. INVASIVE, NON-NATIVE SPECIES**

Affected Environment: The ecological sites on this allotment are prone to invasion by a wide variety of noxious weeds if severe soil surface disturbance occurs. There are no known noxious weeds located on the allotment presently.

#### Environmental Effects

##### Proposed Action Alternative

*Direct and Indirect Impacts:* The impacts from the type of grazing proposed in this alternative would not result in the type of soil disturbance needed to increase the risk of noxious weed invasion.

*Cumulative Impacts:* The impacts of the proposed action when considered in addition to the existing surface disturbing activities in the general area, would not increase the risk of noxious weed invasion.

*Mitigation/Residual Effects:* None.

#### No Action Alternative

*Direct and Indirect Impacts:* The impacts from the type of grazing proposed in this alternative would not result in the type of soil disturbance needed to increase the risk of noxious weed invasion.

*Cumulative Impacts:* The impacts of the proposed action when considered in addition to the existing surface disturbing activities in the general area, would not increase the risk of noxious weed invasion.

*Mitigation/Residual Effects:* None.

#### Cattle Only Alternative

*Direct and Indirect Impacts:* The impacts from the type of grazing proposed in this alternative would not result in the type of soil disturbance needed to increase the risk of noxious weed invasion.

*Cumulative Impacts:* The impacts of the proposed action when considered in addition to the existing surface disturbing activities in the general area, would not increase the risk of noxious weed invasion.

*Mitigation/Residual Effects:* None.

## **F. THREATENED, ENDANGERED, AND SENSITIVE SPECIES**

(Includes a finding on Std. 4)

Affected Environment: See the Migratory Bird section for habitat descriptions. Threatened and endangered species are managed under the authority of the Endangered Species Act of 1973 (PL 93-205, as amended). The Endangered Species Act requires Federal agencies to ensure that all actions which they authorize, fund, or carry out are not likely to jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of their critical habitat. In addition, BLM policy requires that BLM sensitive species are given the same consideration and protection as listed species. There are no records of any federally listed species within these allotments.

South Park provides habitat for many of the birds, reptiles, amphibians, fish and mammals found throughout the mountainous landscape of Colorado. Recent conservation assessments for the Southern Rockies, conducted through the Nature Conservancy, identified South Park as the largest and best of the montane grasslands within the eco-region. In addition, the Colorado

Natural Heritage Program (CNHP) has identified South Park as having one of the best occurrences of this plant community in the state. The grassland historically was filled with prairie dog towns and an abundant herd of mountain bison roamed South Park until the early 1900's. Waterfowl numbers were once some of the highest in the state. South Park uplands are also unique. A unique plant association is located on the basin floor and contains a globally rare grassland plant community of Arizona fescue (*Arizona fescue*) and slimstem muhly (*Muhlenbergia filiculmis*). In addition, this plant community provides habitat for 10-20% of the known breeding population of the globally imperiled, BLM sensitive mountain plover. Threatened, endangered, candidate and BLM sensitive species that could or are known to occur in Park County are listed in Table 5.

Table 5 - List of Species Included in this Analysis

Common Name	Scientific Name	Federal Status
Bald eagle	<i>Haliaeetus leucocephalus</i>	BLM Sensitive
American peregrine falcon	<i>Falco peregrinus anatum</i>	BLM Sensitive
Northern goshawk	<i>Accipiter gentilis</i>	BLM Sensitive
Ferruginous hawk	<i>Buteo regalis</i>	BLM Sensitive
Mexican spotted owl	<i>Strix occidentalis luucida</i>	Threatened
American white pelican	<i>Pelecanus erythrorhynchos</i>	BLM Sensitive
White-faced ibis	<i>Plegadis chihi</i>	BLM Sensitive
Burrowing owl	<i>Athene cunicularia</i>	BLM Sensitive
Mountain plover	<i>Charadrius montanus</i>	BLM Sensitive
Uncompahgre fritillary butterfly	<i>Boloria acrocneuma</i>	Endangered
Pawnee montane skipper	<i>Hesperia leonardus montana</i>	Threatened
Gunnison prairie dog	<i>Cynomys gunnisoni</i>	Candidate/BLM Sensitive
Townsend's big eared-bat	<i>Corynorhinus townsendii</i>	BLM Sensitive
Fringed myotis	<i>Myotis thysanodes</i>	BLM Sensitive
Yuma myotis	<i>Myotis yumanensis</i>	BLM Sensitive
Big free-tailed bat	<i>Nyctinomops macrotis</i>	BLM Sensitive
Black-footed ferret	<i>Mustela nigripes</i>	Endangered
Canada Lynx	<i>Lynx Canadensis</i>	Threatened
Greenback cutthroat trout	<i>Oncorhynchus clarki stomias</i>	Threatened
Northern leopard frog	<i>Rana pipiens</i>	BLM Sensitive
Boreal toad	<i>Bufo boreas boreas</i>	Candidate/BLM Sensitive
Rock loving neoparrya	<i>Neoparrya lithophila</i>	BLM Sensitive
Dwarf milkweed	<i>Asclepias uncialis</i>	BLM Sensitive
Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	BLM Sensitive
Degener's beardtongue	<i>Penstemon degeneri</i>	BLM Sensitive
Penland Alpine Fen Mustard	<i>Eutrema penlandii</i>	Threatened
Pale blue-eyed grass	<i>Sisyrinchium pallidum</i>	BLM Sensitive
Little bulrush	<i>Scirpus rollandii</i>	BLM Sensitive
Autumn willow	<i>Salix serissima</i>	BLM Sensitive
Low blueberry willow	<i>Salix myrtilifolia</i>	BLM Sensitive
Silver willow	<i>Salix candida</i>	BLM Sensitive
Porter feathergrass	<i>Ptilagrostis porteri</i>	BLM Sensitive
Greenland primrose	<i>Primula egaliksensis</i>	BLM Sensitive
Few flowered ragwort	<i>Packera pauciflora</i>	BLM Sensitive

Slender cottongrass	<i>Eriophorum gracile</i>	BLM Sensitive
Canadian single spike sedge	<i>Carex scirpoidea</i>	BLM Sensitive

Of the 36 species that could occur in Park County, 23 were dropped from further consideration because surveys have been done and they were not found, their range distributions are outside the allotment or habitats necessary for their life requirements are not found within the allotment. These species are as follows: American peregrine falcon, Mexican spotted owl, White-faced ibis, Uncompahgre fritillary, Pawnee montane skipper, Canada Lynx, black-footed ferret, Boreal toad, greenback cutthroat trout, Rock loving neoparrya, Dwarf milkweed, Ute ladies'-tresses, Degener's beardtongue, Penland Alpine Fen Mustard, Little bulrush, Autumn willow, Low blueberry willow, Silver willow, Porter feathergrass, Greenland primrose, Few flowered ragwort, Slender cottongrass and Canadian single spike sedge.

Species descriptions for BLM sensitive species being considered here are described in Appendix 3.

### Environmental Effects

#### Proposed Action Alternative

##### *Direct and Indirect Impacts:*

#### **Bald Eagle and American white pelican**

Bald eagles are only occasional migrants in this area and white pelicans are summer residents on nearby reservoirs. There are no known nesting occurrences in this area for bald eagles but white pelicans probably nest in the area in suitable habitat. In addition, since both of these species activities are tied to water bodies, they would only be expected along the northern boundary of this allotment which rarely has any livestock use. Implementing the Proposed Action would likely have no effect on either of these species or their habitat.

#### **Northern Goshawk**

High quality habitat for goshawks is not present on the allotment since there are only small stands of mixed conifers present. However, south of the allotment, at higher elevations, there are large areas of continuous conifer habitat where goshawks may be present. If they occur on the allotment it would only be occasionally. Implementing the Proposed Action would likely have no effect on Northern goshawks.

#### **Ferruginous Hawk**

Ferruginous hawks are birds of grasslands and prairies and there are known occurrences (CNHP database) on this allotment. Since much of this allotment is open grassland habitat, there is a substantial amount of suitable habitat present. Since Land Health Assessments determined that health standards are being met, prey habitat and prey base for these hawks has not been degraded. If grazing stipulations continue to be followed, implementing the Proposed Action will likely have no effect on ferruginous hawks.

#### **Mountain plover**

The proposed action establishes a grazing utilization level that is appropriate for maintaining plover habitat. Mountain plover prefer short vegetation and bare ground and grazing can help to maintain short vegetation. Implementing the Proposed Action would result grazing use on the allotment that is consistent with proper mountain plover management. There could be some

direct impacts as a result of nest trampling but this would be rare since plovers tend to be widely spaced. If this occurred, it would not result in a substantial impact to the plover population in this area. The amount of use proposed would benefit mountain plover.

#### **Burrowing owl and Gunnison's prairie dog**

Although there are prairie dog colonies in South Park, there are no known occurrences on this allotment. Since burrowing owls would be found in association with prairie dog colonies, it is also unlikely that they are present. Gunnison's prairie dogs evolved with bison grazing in the past. Their colonies tend to be widely spaced, low density occurrences that would not have negative impacts from livestock grazing at the levels stipulated in this permit. Since Land Health Assessments determined that health standards are being met, habitat for both of these species has not been degraded. Implementing the Proposed Action will likely have no measurable effect on either of these species or their habitat.

#### **Bats** (Townsend's big eared-bat, Fringed myotis, Yuma myotis, Big free-tailed bat)

There are no foreseeable direct impacts to any of these species from authorizing this permit. Potential indirect impacts could be reduction of vegetative cover and substrate for insects. Based on recent the recent Land Health Assessment for this allotment, utilization stipulations are being followed and adequate vegetative cover is being maintained. Implementing the Proposed Action will likely have no measurable effect on any of these species or their habitat.

#### **Northern leopard frog**

See the Aquatic Wildlife section for impacts discussion.

#### **Pale blue-eyed grass**

There are many known occurrences of this plant in South Park and one has been documented within the allotment. Complete surveys of the allotment for this species have not been done. Most of the known occurrences are on private land and many of these are in areas that are grazed by livestock. It is unknown whether this plant is palatable to livestock. There could be direct impacts to this plant from trampling but this has not been documented. Since there are numerous, widespread occurrences of this plant in South Park that have been grazed by livestock for many years and the population appears to remain viable, it is likely that livestock grazing does not represent a substantial impact to this species. Implementing the Proposed Action would likely have no measurable effect on this species or its habitat.

*Cumulative Impacts:* In addition to public lands, this allotment contains some private land and is adjacent to other private land. Most of the private lands near the allotment are rural lands that are also grazed by livestock; this land use will likely continue into the future. Much of the private land in this area is in poor condition from livestock grazing. In addition, construction of homes within subdivisions on tracts from 5 to 35 acres on private land and subdivision roads can also be expected to continue. In addition to livestock grazing, various recreational activities (hunting, OHV riding, mountain biking, snowmobiling, etc.) are ongoing and are reasonably certain to continue on the adjacent private lands. Logging is also likely to continue on some private lands near this allotment, however, most of these are small-scale operations. Commercial harvest of timber on public lands will be minimal due to the lack of access and a low demand for timber products. The continued authorization of livestock grazing on public lands administered by the BLM is not anticipated to result in negative cumulative impacts to TES species when

viewed in conjunction with those activities currently occurring and reasonably certain to occur on adjacent State and private lands.

*Mitigation/Residual Effects:* None

#### No Action Alternative

*Direct and Indirect Impacts:* Recent Land Health Assessments have shown that this allotment is meeting Land Health Standards except for areas along Threemile creek. These areas have been removed from livestock grazing except for one short section in the Connie pasture that is unfenced from private land (see the floodplains/riparian section for more detail). This alternative potentially has some increased benefit to TES species that utilize riparian habitat. Since cattle are less likely to break down the fences that border private land in section 25, south of the Connie pasture, and pastures 1 and 2 that would allow access to Threemile creek, there would be less risk of impacts to these resources. Bison are more likely to pressure and possibly break down these fences that could result in continued resource damage from trespass. This is a potential risk with the proposed action.

*Cumulative Impacts:* Similar to those described in the Proposed Action alternative.

*Mitigation/Residual Effects:* Similar to those described in the Proposed Action alternative.

#### Cattle Only Alternative

*Direct and Indirect Impacts:* As discussed in the No Action alternative section, there are fewer risks with cattle grazing than with bison as they are less likely to pressure and break down fences. Some of the results of bison breaking down fences on this allotment are discussed in the background section of this document. This alternative has some potential benefit to riparian habitat as a result. Although there are fewer risks with cattle grazing compared with bison, this does not mean that bison grazing cannot be accomplished without trespass.

*Cumulative Impacts:* Similar to those impacts described in the Proposed Action alternative.

*Mitigation/Residual Effects:* Similar to those impacts described in the Proposed Action alternative.

#### **Finding on the Public Land Health Standard for Threatened & Endangered species:**

Implementing the Proposed Action would not affect the Land Health Standard for Threatened & Endangered species on this allotment.

#### **G. VEGETATION** (includes a finding on Standard 3)

Affected Environment: The elevation of the allotment is 8,600 to 9,600 feet and the average annual precipitation in the area is between 10 and 12 inches. The growing season on this allotment is generally between the months of June through August. Precipitation records indicate that July and August in this area are the wettest months of the year as well as the warmest. The combination of available moisture and warm temperatures tend to provide July and August with the most favorable conditions for plant growth during the year.

The vegetation found on the allotment is primarily associated with open, rolling grasslands and few, small stands of timber. A description of the vegetation found on the allotment is described utilizing the existing range sites as interpreted by the NRCS website 2009. According to the Natural Resource Conservation Service, a range site is an area of rangeland where climate, soil, and topography are sufficiently uniform to produce a distinct natural plant community. The primary range sites on this allotment include Shallow Loam, Mountain Loam 10 – 16”, Dry Shallow Loam, Dry Mountain Swale, Mountain Meadow, and Shallow Pine.

**Shallow Loam:** An open grassland site found on the steeper slopes and south and western exposures. The typical grasses are bunchgrass species that include Arizona Fescue, Mountain Muhly, June grass, Parry Oatgrass, and Pine Dropseed. Common forbs found on the site include Yarrow, Lupin, Penstemon, American Vetch, Golden Pea, and Bluebell. Shrubs are generally scattered and isolated, and include Mountain Mahogany, Skunkbrush, Snowberry, Current, and Gooseberry. Average annual production for this site is 700 lbs per acre.

**Mountain Loam 10-16”:** The site is open grassland dominated and include Arizona Fescue, Western Wheatgrass, Prairie Junegrass, Slimstem Muhly, Bottlebrush Squirreltail, and Blue Grama. This site generally contains more forbs than other sites and includes Oregon Fleabane, Silky Crazyweed, Vetches, and Erigonums. Shrubs include Rabbitbrush and Fringed Sage. Average annual production for this site is 700 lbs per acre.

**Dry Shallow Loam:** This site occurs on weathered ridge tops where shallow soils are prominent and slopes are moderate. The plant community contains more shrubs and forbs compared to the others, but the site is still considered a grassland site. Common grasses to the site include Arizona Fescue, Mountain Muhly, Indian Ricegrass, Western Wheatgrass, Blue Grama, and Needle and Thread grass. Grass dominance may vary and depends on site factors such as aspect, ridge top versus depression, and exposure. The prominent forbs include Penstemon, Milkvetch’s, Geranium, Goldasters, and Aster’s. Shrubs include Rabbitbrush, Fringed Sage, Cinquefoil, Soapweed, and Snakeweed. Average annual production for this site is 450 lbs per acre.

**Dry Mountain Swale:** This site occurs along the bottoms adjacent to streams and is associated with deeper soils. The plant community is grass dominated and includes Western Wheatgrass, Needle and Thread, Slender Wheatgrass, Nodding Brome, Blue Grama, Bottlebrush Squirreltail, and Sand Dropseed. Forbs include Aster’s, Fleabane, Geranium, Goldasters, and Yarrow. Shrubs include Rabbitbrush, Fringed Sage, Cinquefoil, Soapweed, and Snakeweed. Average annual production for this site is 1,200 lbs per acre.

**Mountain Meadow:** The site occurs in wetter mountain valleys, swells, parks, and where the topography is generally level. The site is dominated by grasses and sedges, however, during certain times of the year forbs are very prevalent while in bloom. Grasses include Tufted Hairgrass, Nebraska Sedge, Slender Wheatgrass, and Baltic Rush. Forbs include Clovers, Iris, and Vetch. Shrubs may include willows and Cinquefoil. Average annual production for this site is 3,000 lbs per acre.

**Shallow Pine:** This site occurs on moderate to steep slopes along mountain sides and ridge tops where soils are generally shallow. The plant community is considered an open Ponderosa Pine stand with a bunchgrass understory. Some open grassland parks occur within the site. The

Ponderosa Pine may make up 15 to 20% of the site. The dominate grasses include Mountain Muhly, Arizona Fescue, Parry Oatgrass, Muttongrass, Pine Dropseed, Western Wheatgrass, Elk Sedge, Prairie Junegrass, Blue Grama, and Needle grasses. Forbs and shrubs include Geranium, Golden pea, Mountain Mahogany, and Wax Current. Average annual production for this site is 1,200 lbs per acre.

During prolonged periods of overgrazing and poor management ecological retrogression may occur on any of the above range sites. The result is a decrease in desirable cool season plants and dominance in warm season and less desirable plants such as shrubs.

Public Land Health Assessments have been conducted on the Eleven Mile Canyon Allotment on two separate periods since bison grazing was authorized in 1999. In 2006 and again in 2009, evaluations were conducted on upland vegetation throughout the allotment including the Big Pasture and Connie Pasture. In both cases, areas used by grazing animals (bison and cattle) exhibit ground cover and species composition appropriate to the area and are meeting current public land health standards related to productive plant and animal communities (Standard 3). The assessment identified sufficient vegetative and litter cover to protect soil and to trap and hold moisture during precipitation events.

### Environmental Effects

#### Proposed Action Alternative

*Direct and Indirect Impacts:* The Proposed Action re-authorizes grazing use on the allotment as currently scheduled and authorizes new bison grazing on the Connie Pasture. Currently, cattle are only authorized in the Connie Pasture. The previous Environmental Assessment (CO-057-1998-088EA) cited numerous sources in reference to plant and animal interactions under bison grazing. The EA described that bison tend to favor the less desirable plant species that include warm season grasses, and will generally pass up the more desirable cool season grasses and forbs. Also, bison tend to distribute throughout the range better than cattle, and on previously grazed places, bison were re-grazing those places with varying time intervals between re-grazing. In addition, Public Land Health Assessments were recently conducted on the “Big Pasture”, that indicate, under current management, bison grazing does not appear to be preventing public land from meeting applicable land health standards. BLM has conducted Land Health Assessments on public lands where bison grazing has occurred for almost ten years and those areas are meeting Public Land Health Standards. At this time, BLM has no reason not to expect the same for the Connie Pasture as long as the associated utilization restrictions are followed.

On pastures managed under “Custodial” management there are utilization restrictions which determine the amount of vegetation that can be removed. The Royal Gorge Resource Management Plan (RMP) authorizes this level of vegetation utilization on single pasture allotments under season-long grazing in lieu of a rest standard. Although this type of grazing management is not optimal, relatively low utilization levels (40% -60%) during the growing season will allow for seed dissemination and seedling establishment. For the reasons stated above, the grazing schedules and associated terms and conditions of the Proposed Action would meet Colorado Livestock Grazing Management Guidelines.

*Cumulative Impacts:* The Elevenmile Creek Allotment occurs within the Spinney Creek fifth level watershed. The public land portions of the allotment are fragmented and surrounded by

unfenced private lands in most cases. Even though private land parcels are currently undeveloped, it is anticipated that further development practices will increase in the future involving construction of homes and higher road densities. In addition to private development, recreation has occurred in the area and includes hunting, fishing, OHV, and snowmobiling. These activities are also anticipated to increase in popularity in the future. For the most part, grazing use on the public land has been taking place under the current BLM management since approximately 1981. Grazing use takes place on much of the private, state, and other federal lands within the watershed as well. Generally, BLM grazing management is more intensive than management of the surrounding private and state lands. Therefore, negative cumulative impacts to vegetation related to the Proposed Action is not anticipated when viewed in conjunction with other activities in the watershed.

*Mitigation:* There are none.

#### No Action Alternative

*Direct and Indirect Impacts:* The No Action alternative renews the permit as currently authorized. Under current management, Public Land Health Standards on upland areas are currently being met. Renewing the permit as currently scheduled would not produce any new impacts above and beyond what has already been incurred.

*Cumulative Impacts:* Similar to those impacts described under the Proposed Action Alternative.

*Mitigation:* There are none.

#### Cattle Only Alternative:

*Direct and Indirect Impacts:* Under this alternative, the grazing permit would be limited to cattle grazing only and not authorize bison grazing. In 1998, prior to authorizing bison grazing, Rangeland Health Assessments were conducted on the Elevenmile Canyon Allotment. The assessments indicated that several upland areas on public land were not meeting standards related to "healthy and productive plant & animal communities". The determination was attributed to improper grazing practices that had led to decreases in the amount of highly productive and desirable cool season grass species on these sites, resulting in less diverse and productive plant communities. These issues were addressed in EA No. CO-057-98-088 and one of the objectives for authorizing bison grazing was to improve the condition of public lands in this area. In 2006 and again in 2009, Health Assessments were conducted on the Elevenmile Canyon Allotment. It was determined at that time most of the upland areas within the allotment were meeting standards related to "healthy and productive plant & animal communities". This improvement was attributed to limiting the number of bison and through the natural grazing behavior and forage selection of bison.

*Cumulative Impacts:* Similar to those impacts described under the Proposed Action Alternative.

*Mitigation:* The grazing schedule should allow for rest and recovery during the growing season on forage species to allow for the physiological needs and vigor of forage species on the allotment.

**Finding on the Public Land Health Standard for Plant and Animal Communities:** 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 habitats 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. Based on the recent health assessment, the allotment is currently meeting Public Land Health Standard for Upland Plant Communities.

#### **H. WETLANDS & RIPARIAN ZONES** (includes a finding on Standard 2)

Affected Environment: There are three small perennial tributaries with some public land that enter the South Platte watershed in the area of permit, Three Mile, Union, and Balm of Gilead Creeks. These are small headwater streams with watershed area originating on National Forest, flowing across BLM lands, then on to private land controlled by the permittee. Historically the streams on public land were degraded and efforts to improve conditions were undertaken for most of the stream length total on BLM. Union and Balm of Gilead creeks were fenced and rested and presently are in functional conditions meeting BLM's Riparian health standard. Three Mile Creek on the public land (pasture #1 and #3) was put into suspension for grazing use, but unauthorized grazing has kept the stream from meeting Proper Functioning Condition (PFC). Monitoring has occurred only to the extent to evaluate if improvements are occurring or to check for livestock, but with below average precipitation years, and the unauthorized grazing use, Three mile Creek has not moved into a condition to meet BLM riparian health standard. Below the larger tracts of public land in pastures 1 and 3, the stream is entirely private land with the exception of two separate landlocked and unfenced public land parcels totaling less than 0.5 miles of stream segment. These are the only public land riparian resources located within the Connie Pasture and these small segments are subject to bison grazing under the Proposed Action. These riparian segments have historically been grazed by cattle as with the private land surrounding them as there is no fencing or access for management control of livestock. The riparian condition on this isolated public land is not PFC. Many streams in this region were damaged by historical land use and subsequent severe storm events that eroded stream banks and creating incised channels. An undated and unpublished report from the NRCS (approximately later 1980's) partially documents the poor overall conditions of the Three Mile Creek Watershed and discusses potential interagency management options to reduce documented silt loads entering the South Platte. Potential for recovery on this stream is high and these stream types are well suited for recovery, however to the BLM's knowledge, no interagency watershed recovery efforts were undertaken outside of the efforts described to rest Three Mile Creek in the BLM pastures. BLM initiated that management change related to the need to meet the riparian land health standards, rather than in response to potential interagency watershed improvement efforts. An on site meeting with the permittee (summer 98) clarified the mandates BLM must operate under on the streams on public lands. Discussion of BLM's riparian goals and assessment methodology for the public land riparian resources given the BLM mandates occurred and grazing schedules for the public land riparian resources further evolved from these meetings. Problems however arise in areas unfenced or poorly fenced, from the surrounding private land where land management objectives differ.

#### Environmental Effects

##### Proposed Action Alternative

*Direct and Indirect Impacts*: The grazing management as described under the proposed action alternative (primarily the change in class of livestock from cattle to bison), would sustain proper

functioning conditions, and continue to improve riparian resources on all parcels of public land excluding the two isolated parcels in the Connie Pasture. These unfenced parcels did not meet BLM riparian health standard with the historical cattle grazing use. There has been considerable discussion whether bison in the Connie Pasture would be less impacting to riparian resources than cattle. There may be some lessening of concentrated use in riparian areas, but with this stream being the primary water source and fences to contain buffalo, it is not certain these parcels would improve beyond the conditions brought about from cattle. The comparison of uplands improving in the Big Pasture with bison grazing does not translate to riparian areas. Research presented (1998 EA) points out that compared to cattle, distribution away from the stream and upland use by bison is much improved, but RGFO would need to monitor to determine any change from switching to bison. The relative significance of the public land riparian area when compared to that of the larger private holdings within the Connie pasture area is small because of the short stream length. Any improvement would match that for the private lands. More intensive riparian management such as exclusion fencing, or fencing to regulate utilization on these parcels may not be justified because the private land influence would substantially dictate the condition of the public land stream health because of the public land stream length being short. Given other riparian resources described are sensitive, and early in recovery, fence integrity becomes paramount to the success of recovery of those public land areas, and there are documented issues with livestock and the fences in the area. Fences must restrict animals, whether bison or cattle, to the schedule of the Proposed Action or riparian conditions set back.

*Cumulative Impacts:* Most all land in South Park at the elevations of the public land discussed here and lower are grazed. Continued grazing of the relatively minor acreage of BLM riparian compared to that on private does not constitute a significant change from historical management, nor make much difference on a regional scale, but improving the public land riparian will provide local resource benefit.

*Mitigation/Residual Effects:* Implementing the proposed action as described relies on fencing. Fences need to be inspected and repaired if necessary, or rebuilt, then maintained. Improvement within the Connie Pasture riparian is reliant upon improved bison distribution over that of cattle, monitoring the two public land parcels would be necessary to determine improvement, or the need for additional grazing management.

#### No Action Alternative

*Direct and Indirect Impacts:* Impacts are similar to those impacts described under the Proposed Action Alternative and the No Action Alternative. Management changes have been made on the allotments to address riparian / wetland areas except for less than a ½ mile segment discussed above in the Connie Pasture and continued improvement for most riparian resources is anticipated if existing improved management continues. Cattle remaining in the Connie Pasture would continue to prevent those small BLM parcels' riparian resources from reaching proper functioning condition.

*Cumulative Impacts:* Similar to those impacts described under the Proposed Action Alternative.

*Mitigation/Residual Effects:* Similar to those impacts described under the Proposed Action Alternative.

### Cattle Only Alternative

*Direct and Indirect Impacts:* For the Connie pasture, the expected impacts would be the same as for the No Action Alternative. The primary differences between the Proposed Action alternative and the Cattle Only alternative are whether bison remain the class of livestock or whether the allotment should revert back to cattle within the Connie Pasture and other isolated public land parcels presently authorized for bison grazing. Cattle remaining in the Connie Pasture would continue to prevent those small public land parcels' riparian resources from reaching proper functioning condition.

*Cumulative Impacts:* Similar to the Proposed Action and no Action Alternatives.

*Mitigation/Residual Effects:* Similar to the Proposed Action and No Action Alternatives.

**Finding on the Public Land Health Standard for Riparian Systems:** All riparian resources within this allotment are either meeting BLM's riparian health, or have been under a management change for some time in order to do so. Riparian within the Connie Pasture that is not meeting BLM land health standards is small and insignificant relative to the total amount of private land, but it will possibly improve with the bison use over historic cattle grazing given time but this would need to be evaluated at this specific site.

### **I. WILDLIFE, AQUATIC** (includes a finding on Standard 3)

Affected Environment: There is approximately 3.6 miles of small stream aquatic habitat on public land within the allotment. As described in further detail in the riparian section, this habitat exists along Three Mile, Union and Balm portions of Gilead creek. These streams do not sustain much flow in drought years, but are generally perennial across public land, diminishing some as they flow across flatter terrain private land to the north. Suitable habitat conditions exist on all but the upper Three Mile Creek and the two-isolated land locked parcels described (riparian section) below the larger block of public land but also on Three Mile Creek. Leopard frogs may exist in the allotment, but no amphibian surveys have been conducted. These frogs are in Park County and are a species of concern for BLM.

### Environmental Effects

#### Proposed Action Alternative

*Direct and Indirect Impacts:* All pastures with aquatic habitat on this allotment had management action taken to improve or sustain the resource except for the isolated parcels within the Connie Pasture. Changing the class of livestock from cattle to bison within the Connie pasture is the most significant management change proposed. Implementing this management change, as well as the other terms and conditions prescribed within the proposed action alternative would maintain and improve aquatic wildlife habitat. The aquatic habitat located within the two isolated parcels within the Connie pasture may improve as a result of bison grazing over that of use by cattle. Research presented (1998 EA) points out that compared to cattle, distribution away from the stream and upland use by bison is much improved, but RGFO would need to monitor to determine any change from switching to bison. The relative significance of the public land aquatic habitat area when compared to that of the larger private holdings within the Connie pasture area is small because of the short stream length. Any improvement would match that for the private lands. More intensive stream improvement management such as exclusion fencing,

or fencing to regulate utilization on these parcels may not be justified because the private land influence would substantially dictate the condition of the public land stream health because of the public land stream length being short.

*Cumulative Impacts:* Most all land in South Park at the elevations of the BLM land discussed for this action and lower are grazed. Continued grazing of the relatively minor acreage of BLM compared to that on private does not constitute a substantial change from historical management, nor make a difference on a larger regional scale. Improving the public land riparian and aquatic habitat will be restricted to that of just some local resource benefit.

*Mitigation/Residual Effects:* Implementing the proposed action as described relies on fencing. Fences need to be inspected and repaired if necessary, or rebuilt, then maintained. Improvement within the Connie Pasture riparian is reliant upon improved bison distribution over that of cattle, monitoring the two public land parcels would be necessary to determine improvement, or the need for additional grazing management.

#### No Action Alternative

*Direct and Indirect Impacts:* Expected impacts are largely similar to those described under the Proposed Action and No Action alternatives. Management changes were made on the allotments to address aquatic habitat values in all but the two public land parcels located within the Connie Pasture. Maintaining or improvement for most riparian and aquatic habitat resources is anticipated under current management. Cattle remaining in the Connie Pasture would continue to prevent the aquatic habitat located within the two isolated public land parcels from meeting rangeland health standards.

*Cumulative Impacts:* Similar to the proposed action alternative.

*Mitigation/Residual Effects:* Fences need to be inspected and repaired if necessary, or rebuilt to allow for a current situation to operate.

#### Cattle Only Alternative:

*Direct and Indirect Impacts:* Expected impacts to the aquatic habitat within the Connie pasture would be similar to those impacts described under the No Action alternative, where bison would not be authorized to graze. The class of livestock would revert back to cattle only. Cattle only remain in the areas that are improving, but no improvement within the Connie Pasture public land riparian would occur.

*Cumulative Impacts:* Similar to those described in the Proposed Action alternative.

*Mitigation/Residual Effects:* Fences need to be inspected and repaired if necessary, or rebuilt.

**Finding on the Public Land Health Standard for Plant and Animal Communities:** Aquatic habitat located on public land holdings in this area below the National Forest are minor compared to the aquatic resources located on private lands. BLM has initiated action over recent times to improve aquatic health on areas in poor condition with success. Compliance and fencing have been at issue, but otherwise the management direction has been set to improve aquatic resources on this allotment on all but two small stream segments surrounded by private

land where monitoring of utilization will determine if additional management change is working the aquatic resources on.

**J. WILDLIFE, TERRESTRIAL** (includes a finding on Standard 3)

Affected Environment: South Park provides habitat for many of the birds, reptiles, amphibians, fish and mammals found throughout the mountainous landscape of Colorado. Recent conservation assessments for the Southern Rockies, conducted through the Nature Conservancy, identified South Park as the largest and best of the montane grasslands within the eco-region. The grassland historically was filled with prairie dog towns and an abundant herd of mountain bison roamed South Park until the early 1900's. South Park uplands are also unique. A unique plant association is located on the basin floor and contains a globally rare grassland plant community of Arizona fescue (*Arizona fescue*) and slimstem muhly (*Muhlenbergia filiculmis*). Wetland types located in the area include playa lakes, wet meadows, springs, alkaline wet meadows and springs. Large animals that inhabit the allotments include elk and pronghorn. Pronghorn are common in the flat, open habitat during all times of the year. Elk generally use the allotments during the winter months when they are moving throughout the park. It is not unusual in South Park for large numbers of elk to use open flat habitat miles from the timbered ridges.

As with many other areas in South Park, this allotment was grazed by sheep in that past and many of the fences present have 8-10 inch wire mesh along the bottom 3 feet of the fence. This is a potential problem for antelope although they seem to move freely around the allotment without any noticeable increase in mortality as a result (Mark Lamb, CDOW, pers. com.).

Environmental Effects

Proposed Action Alternative

*Direct and Indirect Impacts*: The proposed action includes changes in the grazing authorizations for the allotment: 1) Adjusting estimates of forage production on public land based on the recent, updated surveys, and 2) Including specific utilization standards for forage species. The previous estimates of carrying capacity on allotments currently under custodial management were made by extrapolating data from ocular estimations of forage production many years ago. As part of the current analysis, updated forage production data is available based on soil surveys and soil maps. Calculations on public land also factored in an adjustment to leave sufficient forage for wildlife. The proposed action also includes utilization standards in the new permit that are desirable in order to assure sufficient residual vegetation to protect soil from wind and water erosion and allow adequate seed dissemination and seedling establishment. The proposed action helps ensure that grazing use on the allotments comply with Guidelines for Livestock Grazing Management in Colorado.

The change in the estimated carrying capacity and the amount of authorized use under the proposed action would not affect the amount of vegetation actually harvested by livestock on public land (utilization would continue to be limited to 40% - 60% of the annual forage production.) Therefore, there would be no impact on vegetation from the changes in carrying capacity and the amount of authorized use under the proposed action. Similarly there should be no affect on wildlife species that use the allotments. Rangeland health evaluations for this allotment indicated that there is adequate habitat in good condition for the species that inhabit the

areas. Designating specific utilization limits for the allotments under the proposed action would improve protection of the public lands and ensure that wildlife habitats are maintained.

The proposed action is to manage grazing use on the allotment in a manner that is consistent with proper wildlife management. The proposed action would establish a grazing utilization level that is appropriate for maintaining habitat. Recent land health assessments have shown that, under the old permit, the allotment is meeting Land Health Standards overall. It is reasonable to assume that this would continue under a new permit. Therefore, the Proposed Action Alternative would likely have no measurable effect on terrestrial wildlife species or their habitat.

*Cumulative Impacts:* In addition to public lands, this allotment contains large portions of private land and is adjacent to other private land. Most of the private lands near the allotment are rural lands that are also grazed by livestock; this land use will likely continue into the foreseeable future. Much of the private land in this area is in poor condition from livestock grazing. In addition, construction of homes within subdivisions on tracts from 5 to 35 acres on private land and subdivision roads can also be expected to continue. In addition to livestock grazing, various recreational activities (hunting, OHV riding, mountain biking, snowmobiling, etc.) are ongoing and are reasonably certain to continue on the adjacent private lands. Logging is also likely to continue on some private lands near this allotment, however, most of these are small-scale operations. Commercial harvest of timber on public lands will be minimal due to the lack of access and a low demand for timber products. The continued authorization of livestock grazing on public lands administered by the BLM is not anticipated to result in negative cumulative impacts to terrestrial wildlife species when viewed in conjunction with those activities currently occurring and reasonably certain to occur on adjacent State and private lands.

*Mitigation/Residual Effects:* None

#### No Action Alternative

*Direct and Indirect Impacts:* Recent Land Health Assessments have indicated that this allotment is meeting Land Health Standards except for areas along Threemile creek. These areas that are not meeting Land Health Standards have been removed from livestock grazing except for one short section in the Connie pasture that is unfenced from private land (see the floodplains/riparian section for more detail). This alternative potentially has some increased benefit to wildlife species that utilize riparian habitat. Since cattle are less likely to break down the fences that border private land in section 25, south of the Connie pasture, and pastures 1 and 2 that would allow access to Threemile creek, there would be less risk of impacts to these resources. Bison are more likely to pressure and possibly break down these fences resulting in continued resource damage to riparian habitat from trespass. This is a potential risk with the proposed action and the no action alternatives.

*Cumulative Impacts:* Similar to those described within the Proposed Action Alternative.

*Mitigation/Residual Effects:* None

#### Cattle Only Alternative

*Direct and Indirect Impacts:* As discussed in the No Action Alternative section, there are fewer potential risks with cattle grazing than with bison as cattle are less likely to pressure and break down fences. Some of the results of bison breaking down fences on this allotment are discussed

in the background section of this document. This alternative has some potential benefit to riparian habitat and terrestrial wildlife species as a result. Although there are fewer potential risks with cattle grazing compared with bison, this does not mean that bison grazing cannot be accomplished without trespass.

*Cumulative Impacts:* Similar to those impacts described under the Proposed Action Alternative.

*Mitigation/Residual Effects:* None

**Finding on the Public Land Health Standard for Plant and Animal Communities** (partial, see also Vegetation and Wildlife, Aquatic): The proposed action will not affect the public land health standard for plant and animal communities.

## **K. MIGRATORY BIRDS**

Affected Environment: There are a variety of habitat types within the allotment. South Park provides habitat for many of the birds, reptiles, amphibians, fish and mammals found throughout the mountainous landscape of Colorado. Recent conservation assessments for the Southern Rockies, conducted through the Nature Conservancy, identified South Park as the largest and best of the montane grasslands within the eco-region. The grassland historically was filled with prairie dog towns and an abundant herd of mountain bison roamed South Park until the early 1900's. Waterfowl numbers were once some of the highest in the state.

South Park contains important habitats valuable to a wide array of bird species: palustrine emergent habitats in the form of wet meadows; shallow ponds; playa lakes; palustrine shrub habitat in the form of willow riparian; and upland habitats including park-like coniferous forest, aspen stands, and grasslands. The following species breed in emergent marsh, wet meadow, salt meadow or open water habitats in the area: American avocet, common snipe, killdeer, spotted sandpiper, sora rail, savannah sparrow, and common yellowthroat. White-faced ibis and Virginia rail breed in dense emergent vegetation, and may occur in the area. Furthermore, these wetlands also provide foraging sites for Swainson's hawk and red-tailed hawk. Coniferous forests in the area provide habitat for migrating Calliope and broad-tailed hummingbirds in addition to breeding habitat for several other migratory land birds. Aspen stands also provide habitat for priority species: migrating Lewis' woodpecker, migrating and breeding red-naped sapsucker, and cordilleran flycatcher.

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, 8 are described for this allotment (aspen, mountain grassland, riparian, spruce-fir, mixed conifer, ponderosa and mountain shrub). Bird species typically found in these habitats are described for each habitat type.

### Aspen

The allotment contains about 275 acres of aspen/aspen mix or 0.9% of the total allotment. 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.

### Mountain Grassland

The allotment contains about 20,000 acres of grassland/grassland mix or 62% of the total allotment. 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.

These are typically grasslands of forest openings and park-like expanses in the montane and subalpine coniferous forests. Although smaller montane grasslands are scattered throughout the Southern Rocky Mountains eco-region, the largest occurrence by far (over a million acres) is on the valley floor of South Park in central Colorado. This ecological system typically occurs between 7,200 and 10,000 feet on gentle to steep slopes, parks, or on lower side slopes. The montane grassland community, Arizona fescue-slimstem muhly (*Festuca arizonica* - *Muhlenbergia filiculmis*), is rated as S3 by the Colorado Natural Heritage Program (CNHP) and is wide spread in the area of this allotment.

These large patch grasslands are intermixed with matrix stands of spruce-fir, lodgepole, ponderosa pine, and aspen forests. In limited circumstances (e.g., South Park in Colorado) they form the "matrix" of high-elevation plateaus. These large patch grasslands are intermixed with forests of spruce-fir, lodgepole, ponderosa pine, mixed conifers, and aspen. Montane and subalpine grasslands are generally interspersed in forest communities as park-like openings that vary in size from a few to several thousand acres.

### Riparian

The allotment contains about 800 acres of riparian vegetation or 2% of the total allotment. 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.

### Spruce-fir

The allotment contains about 500 acres of spruce/fir or 2% of the total allotment. Spruce-fir forests are present at 9,000-12,000 ft in elevation. Engelmann spruce and subalpine fir are the dominant tree species. Engelmann spruce is found without subalpine fir at the lower elevations, but only on cool, sheltered sites. Lodgepole pine and aspen are often mixed in at lower and middle elevations, and limber pine and bristlecone pine are present at middle and higher elevations. Understory vegetation can vary from sparse to quite dense, perhaps the densest of the conifer forests in this region with the exception of dense Gambel oak under ponderosa pine. Blueberry, shrubby cinquefoil, and Colorado currant are common components.

The avian community in this area has a comparatively large number of seed-eating birds, a reflection of the abundant cone crops available here. Compared to eastern spruce forests, fewer birds of this region are of conservation concern. Birds commonly found in this forest type include the Gray Jay, Mountain Chickadee, Red-breasted Nuthatch, Ruby-Crowned Kinglet, Hermit Thrush, Pine Grosbeak, and Pine Siskin.

Three species are identified as high priority in Spruce-Fir habitats: Boreal Owl, Olive-sided Flycatcher, and Hammond's Flycatcher.

### Mixed Conifer

The allotment contains about 75 acres of mixed conifer or 0.2% of the total allotment. 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.

### Ponderosa pine

The allotment contains about 5,100 acres of ponderosa pine or 16% of the total allotment. Ponderosa pine forests are very dry and warm, with less than 25 in of precipitation annually. Ponderosa pines are the largest conifers in Colorado and Gambel oak is a common component of the understory, typically in a shrubby form. Other common understory shrubs include mountain mahogany and wax currant. Tree species sometimes found mixed with ponderosa pine are junipers, pinyon pine, aspen, white fir, and Douglas-fir. Birds typical of the ponderosa pine forest type include Merriam's turkey, Williamson's sapsucker, pygmy nuthatch, western bluebird, band-tailed pigeon, 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.

Birds typical of the ponderosa pine forest type include Wild Turkey, Pygmy Nuthatch, Western Bluebird, and Chipping Sparrow. More bird species are found in ponderosa pine forests than any other coniferous forest habitat in this region. This abundant bird life reflects in part the prevalence of Gambel oak in many ponderosa stands. Oak adds structure, acorns, and prey--insect densities are higher in oak than in nearby conifers.

Five species are identified as high priority in Ponderosa pine habitats: Band-tailed Pigeon, Flammulated Owl, Mexican Spotted Owl, Lewis's Woodpecker, and Grace's Warbler.

### Mountain Shrub

The allotment contains about 5,200 acres of shrub/shrub mix or 16% of the total allotment. 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, Merriams 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.

The following birds are listed on the US Fish and Wildlife Service Birds of Conservation Concern (BCC) – 2002 List for BCR 16-Southern Rockies/Colorado Plateau. These species have been identified as species that may be found in the project area, have declining populations and should be protected from habitat alterations.

The golden eagle is a bird of grasslands, shrublands, pinyon-juniper woodlands, and ponderosa pine forests, may occur in most other habitats occasionally, especially in winter. Nests are placed on cliffs and sometimes in trees in rugged areas, and breeding birds range widely over surrounding habitats.

Flammulated owls prefer old-growth or mature ponderosa pine, apparently due to the presence of large broken-top and lightning-damaged snags and trees for nesting cavities, large cavities excavated by northern flickers and other woodpeckers, open structure of trees and understory for foraging, and high prey availability. They will utilize other habitats with similar structure, such as open mixed-conifer and aspen forests. Key habitat features seem to be the presence of large trees and snags, scattered clusters of shrubs or saplings, clearings, and a high abundance of nocturnal arthropod prey.

Northern harriers reside throughout Colorado, with highest densities on the eastern plains, mountain parks, and western valleys. These hawks feed on small mammals, birds, reptiles, and amphibians. They hunt by flying low over wetlands, grasslands, shrublands, and croplands.

Peregrine falcons in Colorado breed on cliffs and rock outcrops from 4,500-9000 ft in elevation. They most commonly chosen cliffs lie within pinyon-juniper and ponderosa pine zones. These falcons feed on smaller birds almost exclusively, with White-throated swifts and rock doves being among their favored prey.

Prairie falcons nest in scattered locations throughout the state where they inhabit the grassland and cliff/rock habitat types. These falcons breed on cliffs and rock outcrops, and their diet during the breeding season is a mix of passerines and small mammals.

Williamson's sapsuckers breed in forested regions and in Colorado populations are concentrated along the eastern edge of the Rockies. Williamson's sapsuckers nest primarily in ponderosa pine and in aspen components of mixed-conifer. They often place nest cavities in aspen trees, and often choose nest trees in aspen stands adjacent to open ponderosa pine or mixed-conifer forest.

Gray vireos' nest along the western tier of counties, with centers of abundance in Mesa, Montrose, and Montezuma counties. They also nest on the Eastern Slope in Las Animas County. Gray vireos are pinyon-juniper woodland obligates. Gray vireos usually inhabit stands dominated by juniper or thin stands of pure juniper. They construct nests of dry grasses, plant fibers, stems, and hair, often camouflaging them with sagebrush leaves.

Pinyon jays range the semiarid lands of the West. The Colorado Breeding Bird Atlas map shows them south of a diagonal line drawn from the northwest corner to the southeast corner of the state. Pinyon jays are pinyon and juniper obligates in Colorado and nest commonly at the lower elevations of pinyon-juniper woodlands, often where junipers dominate. A few nest in ponderosa pine. They prefer extensive stands far from high human activity.

Black-throated gray warblers are fairly common summer residents in pinyon-juniper woodlands across the southwestern half of Colorado. Some surveys show these warblers to be the most frequently encountered birds in the pinyon-juniper woodland. Black-throated gray warblers, in Colorado, are pinyon-juniper obligates, preferring tall, dense pinyon-juniper woodlands.

Virginia's warblers in Colorado nest between 5,000-9,000 feet in elevation. They breed most abundantly in the western quarter of the state, along the eastern slope foothills, and in the Upper Arkansas River drainage. Virginia's warblers nest in dense shrublands and on scrub-adorned slopes of mesas, foothills, open ravines, and mountain valleys in semiarid country. They use scrubby brush, pinyon-juniper woodland with a well-developed shrubby understory, ravines covered with scrub oak, and dense shrublands--especially Gambel oak. They also breed in open ponderosa pine savannahs that have a dense understory of tall shrubs.

Grace's warblers breed from southwestern Colorado and southern Utah, south through central Arizona, western New Mexico, and into north-central Mexico. Grace's warblers inhabit open ponderosa pine forests with pines 16 ft tall, especially with a shrubby understory, usually Gambel oak.

### Environmental Effects

In order to be in compliance with the Migratory Bird Treaty Act, BLM must avoid actions that result in a "take" of 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. This generally applies mostly to shrub and tree species more than herbaceous vegetation. Although there are ground nesting birds, most species that could be found on this allotment are shrub or tree nesting species. Mountain plovers are ground nesting birds and prefer nesting in areas that have been grazed by livestock.

### Proposed Action Alternative

*Direct and Indirect Impacts:* The proposed action includes changes in the grazing authorizations for the allotment: 1) Adjusting estimates of forage production on public land based on the recent, updated surveys, and 2) Including specific utilization standards for forage species. The previous estimates of carrying capacity on allotments currently under custodial management were made by extrapolating data from ocular estimations of forage production many years ago. As part of the current analysis, updated forage production data is available based on soil surveys and soil maps. Calculations on public land also factored in an adjustment to leave sufficient forage for wildlife. The proposed action also includes utilization standards in the new permit that should provide sufficient residual vegetation to protect soil from wind and water erosion and allow adequate seed dissemination and seedling establishment. The proposed action would help ensure that grazing use on the allotments comply with Guidelines for Livestock Grazing Management in Colorado.

The change in the estimated carrying capacity and the amount of authorized use under the proposed action alternative would not affect the amount of vegetation actually harvested by livestock on public land (utilization would continue to be limited to 40% - 60% of the annual forage production.) Therefore, there would be no impact on vegetation from the changes in carrying capacity and the amount of authorized use under the proposed action alternative. Similarly there should be no affect on wildlife species that use the allotments. Rangeland health evaluations for this allotment indicated that there is adequate habitat in good condition for the species that inhabit the areas. Designating specific utilization limits for the allotments under the proposed action alternative would improve protection of the public lands and ensure that wildlife habitats are maintained.

The proposed action would be to manage grazing use on the allotment in a manner that is consistent with proper wildlife management. The proposed action would establish a grazing utilization level that is appropriate for maintaining habitat. Implementing the proposed action alternative would likely have no measurable effect on migratory bird species or their habitat.

Compliance with the Migratory Bird Treaty Act requires that BLM avoid actions that “take” migratory birds. In many BLM actions vegetation is disturbed during project implementation and it is recommended that vegetation disturbance be avoided from April 15 thru July 15 when possible. This is the breeding and brood rearing season for most Colorado migratory birds. The proposed action would not in itself create a “take” situation for migratory birds. Implementing the proposed action alternative would likely have no measurable effect on migratory bird species or their habitat.

*Cumulative Impacts:* In addition to public lands, this allotment contains some private land and is adjacent to other private land. Most of the private lands near the allotment are rural lands that are also grazed by livestock; this land use will likely continue into the future. Much of the private land in this area is in poor condition from livestock grazing. In addition, construction of homes within subdivisions on tracts from 5 to 35 acres on private land and subdivision roads can also be expected to continue. In addition to livestock grazing, various recreational activities (hunting, OHV riding, mountain biking, snowmobiling, etc.) are ongoing and are reasonably certain to continue on the adjacent private lands. Logging is also likely to continue on some private lands near this allotment, however, most of these are small-scale operations. Commercial

harvest of timber on public lands will be minimal due to the lack of access and a low demand for timber products. The continued authorization of livestock grazing on public lands administered by the BLM is not anticipated to result in negative cumulative impacts to migratory bird species when viewed in conjunction with those activities currently occurring and reasonably certain to occur on adjacent State and private lands.

*Mitigation/Residual Effects:* None

#### No Action Alternative

*Direct and Indirect Impacts:* The 2009 Land Health Assessments have indicated that this allotment is meeting Land Health Standards except for areas along Threemile creek. The majority of these have been removed from livestock grazing except for several small, isolated stream segments in the Connie pasture. These isolated stream segments are unfenced from private land (see the floodplains/riparian section for more detail). This alternative potentially has some increased benefit to migratory bird species that utilize riparian habitat. Since cattle are less likely to break down the fences that border private land in section 25, south of the Connie pasture, and pastures 1 and 2 that would allow access to Threemile creek, there would be less risk of impacts to these resources. Bison are more likely to pressure and possibly break down these fences resulting in continued resource damage to riparian habitat from trespass. There are potential risks with the proposed action. However, if cattle ever get through the riparian enclosure fences, they would be more likely to stay within that riparian area for more extended time than bison would.

*Cumulative Impacts:* Similar to those impacts described under the Proposed Action alternative.

*Mitigation/Residual Effects:* None

#### Cattle Only Alternative

*Direct and Indirect Impacts:* As discussed in the No Action alternative section, there are potentially fewer risks with cattle grazing than with bison as they are less likely to pressure and break down fences. Some of the results of bison breaking down fences on this allotment are discussed in the background section of this document. This alternative has some potential benefit to riparian habitat and migratory bird species as a result. Although, if cattle ever do get inside the riparian enclosures, they would more likely stay in the riparian zone for a longer period than bison would. Although there are fewer potential risks with cattle grazing compared with bison, this does not mean that bison grazing cannot be accomplished without trespass, or that if cattle did get access to those riparian areas, they would not cause similar or even more impacts than bison.

*Cumulative Impacts:* Similar to those impacts described under the Proposed Action alternative.

*Mitigation/Residual Effects:* None

## **L. CULTURAL RESOURCES**

Affected Environment: Pursuant to BLM Instruction Memorandum Number CO-2002-029, the Royal Gorge Field Office cultural resources staff conducted a literature review of previous projects conducted and sites recorded on the public land in the allotment area. After consulting

with the range staff to identify concentrations of livestock and potential damage, the archaeologist determined that one site (5PA458) had the potential to be impacted by the proposed undertaking [see Report CR-RG-09-99 (P)]. During a field visit, the site was re-recorded and evaluated, and determined to be potentially eligible for the National Register of Historic Places. No evidence of livestock concentration or damage was present on the site.

### Environmental Effects

#### Proposed Action Alternative

*Direct and Indirect Impacts:* Because the site is located on a ridge, it has the potential to be impacted by livestock concentrating on it. However, a permanent stream is nearby (below the ridge) and cattle are more likely to congregate on the stream banks rather than on the ridge above.

*Cumulative Impacts:* Natural erosion, slowed by good ground cover.

*Mitigation/Residual Effects:* No mitigation necessary, no residual effects likely.

#### No Action Alternative

*Direct and Indirect Impacts:* Similar to those impacts described under the Proposed Action Alternative.

*Cumulative Impacts:* Similar to those impacts described under the Proposed Action Alternative.

*Mitigation/Residual Effects:* Similar to those impacts described under the Proposed Action Alternative.

#### Cattle Only Alternative

*Direct and Indirect Impacts:* Similar to those impacts described under the Proposed Action Alternative.

*Cumulative Impacts:* Similar to those impacts described under the Proposed Action Alternative.

*Mitigation/Residual Effects:* Similar to those impacts described under the Proposed Action Alternative.

## **M. TRIBAL AND NATIVE AMERICAN RELIGIOUS CONCERNS**

Affected Environment: The literature review indicated that aboriginal sites are present within the allotment. Site distribution is low in density and not coincident with livestock concentration areas.

Environmental Effects: BLM consulted with 17 tribes regarding the Elevenmile Canyon Allotment Grazing Permit Renewal. Included were the Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes of Oklahoma, Cheyenne River Lakota Tribe, Comanche Tribe of Oklahoma, Crow Creek Sioux, Jicarilla Apache Nation, Kiowa Tribe of Oklahoma, Northern Arapaho Tribe, Northern Cheyenne Tribe, Oglala Sioux Tribe, Pawnee Nation of Oklahoma, Rosebud Sioux

Tribe, Eastern Shoshone Tribe, Southern Ute Tribe, Standing Rock Sioux Tribe, Ute Tribe, and the Ute Mountain Ute Tribe. BLM received no comments regarding tribal concerns.

## **N. PALEONTOLOGICAL RESOURCES**

Affected Environment: The project area includes the Tertiary Antero Formation that is classified by the Royal Gorge Field Office, Fossil Yield Potential Classification as Class 3 formation. A class 3 formation is a fossiliferous sedimentary geologic unit where fossil content varies in significance, abundance, and predictable occurrence.

Ground-disturbing activities will require sufficient mitigation to determine whether significant paleoresources occur in the area of a proposed action. Mitigation beyond initial findings will range from no further mitigation necessary to full and continuous monitoring of significant localities during the action.

Environmental Effects: None. Grazing, either of Cattle or of Bison should not disturb resources below the top soil horizon and therefore paleo resources should be protected. As a precaution, the BLM geologist should be consulted if paleontologic resources are uncovered by any grazing related activity within the allotment area. The listed alternatives should have no impacts on paleontological resources.

## **O. VISUAL RESOURCES**

Affected Environment: The allotment is characterized by open, rolling grasslands of South Park with views of the Rampart Range to the east and Mosquito Range to the northwest. Portions of the allotment are visible to the public from US 24, Colorado 9, and county roads within the allotment boundaries. In addition, some of the allotment is visible from Spinney Mountain Ranch State Wildlife Area and Eleven Mile State Park. The public lands within this allotment are managed for Visual Resource Management Class III objectives which allows for moderate change to the landscape. Management activities may attract the attention but would not dominate the view of the casual observer.

Environmental Effects: The listed alternatives would have no impacts on visual resources.

## **P. ENVIRONMENTAL JUSTICE**

Affected Environment: The proposed action affects areas that are rural in nature. The land adjacent to these parcels is open rangeland. As a result, there are no minority or low-income populations in or near this allotment. As such, the proposal would not have a disproportionately high and adverse human health or environmental effect on minority or low-income populations.

Environmental Effects: The listed alternatives would have no impacts on low income or minority populations.

## **Q. WASTES, HAZARDOUS OR SOLID**

Affected Environment: The affected areas are public lands utilized for forage production and some level of public recreation, depending upon public access. Dumping is an issue on some of these lands historically. When encountered, dumps are assessed for the hazard they present to the public and employees and are cleaned up as promptly as possible, depending upon location, threat posed, available funding and other considerations.

Environmental Effects: The listed alternatives would not result in the use, storage or disposal of hazardous materials on public lands.

## **R. LANDS AND REALTY**

Affected Environment: Land use authorizations are present within the allotment.

Environmental Effects: The listed alternatives would not be impacted by the proposed action.

## **S. RECREATION**

Affected Environment: Access for recreation use on public lands in the allotment is complicated by the scattered tracts of public land interspersed with large areas of private and state land. The recreation activities on public lands within the allotment include hunting, fishing, wildlife viewing, bison viewing, OHV use, dispersed camping, and mountain biking. This use is dispersed and at relatively low levels when compared to adjacent National Forest lands and Eleven Mile State Park. Recreation use of public land is generally increasing, and use from adjacent private lands, state lands, and National Forest is contributes to increased recreation use. These lands are within the Royal Gorge Extensive Recreation Management Area (ERMA). Recreation management within the ERMA is custodial addressing activity opportunities, visitor safety, user conflicts, and resource protection issues.

### Environmental Effects

#### Proposed Action Alternative

*Direct and Indirect Impacts:* Direct impacts of the Proposed Action Alternative are displacement of some recreation users because of the presence of livestock. Some recreation users prefer to avoid areas where livestock are actively grazing. Bison would pose a potential greater risk to the safety of recreation users than cattle on public lands due to their size and temperament.

*Cumulative Impacts:* None.

*Mitigation/Residual Effects:* None.

#### No Action Alternative

*Direct and Indirect Impacts:* Similar to those impacts described under the Proposed Action Alternative.

*Cumulative Impacts:* None.

*Mitigation/Residual Effects:* None.

### Cattle Only Alternative

*Direct and Indirect Impacts:* Similar to those impacts described under the Proposed Action Alternative except the risk to public safety would be potentially decreased because bison would not be grazing on public lands.

*Cumulative Impacts:* None.

*Mitigation/Residual Effects:* None.

## **T. FARMLANDS, PRIME AND UNIQUE**

Affected Environment: There are no prime or unique farmlands involved in any of the alternatives.

Environmental Effects : There are no impacts to prime and unique farmlands from any of the alternatives.

## **U. RANGE MANAGEMENT**

### Affected Environment:

The allotment contains approximately 49,500 acres of private land and 9,800 acres of public land which consist of numerous parcels of various sizes. Many of these parcels of public land are not fenced separately from land owned by the permittee, state land, or "uncontrolled private lands". (Uncontrolled lands refer to private land that are not owned or leased by the permittee.) The allotment also includes several pastures that contain significant riparian habitat on public land and are fenced separately from private or uncontrolled land in the area. These pastures include the Union Creek Pasture and Pastures 1, 2, and 3 containing Threemile Creek. Grazing authorization for public land within the allotment is held by Elk Mountain Land and Cattle Co. (formerly Downare Land, Cattle & Equipment Co.) of Hartsel, Colorado (See Table 6 - Land Ownership Summary Table).

Some of the uncontrolled private land is located within the Ninemile Heights Subdivision, which lies partially within the Big Pasture at the southern end. There is one residence within the subdivision that lies within the fenced perimeter of the Big Pasture. The Big Pasture is fenced around the perimeter for its entire length. Of the approximately 32 miles of perimeter fencing, 6 miles of perimeter fence are located on public lands (See Fence Map in appendix 2). The pasture is bounded on the north and the northeast by Spinney Mountain State Wildlife Area and on the west by Colorado Hwy 9. Health assessments were conducted on the Big Pasture in both 2006 and 2009. In both assessments it was determined that the upland areas within the Big Pasture are meeting public land health standards.

The Connie Pasture is fenced separate from the Big Pasture, Pasture's #1, 2, and 3, and the unfenced BLM public areas. The total fenced perimeter of the Connie Pasture is approximately 15 miles in length and fencing that borders along public land is approximately 6.75 miles. During the summer of 2009, BLM inventoried the existing perimeter fence making up the Connie Pasture. The fence making up the east side of the Connie pasture had recently been

rebuilt with a five strand wire fence approximately 60” high. The fence line consisting of the north and west side of the pasture and adjacent to the Big Pasture was in fair condition. The fence consisted of mesh wire with strands of barb wire along the top for a height of approximately 50-60 inches. There were several breaks in the fence line that will require mending. The remaining fence consisting of the south boundary borders the Three Mile Creek pastures. The inventory indicated this fence was in fair condition, but still needed some work. BLM has no jurisdiction on private fences (See Fence Map in appendix 2).

During the 2009 health assessment, BLM interdisciplinary team identified approximately 0.5 miles of riparian along Three Mile Creek not meeting public land health standards within the Connie Pasture. It was determined by the team that livestock grazing under current management was the casual factor. As stated under CFR subpart 4180.1, BLM shall take appropriate action in grazing management no later than the next grazing season to make progress towards meeting public land health standards. The 0.5 mile stretch of riparian not meeting standard is located on small isolated parcels of public land that is unfenced from the adjacent private lands. The surface acreage is 160 acres and BLM has no legal access to the parcel. In all, BLM controls 8% of the surface area within the Connie Pasture and the permittee controls 62%. In addition, the BLM parcels within the Connie Pasture are identified as “Disposal” under the South Park Land Tenure Adjustment Plan and Royal Gorge Resource Management Plan Amendment Decision Record CO-200-2005-0025. These lands have limited resource priorities and are not feasible for BLM to manage.

Table 6 - Land Ownership Summary Tables

**Big Pasture**

<b>Ownership</b>	<b>Acres</b>	<b>Percent of Total</b>
Elk Mountain Land & Cattle (Owned)	7,100	40%
Elk Mountain Land & Cattle (State Lease)	3,120	18%
Uncontrolled Private	3,240	18%
BLM Lands	4,285	24%
<b>Total</b>	<b>17,745</b>	

82% of land in Big Pasture is controlled by Elk Mountain Land & Cattle.

**Connie Pasture**

<b>Ownership</b>	<b>Acres</b>	<b>Percent of Total</b>
Elk Mountain Land & Cattle (Owned)	2,570	54%
Elk Mountain Land & Cattle (Private Lease)	400	8%
Uncontrolled Private	1,410	30%
BLM Lands	360	8%
<b>Total</b>	<b>4,740</b>	

70% of land in the Connie Pasture is controlled by Elk Mountain Land & Cattle.

**Unfenced BLM**

<b>Ownership</b>	<b>Acres</b>	<b>Percent of Total</b>
Elk Mountain Land & Cattle (Owned)	4,542	10%
State Lands	7,247	16%
Uncontrolled Private	30,227	68%
BLM Lands	2,224	5%

<b>Total</b>	44,240	
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## Environmental Effects

### Proposed Action Alternative

*Direct and Indirect Impacts:* BLM identified 0.5 miles of riparian not meeting land health standards within the Connie Pasture. In order to be in compliance, BLM must make a change in management to help progress towards meeting that standard. In most cases, BLM would fence the parcel and/or defer grazing use to a more favorable time of the year. However, due to the small BLM parcel involved and the large expanse of private lands surrounding this parcel, fencing would be expensive and there is question on who would maintain the fence.

The proposed action authorizes bison grazing in the Connie Pasture in place of cattle. Based on the research cited in the previous EA (CO-057-98-0088), livestock distribution problems on the pasture would be improved by the bison's natural grazing patterns. Experience by BLM, the National Park Service, bison producers and research indicates that bison tend to use much more of the available area than cattle. Bison tended to stray further away from water sources, used steeper terrain and higher elevations than cattle, further reducing grazing pressure on some of the areas that have been over-used under cattle grazing in the past. There is also evidence that the rest and recovery periods for forage species within the plant community may be improved under bison's natural grazing behavior. Research involving bison in the Theodore Roosevelt National Park, noted that bison seldom stayed in the same location for more than 48 hours. The research concluded that due to the constant movement and random nature of these movements, plants were potentially grazed only once, if at all, in a 3-4 week period.

In 1998 the assessments conducted in the Big Pasture indicated that under current management several upland areas were not meeting standards related to "healthy and productive plant & animal communities". Current management at that time included cattle as the primary class of livestock. Since the class of livestock was changed from cattle to bison in 1998 within the Big Pasture subsequent health assessments have shown an improvement in standards related to "healthy and productive plant & animal communities".

Fencing and bison interactions were intensively analyzed in the previous EA (CO-057-98-0088) and will not be re-analyzed in this analysis. The allotment contains the permittees' controlled private lands (owned and leased), controlled state lands, and uncontrolled private land (land that is not owned or leased by the permittee). Since a majority of the uncontrolled private land is unfenced from public land, the impacts to the uncontrolled private land would be similar to the impacts on public land. However, merely the fact that there is uncontrolled private land within these pastures is not sufficient reason to prevent the authorization of grazing use on public land. This also applies to cases where a neighboring landowner does not wish for his property to be grazed by livestock. Fencing and livestock use on private land fall under the jurisdiction of Colorado Livestock Laws. During the last ten years there have been several occurrences where bison have escaped and been identified on public land in areas not authorized. In most cases the unauthorized use was due to poor fence maintenance by the permittee. The incidents during the winter of 2007/2008 were related to unprecedented amounts of snow for the year and drifts along the fences allowing bison to cross. There are areas that are either closed to grazing or are not authorized to bison grazing. Regardless of the ownership in fences, the permittee would be in

violation of their grazing permit when livestock are in unauthorized portions of the allotment. It is the permittees' responsibility and in his best interest to keep fences maintained.

*Cumulative Impacts:* The BLM land portion of the allotment make up a small portion (10%) of the private, state, and forest lands that are utilized for livestock grazing. For the most part, grazing use has been taking place under the current BLM management since approximately 1981. Generally, BLM grazing management is more intensive than management of the surrounding private and state lands and takes other resource values, such as wildlife, cultural, soils, vegetative and riparian on the public land into account to a greater degree.

*Mitigation/Residual Effects:* There are none.

#### No Action Alternative

*Direct and Indirect Impacts:* The No Action Alternative would renew the permit without making any changes to management. As stated above, BLM identified ½ mile of riparian habitat within the Connie Pasture as Not Meeting Standards due to current livestock grazing. Under this alternative, and without implementing mitigation measures, BLM would be in violation under CFR subpart 4180.1 that states “BLM shall take appropriate action in grazing management no later than the next grazing season to make progress towards meeting public land health standards”. Also by not making the appropriate changes, the allotment would not meet Guidelines for Livestock Grazing Management in Colorado.

*Cumulative Impacts:* The Elevelinmile Creek Allotment occurs within the Spinney Creek fifth level watershed. The public land portions of the allotment are fragmented and surrounded by unfenced private lands in most cases. Even though private land parcels are currently undeveloped, it is anticipated that further development practices will increase in the future involving construction of homes and higher road densities. In addition to private development, recreation has occurred in the area and includes hunting, fishing, OHV, and snowmobiling. These activities are also anticipated to increase in popularity in the future. For the most part, grazing use on the public land has been taking place under the current BLM management since approximately 1981. Grazing use takes place on much of the private, state, and other federal lands within the watershed as well. Generally, BLM grazing management is more intensive than management of the surrounding private and state lands. Therefore there would be minimal negative cumulative impacts.

*Mitigation/Residual Effects:* BLM would continue to monitor the riparian condition, and if after 3 years riparian condition does not improve, BLM would initiate the process to construct the enclosure fence. BLM would construct new fencing to exclude livestock grazing along the riparian areas located on the isolated public land parcels within the Connie Pasture that do not meet health standards. Approximately 1.5 miles of new fence would be required at a total cost of \$22,500 for materials, labor and surveying cost.

#### Cattle Only Alternative

*Direct and Indirect Impacts:* As in the No Action alternative, this alternative allows cattle grazing in the Connie Pasture without changes to management. Again, without implementing mitigation measures, BLM may be in violation under CFR subpart 4180.1 that states “BLM shall take appropriate action in grazing management no later than the next grazing season to make progress towards meeting public land health standards.”

*Cumulative Impacts:* Similar to those impacts described under the No Action alternative.

*Mitigation/Residual Effects:* BLM would construct new fencing along the riparian in the Connie Pasture that are not meeting health standards. Approximately 1.5 miles of new fence would be required at a total cost of \$22,500 for materials, labor and surveying cost.

**V. WILDERNESS, AREAS OF CRITICAL ENVIRONMENTAL CONCERN, WILD AND SCENIC RIVERS**

Affected Environment: None of the public lands within the allotment have these special designations.

Environmental Effects: The listed alternatives would have no impacts to any of the special designated lands.

**X. OTHER ELEMENTS:**

The resources or issues listed in Table 7 below were reviewed and dismissed due to their not being present or applicable.

Table 7 – Other Resource/Issues addressed

<b>Resource/Issue</b>	<b>Rationale for dismissal</b>
Cadastral Survey	Public Land Survey System would not be affected by this action.
Fire	
Forest Management	There are small isolated stands of commercial timber with in this area. The action is not likely to effect future forest management actions. The BLM grazing regulations prohibit the cutting or removing of forest products without authorization.
Law Enforcement	There are no law enforcement issues associated with this action.
Noise	This action would not result in any impacts due to noise or result in any increased noise levels.

**CUMULATIVE IMPACTS SUMMARY:** The Elevelinmile Creek Allotment occurs within the Spinney Creek fifth level watershed. The public land portions of the allotment are fragmented and surrounded by unfenced private lands in most cases. Even though private land parcels are currently undeveloped, it is anticipated that further development practices will increase in the future involving construction of homes and higher road densities. In addition to private

development, recreation has occurred in the area and includes hunting, fishing, OHV, and snowmobiling. These activities are also anticipated to increase in popularity in the future. For the most part, grazing use on the public land has been taking place under the current BLM management since approximately 1981. Grazing use takes place on much of the private, state, and other federal lands within the watershed as well. Generally, BLM grazing management is more intensive than management of the surrounding private and state lands. Therefore there would be minimal negative cumulative impacts.

**Table #:** Describes cumulative impacts associated with resources found in the allotment.

Resource	Proposed Action	No Action	Cattle Only
Soils and Vegetation	Minimal negative impacts	Minimal negative impacts	Minimal negative impacts
Water Quality	No new impacts	No new impacts	No new impacts
T&E	No new impacts	No new impacts	No new impacts
Riparian	No negative impacts	No negative impacts	No negative impacts
Wildlife	No new negative impacts	No new negative impacts	No new negative impacts

## CHAPTER 4 CONSULTATION

PERSONS / AGENCIES CONSULTED: On February 25, 2009 Royal Gorge Field Office sent 430 scoping letters to all individual landowners within the Elevenmile Canyon Allotment. In addition, the field office posted an announcement on their official website. BLM received a number of comments as a result of this process and those comments are considered in this analysis.

Other agencies consulted include:

Colorado State Parks Elevenmile State Park Spinney Mountain State Park	Colorado Division of Wildlife
Colorado Department of Transportation Region 5 Section 7	Park County Commissioners
USDA, Forest Service South Park Ranger District	Colorado State Land Board
Park County Sheriffs Department	Colorado State Patrol

### INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Jim Backstrand	Wildlife Biologist	Hazardous Materials
Debbie Bellew	Land Law Examiner	Realty
Jim Backstrand	Wildlife Biologist	Wildlife, T&E, Migratory Birds
Dave Gilbert	Fisheries Biologist	Aquatic Wildlife, Riparian/Wetlands
Mike Cassell	Surface Reclamation Spec.	Soils
Dan Grenard	Geologist	Minerals, Paleontology
Tom Grette	Range Management Spec.	Range, Vegetation, Farmland, Weeds
Jack Hagan	Law Enforcement Ranger	Law Enforcement
Tony Mule'	Cadastral Surveyor	Cadastral Survey
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
Martin Weimer	NEPA Coordinator	Environmental Justice, Noise
Monica Weimer	Archaeologist	Cultural, Native American
Jeff Williams	Range Management Spec.	Range, Vegetation

## **REFERENCES**

Bureau of Land Management. 1996. Environmental Assessment for Standards for Public Land Health and Guidelines for Livestock Grazing Management in Colorado. Bureau of Land Management, Colorado State Office, 2850 Youngfield, Lakewood, CO 80215

Natural Resource Conservation Service On-Line Soil Survey 2009.  
*<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>*

U.S. Bureau of Land Management. 2005. Decision Record CO-200-2005-0025 Environmental Assessment to Amend South Park Land Tenure Designations in the Royal Gorge Resource Management Plan. Royal Gorge Field Office, Canon City, Colorado.

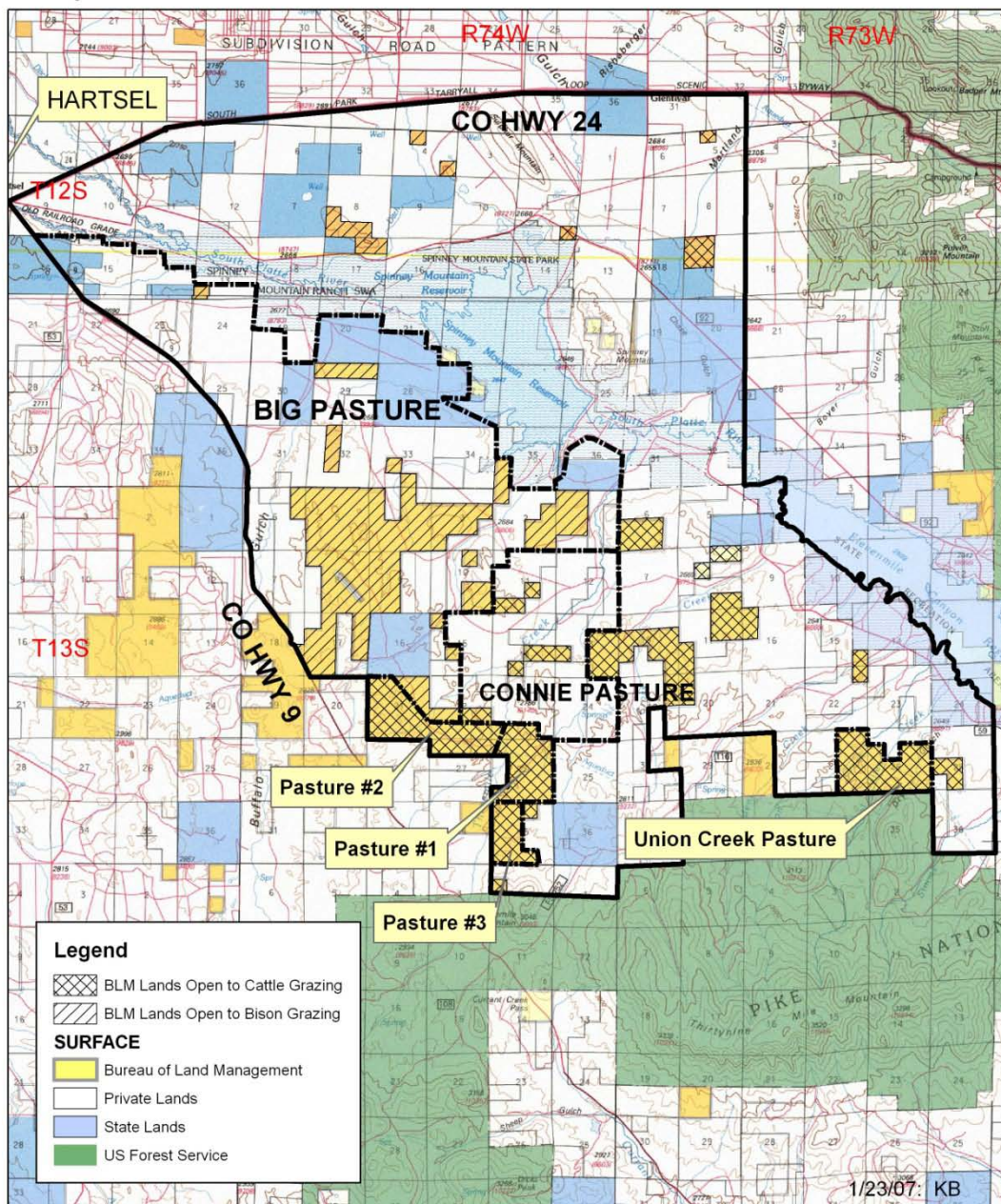
U.S. Bureau of Land Management. 1999. Elevenmile Canyon Allotment Permit Renewal and change in class of livestock. CO-057-98-088 Environmental Assessment. Royal Gorge Field Office, Canon City, Colorado.

**Appendix 1**  
**Allotment Map**

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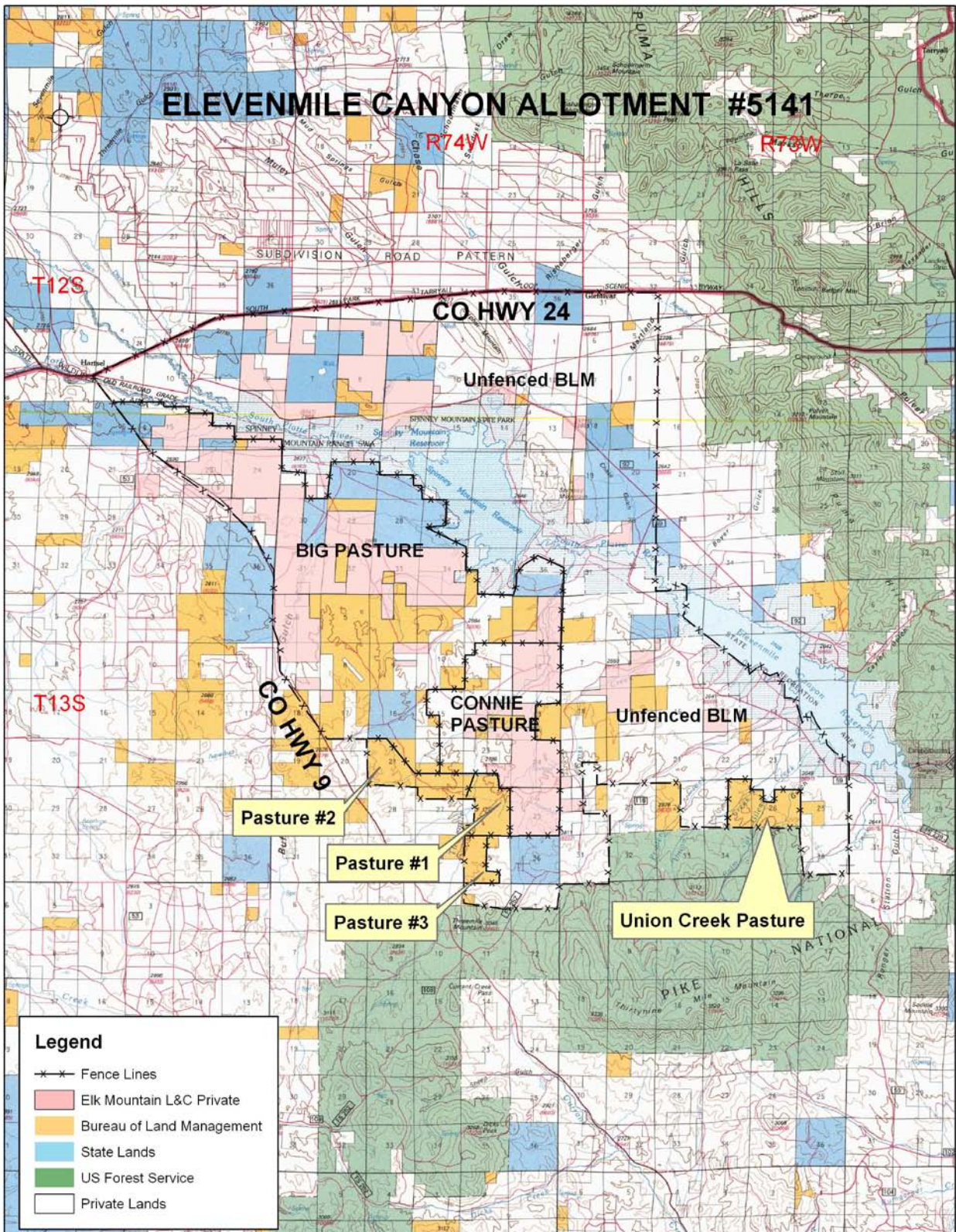


# ELEVENMILE CANYON ALLOTMENT #5141



**APPENDIX 2**  
**Existing Allotment Fences**

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**APPENDIX 3  
BLM Sensitive Species:**

## **Bald Eagle**

Colorado populations of bald eagles 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 (December through February) visitor to the Arkansas River valley and South Park. These birds could be expected to forage on public lands. However, use by eagles is so incidental that preferred or critical areas such as roosting or feeding sites have not been identified.

## **American white pelican**

White pelicans breed on lakes throughout the northern Great Plains and the mountain west. The American White Pelican is one of the largest birds in North America. They winter along the coasts, but breed only on inland lakes and reservoirs. They are common summer residents on mountain reservoirs. They are known to nest nearby on Antero Reservoir.

## **Northern Goshawk**

The northern goshawk inhabits mixed hardwood and coniferous forests in temperate and boreal regions from 7,500 to 11,000 ft in elevation; however, they are occasionally found below 7,000 ft in winter and during migration. They may also utilize other coniferous forest types and structures as available. In Colorado, the goshawk is found throughout the forested mountains. They prefer woodlands with intermediate canopy coverage interspersed with fields or wetlands in remote areas.

In the West, goshawks commonly nest in the lower portions of mature Douglas-fir, ponderosa pine, lodgepole pine, and aspen canopies and prefer old-growth structure, although a variety of habitats may be used throughout the region. Goshawks typically nest in large hardwood trees that are most often found within mature to old-growth forests. These stands most often have high (60-90%) canopy closure with little understory and are often associated with north facing slopes and drainages. The same nest may be used for several seasons. Most nests in Colorado are located on gentle slopes (less than 40%) with a north to east aspect on benches or basins surrounded by much steeper slopes. Sites usually have a sparse understory, which contrasts with dense, multi-leveled understory observed in Oregon. All nest sites in Colorado were located within 1,148 ft of openings. Mature trees serve as perch sites, while plucking posts are frequently located in denser portions of the secondary canopy. In Colorado, goshawks frequently select aspen and occasionally select pine, spruce, fir, and juniper for nest construction. Birds often return to the same nest site year after year and will use alternate nests within the same territory over several years.

## **Ferruginous Hawk**

These hawks inhabit grasslands and semi-desert shrublands, and are rare in pinyon-juniper woodlands. Ferruginous hawks prefer flat and rolling terrain in grassland or shrub-steppe regions and avoid high elevations, forest interiors and narrow canyons. They occur in grasslands, sagebrush, saltbush-greasewood shrublands, and the periphery of western pinyon-juniper and other forests. Breeding birds nest in isolated trees, on rock outcrops, structures such as windmills and power poles, or on the ground. Winter residents concentrate around prairie dog towns. Winter numbers and distribution fluctuate greatly according to the availability of prairie dogs;

when a local prairie dog population dies off due to plague, hawk numbers decrease drastically. Migrants and winter residents may also occur in shrublands and agricultural areas. These hawks are locally abundant at the interface between pinyon-juniper and shrub-steppe habitats.

### **Burrowing owl**

Burrowing Owls breed throughout the eastern plains and in river valleys and mountain parks elsewhere. These owls reside in treeless areas with short vegetation (< 4 in), usually in association with prairie dog colonies. They nest in burrows dug by prairie dogs, badgers, coyotes, or foxes. Some evidence suggests that they prefer larger prairie dog colonies, perhaps because of decreased threat of predation. The owls arrive in Colorado at the end of March and early April, and probably initiate nesting by early May. The breeding season diet consists primarily of insects, but small mammals are also taken.

### **Mountain plover**

A native of the short-grass prairie, the Mountain Plover is a dull-colored shorebird of open, dry areas. Despite its name, it breeds in the high tablelands, not the mountains. The Mountain Plover is one of the species that uses prairie dog towns to provide suitable breeding habitat in areas of longer grasses. Breeds on open plains at moderate elevations. Winters in short-grass plains and fields, plowed fields, and sandy deserts.

Colorado Natural Heritage Program (CNHP) considers the mountain plover globally imperiled (G2/S2B). The species is listed by the U.S. Forest Service and the BLM as a Sensitive Species, and by the Colorado Division of Wildlife as a Species of Special Concern.

### **Gunnison's prairie dog**

Gunnison's prairie dogs (*Cynomys gunnisoni*) are limited to high mountain valleys and plateaus in the southern Rocky Mountains, and found at elevations above 6,000 ft. Its distribution centers around 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 resource area because suitable habitat for the species is not common in areas with mountainous topography. 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. Gunnison's prairie dogs were probably never common due to the lack of suitable habitat. Surveys for occupied towns have not been done for this allotment but there are known occurrences nearby and they could be present.

### **Townsend's big eared-bat**

This bat is generally solitary or gathers in small groups, although during summer females may form larger maternity colonies. Townsend's big-eared bat can be found in mines, caves and structures in woodlands and forests to elevations above 9,500 feet. They often hang near the entrances to roosts, in the "twilight zone." The animals do not make major migrations and appear relatively sedentary. Hibernacula have low and stable temperatures -- sometimes with moderate airflow -- during late October to April. The bat is quite sensitive to changes in temperature and humidity within the hibernaculum and may arouse to move to a more favorable location. Populations may be principally limited by high winter mortality due to the absence of roosts with stable temperatures. Most mortality occurs during the first year of life. Predators have not been documented, but snakes, owls and hawks probably take these bats.

### **Fringed myotis**

These animals apparently occur as scattered populations at moderate elevations on the Western Slope, along the foothills of the Front Range and the mesas of southeastern Colorado. Maximum elevation is 7,500 feet. The fringed myotis is a species of coniferous forest and woodland at moderate elevations in Colorado. Records of occurrence are few, and the species isn't common in the state, but perhaps it is simply widely distributed. Typical vegetation of the habitat includes ponderosa pine, pinyon-juniper, greasewood, saltbush and scrub oak. The animals roost in rock crevices, caves, mines, buildings and trees. They are known to hibernate in caves and buildings. Where this species has been studied well, migration seems not to be extensive.

### **Yuma myotis**

In Colorado these bats occur at moderate elevations in valleys on the Western Slope, in the San Luis Valley and on the eastern slope north to the vicinity of Colorado Springs. They don't seem common. Maximum reported elevation of occurrence in Colorado is about 7,900 feet at Conejos in the San Luis Valley. This is a species of dry shrubby country, but it appears to be tied more closely to water than any of Colorado's other bats. Typical habitat is in pinyon-juniper woodland and riparian woodland in semi desert valleys. The animals roost in caves, crevices or abandoned buildings and other structures. They forage over water, along streams, over springs, among riparian or shoreline vegetation. The Yuma myotis apparently does not hibernate in Colorado, but its winter haunts are unknown. They arrive in Colorado about April, and they become scarce in September.

### **Big free-tailed bat**

The big free-tailed bat occurs in the western United States, as well as in much of Latin America. The species is rare in Colorado. The big free-tailed bat prefers rocky and woodland habitats, where roosting occurs in caves, mines, old buildings, and rock crevices. The species is typically active year-round, spending summers in temperate North America and migrating to warmer areas in North America and South America for the winter. Big free-tailed bats eat insects, primarily moths. Females may give birth to a single offspring during late spring or early summer each year.

### **Northern leopard frog**

Occurs throughout Colorado, excluding most of the southeastern and east-central portions of the state. Elevational range extends from below 3,500 feet in northeastern Colorado to above 11,000 feet in southern Colorado. Typical habitats include wet meadows and the banks and shallows of marshes, ponds, glacial kettle ponds, beaver ponds, lakes, reservoirs, streams, and irrigation ditches.

**Pale blue-eyed grass**

This is a plant of wetlands, fens, riparian corridors, and meadows. Elevation ranges from 6500 feet in the Laramie Basin (Wyoming) to 9800 feet in South Park (Colorado). This species generally occurs in areas where the soils are typically inundated in the spring and where plentiful, often standing, fresh water is available throughout the growing season. In nearly all cases, this species is recorded in an open, seasonally-flooded or saturated, fresh water, palustrine, emergent wetland meadow dominated by grasses and/or sedges and may occur in areas dominated by low shrubs.

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# FONSI

## DOI-BLM-CO-200-2009-0004 EA

FONSI will be completed upon receipt of all comments and review.

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