

**U.S. Department of the Interior  
Bureau of Land Management  
White River Field Office  
73544 Hwy 64  
Meeker, CO 81641**

## ENVIRONMENTAL ASSESSMENT

**NUMBER:** CO-110-2005-102-EA

**CASEFILE/PROJECT NUMBER** (optional): South Fork Price Creek (06608)  
Chokecherry (06609)  
Upper Smith Gulch (06613)  
Strawberry Peak (06615)  
Cave Gulch (06617)  
Cabin Gulch (06618)

**PROJECT NAME:** Grazing Permit Renewal for Buffalo Horn Ranch (0501417)

**LOCATION OF PROPOSED ACTION:** Rio Blanco County and Moffat County

**LEGAL DESCRIPTION:** (See table below)

Allotment			Legal Description		
Number:	Name	BLM Acres	Township:	Range:	Section(s)/Lots/or Portions of
06608	S. Fork Price Creek	1605	4N 3N	95W 95W	Sec 19-21, 28-34 Sec 2-6, 8, 9
06609	Chokecherry	1431	3N 3N	96W 95W	Sec 1, 2, 12 Sec 7, 2, 10, 17-20, 29
06613	Upper Smith Gulch	8808	3N 2N 1N	95W 95W 95W	Sec 29, 31-33 Sec 3-10, 16-21, 28-33 Sec 5, 6
06615	Strawberry Peak	783	3N 2N	95W 95W	Sec 35 Sec 1-3, 10-12
06617	Cave Gulch	1728	3N 3N	94W 95W	Sec 19-21, 28-32 Sec 36
06618	Cabin Gulch	1038	3N 2N	94W 94W	Sec 28, 29, 32, 33 5, 6, 7, 8

**APPLICANT:** Buffalo Horn Ranch (0501417)

**ISSUES AND CONCERNS:** Noxious weed infestations, season of use, over-allocation, poor distribution and associated over-utilization.

**DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:**

***Background/Introduction:*** The Buffalo Horn Ranch is comprised of several consolidated ranch base properties with six associated grazing allotments. The allotments are primarily located in

northern Rio Blanco County and partially in southern Moffat County. In 1998 an environmental assessment / management plan was completed with the purpose of providing Buffalo Horn Ranch with a viable operation base while protecting natural resources on public land; this plan has been generally followed since then. Under current management the allotments have been used as independent units and for the past five years the manager has rotated deferment and use, of several of the allotments. Each year before the beginning of the grazing season, the ranch manager submits a plan of operation for BLM approval. Under livestock control agreements, livestock owned by other operators have grazed some of the allotments each year. This arrangement has worked well in terms of allowing flexibility, rotation, deferment and rest for each allotment. Buffalo Horn Ranch has been and is currently involved in the Colorado Division of Wildlife Ranching for Wildlife program so livestock grazing has not been the only focus of ranch management. The table below is an acreage breakdown by land status of allotments permitted to Buffalo Horn Ranch.

<b>Breakdown of Acres by Allotment Controlled by Buffalo Horn Ranch (0501417)</b>			
<b>Allotment Name &amp; Number</b>	<b>BLM Acres</b>	<b>Private Acres</b>	<b>Total Acres</b>
South Fork Price Creek #06608	1605	3069	4674
Chokecherry #06609	1431	4825	6256
Upper Smith Gulch #06613	8808	2738	11546
Strawberry Peak #06615	783	2251	3034
Cave Gulch #06617	1728	790	2518
Cabin Gulch #06618	1038	2295	3333
<b>Totals:</b>	<b>15393</b>	<b>15968</b>	<b>31361</b>

Annual precipitation ranges from approximately 12-16 inches in the Chokecherry, Upper Smith Gulch and Strawberry Peak allotments. South Fork Price Creek, Cave Gulch and Cabin Gulch are in a 16-20 inch average precipitation zone. Snowfall accounts for about 45% of annual precipitation, occurring from mid October to late April with accumulation from January through March. Allotments being considered in the proposed action can roughly be divided into three elevation zones with dominant vegetation ranging from sagebrush, greasewood, pinyon/juniper, mountain shrub, and aspen woodland plant communities.

Grazing Allotments in the White River Field Office (WRFO) have been placed into one of three management categories that define the intensity of management: (1) improve, (2) custodial and (3) maintain. These categories identify rangeland management objectives based on analysis of an allotment's resource characteristics, potential, management opportunities and needs. Both Upper Smith Gulch #06613 and South Fork Price Creek #06608 are categorized as Maintain. The other four allotments, (Chokecherry #06609, Strawberry Peak #06615, Cave Gulch #06617 and Cabin Gulch #06618) are all categorized as Custodial allotments.

Upper Smith Gulch includes parts of the Windy Gulch and Black Mountain Wilderness Study Areas (WSA). This allotment is characterized by intermingled pinyon/juniper and sagebrush with some mountain shrub communities toward the north end of the allotment and at higher elevation north facing slopes. Stands of pinyon/juniper tend to occur on shallower soils and sagebrush on the deeper soils. Some valley bottoms are dominated by dense old decadent sagebrush stands with minimal herbaceous understory. A large head-cut in Smith Gulch is progressing up through private lands in the main valley bottom. This head-cut is probably the result of historic grazing practices. Maintaining optimal range conditions with adequate ground cover is important to minimizing progression of the head-cut. Public land on both the

Chokecherry and Strawberry Peak allotments are characterized by steep brushy slopes with shallow soils. Terrain and dense brush limits livestock accessibility on the public lands and most livestock grazing use on these two allotments occurs on private land. The Deep Channel/Strawberry Creek divide occurs near the center of the Chokecherry allotment. Part of the Windy Gulch WSA is included in southwest corner of the Strawberry Peak allotment.

The South Fork Price Creek allotment is the northern most allotment being addressed in this permit renewal. The majority of BLM lands are in the northeast pasture where vegetation is primarily mountain shrub communities less vulnerable to livestock grazing. Pinyon/juniper and sage brush dominate both public and private lands at lower elevations. Cave Gulch and Cabin Gulch allotments are both characterized by steep slopes that are subject to slumping. Vegetation includes sagebrush dominated bottoms, pinyon/juniper slopes and some mountain shrub communities. Both South Fork Price Creek and Cave Gulch allotments have riparian systems with potential for improvement under proper management. A variety of noxious weed infestations are a concern on all six allotments.

**A. Proposed Action (Allotment Management Plan):** Renew the grazing permit for the Buffalo Horn Ranch for a ten year period as outlined in the proposed grazing schedule below. This grazing schedule will be incorporated into the grazing permit (0501417) and will also function as the new Allotment Management Plan (AMP). A Term and Condition on the permit will require the permittee to follow the prescribed grazing schedules and operate within the limits of flexibility as outlined in this Environmental Assessment (EA).

Advances in technology (e.g. computer calculations using ArcView and Excel spreadsheets) produced more accurate forage allocation based on land ownership, allowing adjustments in percent public land (see Range section of this document). Active animal unit months (AUMs) on the *Grazing Application for Permit Renewal* have been adjusted by allotment to more accurately reflect the carrying capacity of the rangelands and assure that the standards for public land health and minimum rest requirements established by the White River ROD/RMP are met on public lands within these allotments. Season of use in each allotment has been shifted in the proposed grazing schedule resulting in an average of 43% reduction from current critical growing season use and an average of 17% reduction in permitted BLM AUMs.

The proposed grazing schedule was developed through consultation, discussion and mutual agreement with the ranch manager / authorized representative. The proposed grazing schedule is outlined in the table below as well as in the *Grazing Application for Permit Renewal* form signed by the ranch manager on November 16, 2005. Objectives of this allotment management plan are:

- To maintain or enhance a healthy rangeland vegetation composition and species diversity, capable of supplying forage at a sustained yield to meet the current forage demands for livestock and wildlife.
- To provide for adequate forage plant growth and or re-growth opportunities necessary to:  
1) replenish plants' food reserves; and 2) produce sufficient seed to meet the reproduction needs necessary to maintain an ecological presence in the plant community.

- To establish livestock grazing strategy where the permittee can use these allotments to graze the range at a level that provides for plant growth requirements and provides for the most economical use of all forage resources available to the ranch operation.

Proposed Grazing Schedule (0501417) for Buffalo Horn Ranch						
Allotment:	Livestock		Date		% PL	BLM AUMs scheduled
Name and Number	#	Kind	On	Off		
South Fork Price Creek #06608	210	C	06/15	10/09	39	315
(Defer use 1 in 2 until 7/01)	210	C	07/01	10/25	39	315
Chokecherry #06609	152	C	07/01	10/30	18	110
(Defer use 1 in 2 until 7/15)	152	C	07/15	11/13	18	110
Upper Smith Gulch #06613	235	C	06/01	09/30	74	698
(Defer use 1 in 4 until 7/15)	235	C	07/15	11/13	74	698
Strawberry Peak #06615	60	C	07/01	10/31	25	61
(Defer use 1 in 2 until 7/10)	60	C	07/10	11/10	25	61
Cave Gulch #06617	120	C	07/01	09/30	77	279
(Defer use 2 in 3 until 7/15)	120	C	07/15	10/14	77	279
Cabin Gulch	150	C	06/15	09/30	31	165
(Defer use 2 in 3 until 7/15)	150	C	07/15	10/30	31	165
<b>Total:</b>						<b>1628</b>

**Plan of Operation:** Each year, thirty days prior to turnout into any of these allotments the Buffalo Horn Ranch will submit a plan of operation (grazing application) for the grazing year to the BLM for approval. The plan of operation will include the anticipated turnout dates and numbers of animals. Annual submission of this plan is intended to assure that the required rest periods are met for each allotment.

**Limits of Flexibility:** The permittee will be allowed flexibility from the submitted plan of operation during the grazing year that does not require prior approval from BLM. This flexibility will be limited to on/off dates and number of animals to adjust to changing climatic conditions, forage variability, and operational needs. Livestock may not be turned in to pastures early unless pre-approved by the BLM. Flexibility of dates will be limited to 10 days provided the total days of use do not exceed 10 days from the schedule approved in the allotment management plan and total AUMs of use do not exceed the scheduled AUMs. The permittee will also be able to adjust the number of animals by (+/-) 10% provided the total AUMs of use do not exceed the AUMs scheduled. These flexibilities will be accounted for when Actual Use forms are submitted.

Flexibilities that require approval by the BLM are adjustments made beyond the above criteria. BLM approved flexibilities and/or changes to this plan may be required due to such factors as forage influences from grazing, drought, fire, and/or water availability. The BLM, in conjunction with the grazing permittee, may also adjust this AMP if a situation develops in order to meet the Standards for Public Land Health.

**Rangeland Improvements Necessary to Implement the Grazing System:** No new rangeland improvements (RI) are currently proposed to implement this grazing schedule. Many existing rangeland improvement projects are in need of maintenance and repair. Future evaluations of allotment conditions may likely identify additional improvements or land treatments that would

aid in achieving management and land health objectives. In which case, a separate Environmental Assessment (EA) would be compiled to approve any such new RI on a site specific basis.

**Monitoring and Evaluation:** Five long-term trend monitoring sites within the Upper Smith Gulch allotment were established and read in 1988 and most recently read in 2005. One long-term trend plot was established in the South Fork of Price Creek in 2005. Trend sites include a permanent, repeatable photo plot and a permanent, repeatable Daubenmire transect line to measure ground cover and frequency. All study sites were established in key areas to monitor rangeland condition, changes in plant community composition, and livestock grazing use and were established under protocol developed in the *Grazing Allotment Monitoring Plan for the White River Resource Area*. The next cycle for reading all trend studies will be in 4-5 years (2009, 2010) and again in 9-10 years (2014, 2015), prior to the future renewal of the grazing permit. Work load priorities and BLM staff capabilities will partially determine when trend studies are repeated.

**Grazing Permit Terms and Conditions:** The following terms and conditions as required by 43 CFR 4130.3 will be included in the grazing permit issued under this alternative:

1. Grazing use will occur as per the 2005 Allotment Management Plan Grazing Schedule (4130.3-1(a)), (EA # CO-110-05-102EA).
2. Grazing use authorized under this grazing permit/lease may be suspended, in whole or in part, for violation by the permittee/lessee of any of the provisions of the rules or regulations now or hereafter approved by the Secretary of the Interior.
3. This grazing permit/lease is subject to cancellation, in whole or in part, at any time because of:
  - a. Noncompliance by the permittee/lessee with rules and regulations now or hereafter approved by the Secretary of the Interior.
  - b. Loss of control by the permittee/lessee of all or a part of the property upon which it is based.
  - c. A transfer of grazing preference by the permittee/lessee to another party.
  - d. A decrease in the lands administered by the Bureau of Land Management within the allotment(s) described herein.
  - e. Repeated willful unauthorized grazing use
4. A grazing utilization limit averaging 60 percent of annual growth within key forage areas and averaging 50 percent of annual production will be applied to public lands on all of the allotments included in the Buffalo Horn Ranch Grazing Permit.
5. In order to improve livestock distribution on the public lands, all salt blocks and/or mineral supplements will not be placed within a 1/4 mile of any riparian area, wet meadow, or watering facility (either permanent or temporary) unless stipulated though a written agreement or decision in accordance with 43 CFR 4130.3-2(c).



**B. Continuation of Current Management:** This alternative would renew the expiring permit for a period of 10 years with no changes made in livestock kind, numbers, season of use, or type of use (active, suspended, nonuse). Livestock grazing use would continue as permitted based upon the following schedule including the minimum rest requirements for each allotment from the White River ROD/RMP:

Current Grazing Permit Schedule						
Allotment Name	Allot.	Livestock #		Grazing period	% Public	BLM AUMs
South Fork Price Creek	06608	313	C	06/01 – 11/30	13	245
Chokecherry	06609	122	C	06/01 – 10/31	31	190
Upper Smith Gulch	06613	220	C	05/15 – 10/30	73	892
Strawberry Peak	06615	50	C	07/01 – 10/31	30	61
Cave Gulch	06617	200	C	07/01 – 10/10	75	503
Cabin Gulch	06618	173	C	05/23 – 09/30	10	75
<b>Total:</b>						<b>1966</b>

**Terms and Conditions:** Grazing management will occur in accordance with management plan signed on May 20 1998.

It is unlawful for the permittee, agents or employees to knowingly disturb or collect cultural, historical or Paleontological materials on the public lands. If cultural, historical or Paleontological materials are found, including human remains, funerary items or objects of cultural patrimony, the permittee is to stop activities that might disturb such materials, and notify the area manager immediately.

Minimum rest requirements as incorporated into the 1998 AMP are as follows:

Grazing Allotment	Minimum Rest Requirement
Upper Smith Gulch	04/15 – 06/28; 1 in 4
Chokecherry	04/15 – 07/01; 1 in 2
South Fork Price Creek	04/15 – 07/01; 1 in 2
Strawberry Peak	04/15 – 07/10; 1 in 2
Cave Gulch	04/05 – 07/15; 2 in 3
Cabin Gulch	04/05 – 07/15; 2 in 3

**C. No Action Alternative:** The No Action alternative consists of not issuing a grazing permit for livestock use. There would be no livestock grazing on public lands within these allotments on which it is currently permitted. This alternative would not be in compliance with the White River ROD/RMP decision to provide for livestock grazing as one of the acceptable multiple uses.

**ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD:** none

**NEED FOR THE ACTION:** BLM permit (0501417), which authorizes grazing on the allotments listed above will expire on February 28, 2006. This permit is subject to renewal or transfer at the discretion of the Secretary of the Interior for a period of up to ten years. The Bureau of Land Management has the authority to renew the livestock grazing permit/lease consistent with the provisions of the *Taylor Grazing Act*, *Public Rangelands Improvement Act*, *Federal Land Policy and Management Act* and the *White River Resource area Resource Management Plan/Environmental Impact Statement*. The grazing permittee has a preference

right to receive the permit, which is recognized as a primary use under the land use plan, the White River Record of Decision and Approved Resource Management Plan. In order to graze livestock on public land, the livestock producer (permittee) must hold a grazing permit.

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

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: pages 2-22 through 2-26

Decision Language: Livestock grazing will be managed as described in the 1981 Rangeland Program Summary (RPS). That document is the Record of Decision for the 1981 White River Grazing Management Final Environmental Impact Statement (Grazing EIS).

**COMPLIANCE WITH SECTION 302 OF FLPMA RELATIVE TO THE COMB WASH GRAZING DECISION**

A review of applicable planning documents and a thoughtful consideration of the new issues and new demands for the use of the public lands involved with these allotments have been made. This analysis concludes that the current multiple use allocation of resources is appropriate.

**AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:**

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

<b>STANDARDS FOR PUBLIC LAND HEALTH</b>							
<b>Standard</b>	<b>Current Situation</b>			<b>With Proposed Action</b>		<b>With No Grazing</b>	
	<b>Achieving or Moving Towards Achieving</b>	<b>Not Achieving</b>	<b>Causative Factors</b>	<b>Achieving or Moving Towards Achieving</b>	<b>Not Achieving</b>	<b>Achieving or Moving Towards Achieving</b>	<b>Not Achieving</b>
<b>#1-Upland Soils</b>							

STANDARDS FOR PUBLIC LAND HEALTH							
	Current Situation			With Proposed Action		With No Grazing	
Standard	Achieving or Moving Towards Achieving	Not Achieving	Causative Factors	Achieving or Moving Towards Achieving	Not Achieving	Achieving or Moving Towards Achieving	Not Achieving
South Fork Price Creek	1552 acres	53 acres	Cheatgrass, Noxious weeds, Historical grazing practices	1605 acres	0 acres	1552 acres	53 acres
Chokecherry	1419 acres	12 acres	Noxious weeds	1431 acres	0 acres	1419 acres	12 acres
Upper Smith Gulch	8568 acres	240 acres	Cheatgrass, Noxious weeds, Historical grazing practices, Excessive erosion (altered ground cover)	8613 acres	195 acres	8613 acres	195 acres
Strawberry Peak	783 acres	0 acres	n/a	783 acres	0 acres	783 acres	0 acres
Cave Gulch	1648 acres	80 acres	Cheatgrass, Noxious weeds, Historical grazing practices, Excessive erosion	1728 acres	0 acres	1728 acres	0 acres
Cabin Gulch	1024 acres	14 acres	Cheatgrass, Noxious weeds, Historical grazing practices, Excessive erosion	1038 acres	0 acres	1038 acres	0 acres
	2.6 % of Total			1.3 % of Total		1.7 % of Total	
#2-Riparian Systems							
South Fork Price Creek	1.25 mile	0 mile	n/a	1.25 mile	0 mile	1.25 mile	0 mile
Chokecherry	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Upper Smith Gulch	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Strawberry Peak	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cave Gulch	0.6 mile	0.7 mile	n/a	0.8 mile	0.5 mile	1.3 mile	0 mile
Cabin Gulch	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	27 % of Total			20 % of Total		0 % of Total	
#3-Plant Communities							
South Fork Price Creek	1552 acres	53 acres	Cheatgrass, Noxious weeds, Historical grazing practices	1605 acres	0 acres	1552 acres	52 acres
Chokecherry	1419 acres	12 acres	Noxious weeds	1431 acres	0 acres	1419 acres	12 acres

STANDARDS FOR PUBLIC LAND HEALTH							
	Current Situation			With Proposed Action		With No Grazing	
Standard	Achieving or Moving Towards Achieving	Not Achieving	Causative Factors	Achieving or Moving Towards Achieving	Not Achieving	Achieving or Moving Towards Achieving	Not Achieving
Upper Smith Gulch	8568 acres	240 acres	Cheatgrass dominance in lowland drainages, Noxious weeds, Historical grazing practices	8613 acres	195 acres	8613 acres	195 acres
Strawberry Peak	783 acres	0 acres	n/a	783 acres	0 acres	783 acres	0 acres
Cave Gulch	1648 acres	80 acres	Cheatgrass, Noxious weeds, Historical grazing practices	1728 acres	0 acres	1728 acres	0 acres
Cabin Gulch	1024 acres	14 acres	Cheatgrass, Noxious weeds, Historical grazing practices	1038 acres	0 acres	1038 acres	0 acres
	2.6 % of Total			1.3 % of Total		1.7 % of Total	
#4-Animal Communities							
South Fork Price Creek	1552 acres	53 acres	Cheatgrass, Noxious weeds, Historical grazing practices	1605 acres	0 acres	1552 acres	52 acres
Chokecherry	1419 acres	12 acres	Noxious weeds	1431 acres	0 acres	1419 acres	12 acres
Upper Smith Gulch	8568 acres	240 acres	Cheatgrass dominance in lowland drainages, Noxious weeds, Historical grazing practices	8613 acres	195 acres	8613 acres	195 acres
Strawberry Peak	783 acres	0 acres	n/a	783 acres	0 acres	783 acres	0 acres
Cave Gulch	1648 acres	80 acres	Cheatgrass, Noxious weeds, Historical grazing practices	1728 acres	0 acres	1728 acres	0 acres
Cabin Gulch	1024 acres	14 acres	Cheatgrass, Noxious weeds, Historical grazing practices	1038 acres	0 acres	1038 acres	0 acres
	2.6 % of Total			1.3 % of Total		1.7 % of Total	
#4-Special Status, T&E Species							
South Fork Price Creek	1605	0	n/a	1605	0	1605	0
Chokecherry	1430	0	n/a	1430	0	1430	0

STANDARDS FOR PUBLIC LAND HEALTH							
Standard	Current Situation			With Proposed Action		With No Grazing	
	Achieving or Moving Towards Achieving	Not Achieving	Causative Factors	Achieving or Moving Towards Achieving	Not Achieving	Achieving or Moving Towards Achieving	Not Achieving
Upper Smith Gulch	8809	0	n/a	8809	0	8809	0
Strawberry Peak	783	0	n/a	783	0	783	0
Cave Gulch	1728	0	n/a	1728	0	1728	0
Cabin Gulch	1038	0	n/a	1038	0	1038	0
	0 % of Total			0 % of Total		0 % of Total	
#5-Water Quality							
South Fork Price Creek	1.34 miles	0 miles	N/A	1.34 miles	0 miles	1.34 miles	0 miles
Chokecherry	1.50 miles	0 miles	N/A	1.50 miles	0 miles	1.50 miles	0 miles
Upper Smith Gulch	~17 miles	~6 miles	Historic Grazing/Drought/Soil Characteristics	~23 miles	0 miles	~23 miles	0 miles
Strawberry Peak	2.25 miles	0 miles	N/A	2.25 miles	0 miles	2.25 miles	0 miles
Cave Gulch	4.61 miles	0 miles	N/A	4.61 miles	0 miles	4.61 miles	0 miles
Cabin Gulch	1.8 miles	0 miles	N/A	1.8 miles	0 miles	1.8 miles	0 miles
	17.4 % of Total			0 % of Total		0 % of Total	

## CRITICAL ELEMENTS

### AIR QUALITY

*Affected Environment:* The entire White River RA has been designated as either attainment or unclassified for all pollutants, and most of the area has been designated prevention of significant deterioration (PSD) class II. The proposed grazing permit renewal is not located within a 20 mile radius of any special designated air-sheds or non-attainment areas.

*Environmental Consequences of the Proposed Action:* Implementation of the proposed grazing management plan (shifting seasons of use) will result in a 43% reduction from current critical growing season use and an average of 17% reduction in permitted BLM AUMs. Ground cover is expected to increase with reduced grazing during these critical periods aiding in reduced potential for fugitive dust production. Thus, adverse impacts to air quality are not anticipated as a result of the proposed actions.

*Environmental Consequences of the Continuation of Current Management Alternative:* Under current management, continued grazing during critical growing seasons will reduce effective ground cover (vegetation and litter accumulation) leaving soils exposed to eolian processes. As a result, fugitive dust production would increase during dry and windy conditions reducing air quality.

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* Allow pastures appropriate rest and reduce AUMs during critical growing seasons as outlined in the proposed grazing management plan.

## **CULTURAL RESOURCES**

*Affected Environment:* A Class I literature review was conducted by a White River Field Office BLM Archaeologist through the Colorado Office of Archaeology and Historic Preservation (OAHP), Denver and at the Bureau of Land Management, White River Field Office in Meeker, Colorado in the Summer of 2005. Site and survey files and maps in the allotment pastures were reviewed for information regarding previous cultural resource inventory projects and previously documented sites in the area. The results of the review indicated that none of the allotment pastures had been previously inventoried. No sites have been previously recorded in the project area. The literature search also included a review of the 1883 and 1907 (resurvey) General Land Office (GLO) maps. No historic sites were identified on the GLO maps within the allotment pastures. Based on these results it was anticipated that site density would be low. Prehistoric sites and isolates, historic Ute, and historic sites related to livestock grazing were anticipated, particularly in the pinyon-juniper woodlands.

A Class III inventory was completed by the Archaeologists walking 10 m (33 feet) random transects in each of the allotment pastures. The random surveys were mapped with a Trimble GeoExplorer Global Positioning System (GPS) unit. The Class III survey of the project area resulted in the documentation of one site and one isolated find. The site contains no archaeological data with the potential for yielding information significant to the history of the region and is not recommended as eligible to the National Historic Register.

*Environmental Consequences of the Proposed Action:* Implementation of the proposed grazing schedule would not impact any known eligible cultural resources. There will be no new impacts to cultural resources under the Proposed Action.

*Environmental Consequences of the Continuation of Current Management Alternative:* Due to the lack of systematic inventories and the identification of potentially eligible sites, continuation of the current management grazing schedule would not impact any known eligible cultural resources. There will be no new impacts to cultural resources under the continuation of the current management alternative.

*Environmental Consequences of the No Action Alternative:* There will be no new impacts to Cultural resources under the No Action Alternative.

*Mitigation:* 1. The operator is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are

uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places
- The mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- A timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the operator must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

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

*Affected Environment:* The invasive, non-native, annual cheatgrass (*Bromus tectorum*) is present to some extent in most ecological sites throughout these allotments. Its presence ranges from a trace to an extreme of 35% of the composition. This species is most prominent in the alkaline slopes, clayey foothills and foothill swale plant communities. Generally its occurrence and distribution is a consequence of historic long-term use throughout the critical spring growth period on an annual basis. A variety of noxious weed infestations are a concern on five of the six allotments.

South Fork Price Creek has known infestations of whitetop (*Cardaria draba*), bull thistle (*Cirsium vulgare*), Canada thistle (*Cirsium arvense*), musk thistle (*Carduus nutans*), and houndstongue (*Cynoglossum officinale*) along the main Price Creek draw. The invasive phraetophyte shrub *Tamarix* ssp. is also present; though a minor component in one of the secondary drainages. In the Chokecherry allotment, other than houndstongue, which is present, the primary noxious weed of concern is a large old infestation of yellow toadflax (*Linaria vulgaris*) near the allotment boundary between Chokecherry and Upper Smith Gulch. In Upper Smith Gulch there are several infestations of Scotch thistle (*Onopordum acanthium*) and houndstongue is common. Some drainage bottoms within this allotment are dominated by cheatgrass though native perennial grasses are still present. Cave Gulch and Cabin Gulch both have extensive infestations of Scotch thistle mainly on private lands but with serious potential of spread onto public lands. Houndstongue is also common in the bottoms of both allotments. An old infestation of spotted knapweed (*Centaurea maculosa*) dominates approximately four acres of mostly private land in the eastern most corner of the Cabin Gulch allotment (T3N, R94W

SWSE Sec 28). Strawberry Peak allotment currently has minimal noxious weeds but is at risk of infestation by several of these species.

Historic grazing practices such as continuous season long grazing use at heavy stocking rates created the early seral cheatgrass dominated plant communities that do not meet the Colorado Standard for upland vegetation and soils. This situation is probably largely irreversible regardless of the livestock grazing management practices employed now and in the future. These early seral rangelands are essentially frozen in time and without a human induced disturbance such as fire to remove the cheatgrass/big sagebrush dominance, accompanied by chemical treatment and seeding of adapted perennial grasses to preempt the return to cheatgrass dominance, these sites will remain unchanged in the future. These areas will likely continue to not meet the Public Land Health Standards under the Proposed Action, the Continuation of Current Management, or the No Grazing Alternatives.

*Environmental Consequences of the Proposed Action:* The proposed action, a grazing schedule that will also serve as an allotment management plan will provide each allotment with the minimum growing season rest requirements as established by the White River ROD/RMP. In relation to the known occurrences of noxious weeds on the allotments included in this permit renewal, the proposed action offers the best potential to maximize vigor of the grass component of the various ecological sites involved. These sites will be more resistant to invasion by undesirable species. While noxious weeds readily invade rangelands at all seral stages, the rate and extent of invasion would be much less for mid and late seral rangelands with a vigorous, competitive compliment of perennial grasses and forbs.

On the Upper Smith Gulch allotment (06613), of the 240 acres listed as not meeting the Standards for Public Land Health, approximately 195 acres (81%) are dominated by cheatgrass with minimal presence of desirable perennial species. It is likely these sites have crossed a threshold that is irreversible regardless of livestock grazing management. For South Fork Price Creek, Chokecherry, Cave Gulch and Cabin Gulch, the acres listed as not meeting the standards (53 acres, 12 acres, 80 acres, and 14 acres respectively) are either sites dominated by cheatgrass or sites with considerable noxious weeds infestations. With appropriate stocking rates, proactive grazing practices and aggressive noxious weed control it is expected that these sites could progress to a point where the plant community has an appropriate composition of desirable perennial species. The Buffalo Horn Ranch (grazing permittee) is essential in the detection, control and eradication of noxious weeds on BLM and private lands within allotments associated with the proposed action. The ranch is typically the first line of defense in the long-term endeavor of controlling noxious weeds.

*Environmental Consequences of the Continuation of Current Management Alternative:* Impacts resulting from a continuation of current management would be sustained potential for overuse and degradation resulting from unrealistic stocking rates on South Fork Price Creek, Cave Gulch and Cabin Gulch as well as continued considerable critical growing season use, especially in Upper Smith Gulch. Vulnerable ecological sites would be potentially less resistant to invasion and proliferation of noxious weeds if utilization levels were not closely monitored and livestock moved accordingly. Detection and eradication of noxious weed infestations by the grazing permittee would be essentially the same as that of the proposed action.

*Environmental Consequences of the No Grazing Alternative:* The impact of adopting this alternative would generally be similar to that of the proposed action with respect to the

occurrence and proliferation of noxious weeds; however, with no grazing the permittee would no longer have a commitment to aggressive management of noxious weeds on public lands. This stewardship is a primary factor in control of noxious weed infestations on the allotments of the Buffalo Horn Ranch.

*Mitigation:* Managed grazing and aggressive rehabilitation and re-vegetation efforts (including aerial and drill seeding with adapted species) immediately following disturbances such as wildfire events will be applied to limit the spread and establishment of cheatgrass. This same aggressive management will apply to re-vegetation of soil disturbances.

## **MIGRATORY BIRDS**

*Affected Environment:* This permit area spans an array of elevations and vegetation communities that support a wide variety of migratory birds during the nesting season (early May through mid July). All six allotments contain a heavy mountain shrub component (~5700 ac) dominated by Gambel oak, serviceberry and snowberry. Birds of higher conservation interest (i.e., Partners in Flight program) associated with these habitats and well represented in the permit area include: Virginia's warbler and green-tailed towhee. About 4600 acres of pinyon-juniper woodlands, confined mainly to the steeper slopes, are distributed throughout the Cave and Cabin Gulch, South Fork Price Creek, Chokecherry and Upper Smith Gulch allotments. Approximately 82% of these woodlands are located within the Upper Smith Gulch allotment. Higher conservation species associated with these habitats within the permit area include: gray flycatcher, pinyon jay, juniper titmouse, and black-throated gray warbler. These birds are well distributed at appropriate densities in proper habitats within the allotment and region's extensive like-habitats. Dense stands of basin big sagebrush, much of which is in early-mid seral stage, is present in the drainages and bottomlands of Upper Smith Gulch. Wyoming big sagebrush is scattered at higher elevations throughout all six allotments. Birds of higher conservation interest associated with these sagebrush habitats including Brewer's sparrow and green-tailed towhee are abundant and widespread on these ranges.

Much of the public lands within these allotments are confined to steep, brushy slopes that are less susceptible to livestock grazing. Use of these slopes tends to occur later in the season (August or September), well outside the breeding window for migratory birds.

*Environmental Consequences of the Proposed Action:* Cattle grazing practices are typically dispersed and low intensity and, where coincident with nesting, only incidental disruption of nests in ground or low shrub situations would be expected. Reductions in effective ground cover may indirectly affect nesting outcomes by increasing the susceptibility of incubating or brooding hens and their clutches to predation or extremes in temperature or precipitation. This impact would be most pronounced for ground nesting species associated with open shrubland and grassland habitats. Species that are more closely associated with sage-steppe shrub canopies, mountain shrub habitats and pinyon-juniper woodlands – which make up the majority of habitat within these allotments - are less apt to be influenced by reductions in herbaceous ground cover.

Under the proposed action, use within each allotment will be postponed by approximately two weeks, resulting in an average 43% reduction from current critical growing season use. Use of the Chokecherry, Strawberry Peak and Cave Gulch allotments would be deferred until early-mid

July. Cabin and South Fork Price Creek would also be deferred to the same time frame during alternating years. Under this schedule, declines in ground cover would occur after most broods have fledged and would be expected to have little effect on nest or fledging success.

Use within the South Fork Price Creek and Cabin Gulch will be deferred until early-mid June during alternating years resulting in a 44% and 50% reduction, respectively in current levels of growing season use that is synchronous with the migratory bird nesting season. Use within the Upper Smith Gulch allotment will be deferred until early June 3 out of 4 years resulting in an 80% reduction in current levels of growing season use that is synchronous with the migratory bird nesting season. Livestock use within these allotments is largely coincident with the breeding season and while may potentially result in minor depressions in breeding bird densities, are not expected to affect distribution or viability of breeding bird populations. Longer term benefits attributable to deferred use, alternating years of rest, and reduced use intensity during the growing season would provide for sustained improvements in the composition, vigor, and density of herbaceous ground cover.

*Environmental Consequences of the Continuation of Current Management Alternative:* Continuation of the current grazing schedule would keep herbaceous ground cover suppressed throughout the majority of the breeding season within the South Fork Price Creek, Chokecherry, Upper Smith Gulch and Cabin Gulch allotments, likely resulting in minor-moderate decreases in breeding bird densities within these allotments lower-elevation shrublands. Migratory bird species associated with higher elevation pinyon-juniper woodlands and mountain shrub habitats are likely less influenced by current grazing practices due to the relative inaccessibility of these areas to livestock.

Current grazing use within the Strawberry Peak and Cave Gulch allotments begins near the end of the migratory bird nesting season. Subsequent removal of herbaceous groundcover likely has little inhibitory effect on migratory bird fledgling success.

*Environmental Consequences of the No Action Alternative:* Removal of cattle would be expected to have little effect on breeding bird abundance or reproductive/recruitment success in the permit area's ~4600 acres of woodlands and ~5700 acres of mountain shrub types. Dense vegetation and rugged terrain limits livestock use of these habitats. Birds associated with these lower elevation woodlands do not tend to respond positively to relatively minor increases in herbaceous expression. Substantial increases in herbaceous cover – predominately in the bottomlands – would be expected to bolster densities of ground nesting species associated with open shrubland and grassland habitats.

*Mitigation:* None

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

*Affected Environment:* There are no threatened or endangered animal species that are known to inhabit or derive important benefit from areas within the project site. Woodlands associated with these allotments are generally composed of submature pinyon-juniper stands. Small pockets of aspen located within the Cave Gulch allotment and mature pinyon-juniper stands, located in the Upper Smith allotment may have potential to support nesting functions of

northern goshawk, however the probability for such small, fragmented tracts to support the nesting functions of goshawks is extremely low. There are no records of nesting goshawks within or adjacent to the permit area.

*Environmental Consequences of the Proposed Action:* The proposed action is not likely to adversely affect the short or long term utility or suitability of habitat in relation to northern goshawk, nor would it be a physically disruptive influence to their reproductive activities. Nesting habitat within the allotment is extremely limited and suboptimal at best. Mature pinyon-juniper stands, while typically small and fragmented, tend to be located along steep terrain which is less vulnerable to livestock grazing. Subsequent use by livestock tends to be light and typically occurs later in the season (August or September), well after young have fledged. Proposed cattle use of these habitats would not be expected to have an adverse consequence on nest site selection, nest attendance, or nestling recruitment during potential goshawk nest efforts.

*Environmental Consequences of the Continuation of Current Management Alternative:* Current grazing regimens affect special status species in a manner similar to that discussed in the proposed action. Current livestock use has minimal influence on ground cover expression in those habitats that are important for nesting purposes (e.g., aspen and mature pinyon-juniper). Approximately 96% of aspen habitat within the Cave Gulch allotment is near optimal in ecological health, indicating light use by livestock.

*Environmental Consequences of the No Action Alternative:* The effects of livestock removal on the allotment's vegetation resources as cover for northern goshawk would not be expected to differ markedly from the proposed action. Nesting habitat tends to be located in areas that typically assume light grazing pressure. The most prominent difference would likely involve moderate to substantial increases of herbaceous groundcover and woody forage, which may result in minor increases of mammalian and avian prey available for northern goshawk.

*Mitigation:* None

*Finding on the Public Land Health Standard for Threatened & Endangered species:* There is no reasonable likelihood that the proposed action, current management alternative or no action alternative would have an influence on the condition or function of Threatened, Endangered, or Sensitive animal species habitat. Thus there would be no effect on achieving the land health standard. BLM parcels within this allotment currently meet the Public Land Health standard for special status species. Livestock use, as proposed, appears fully consistent with the maintenance and continued development of those habitat features (e.g., mature aspen and/or pinyon-juniper woodlands) important to northern goshawk.

## **WASTES, HAZARDOUS OR SOLID**

*Affected Environment:* There are no known hazardous or other solid wastes on the subject lands.

*Environmental Consequences of the Proposed Action:* No hazardous wastes would be generated. Small quantities of solid could be potentially be generated by day to day operations.

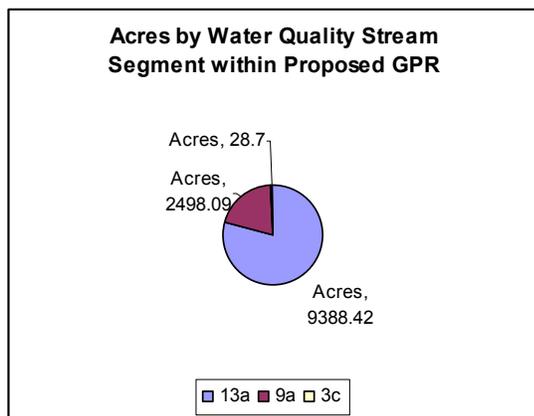
*Environmental Consequences of the Continuation of Current Management Alternative:* No hazardous wastes would be generated. Small quantities of solid waste could be potentially be generated by day to day operations.

*Environmental Consequences of the No Grazing Alternative:* None

*Mitigation:* The permittee shall be required to collect and properly dispose of any solid wastes generated by the proposed action.

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

*Affected Environment:* The proposed grazing permit renewal is located within the Deep Channel Creek, E. Fork Strawberry Creek, Strawberry Creek, and Smith Gulch watersheds. Deep Channel Creek is located within stream segment 13a of the White River Basin. E. Fork Strawberry Creek, Strawberry Creek, and Smith Gulch are all situated in stream segment 9a of the White River Basin. The northeastern boundary of the South Fork Price Creek allotment (06608) sits atop the drainage divided between the White River Basin (segment 13a) and the Yampa River Basin (segment 3c). The following pie-graph illustrates acre distribution of water quality stream segments within the proposed grazing permit renewal (GPR) for the Buffalo Horn Ranch.



A review of the Colorado's 1989 Nonpoint Source Assessment Report (plus updates), the 305(b) report, the 303(d) list, the White River Resource Area RMP, and the Unified Watershed Assessment was done to see if any water quality concerns have been identified. It should be noted that Smith Gulch (segment 9a) has been listed in the White River RMP as a proposed "fragile watershed". Smith Gulch is an ephemeral G5/F5-type channel which is unstable and extremely incised due to past and current head-cutting.

The proposed actions will impact approximately 2,498 acres of stream segment 9a of the White River Basin. Stream segment 9a of the White River basin is defined as all tributaries to the White River, including all wetlands, from the confluence of the North and South Forks to a point immediately above the confluence with Piceance Creek, which are not within the boundary of national forest lands, except for the specific listings in segments 9b and 10b. Segment 9a has been classified as use protected. The state has classified stream segment 9a as beneficial for the following uses: Cold Aquatic Life 2, Recreation 2, Water Supply, and Agriculture. The antidegradation review requirements in the Antidegradation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply. Minimum standards for four parameters have been listed, these parameters are: dissolved oxygen = 6.0 mg/l, pH = 6.5 - 9.0, Fecal Coliform = 2000/100 ml, and 630/100 ml E. coli.

The proposed actions will impact approximately 9,388 acres of stream segment 13a of the White River Basin. Stream segment 13a of the White River Basin is defined as all tributaries to the White River, including all wetlands, lakes and reservoirs from a point immediately above the

confluence with Piceance Creek to a point immediately above the confluence with Douglas Creek, except for the specific listings in segments 13b through 20. Segment 13a has been classified as use protected. The state has further classified stream segment 13a as beneficial for the following uses: Warm Aquatic Life 2, Recreation 2, and Agriculture. The antidegradation review requirements in the Antidegradation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply. Minimum standards for four parameters have been listed, these parameters are: dissolved oxygen = 5.0 mg/l, pH = 6.5 - 9.0, Fecal Coliform = 2000/100 ml, and 630/100 ml E. coli.

The proposed actions will impact approximately 28.7 acres of stream segment 3c of the Yampa River Basin on the drainage divide between stream segment 13a of the White River Basin. Stream segment 3c of the Yampa River Basins defined as the mainstem of Milk Creek, including all tributaries, wetlands, lakes and reservoirs, from Thornburgh to the confluence with the Yampa River except for the specific listings in segment 3b and 3e. Segment 3c of the Yampa River has not been designated use-protected. An intermediate level of water quality protection applies to waters that have not been designated outstanding waters or use-protected waters. For these waters, no degradation is allowed unless deemed appropriate following an antidegradation review.

*Environmental Consequences of the Proposed Action:* Reductions in vegetal cover due to grazing (and drought conditions) may leave soils exposed to erosional processes increasing sedimentation to lower reaches of the affected watersheds. However, with implementation of the proposed grazing permit (reduced AUMs and additional rest during critical growing seasons) water quality within the permit area can be expected to improve.

*Environmental Consequences of the Continuation of Current Management Alternative:* Continual grazing during the growing season without any rest contributes to erosion and water quality problems. Typically, annual runoff is dynamic and dependent aspects we control, such as the amount of vegetation retained for watershed protection and vegetation density. Depleting the vegetation cover needed to protect watersheds from raindrop impact and runoff could cause long-term erosion and water quality problems for these tributaries of the White and Yampa Rivers.

*Environmental Consequences of the No Action Alternative:* The no grazing alternative would help increase water quality within the permit area by sustaining sufficient amounts of ground cover and removing livestock from stream banks. Increased ground cover (vegetation and litter accumulation) would reduce surface erosion and sedimentation to lower portions of the affected watersheds. Removing livestock from stream channels would increase channel stability and allow natural channel morphology to develop.

*Mitigation:* Compliance monitoring for vegetation improvement would help identify if additional actions were needed to comply with the *Clean Water Act*. If necessary, additional structures will be utilized to minimize disturbance to stream banks/channel and riparian areas within the allotment boundaries.

*Finding on the Public Land Health Standard for water quality:* Currently the White River meets the Public Land Health Standard and would continue to do so with the implementation of the proposed action. Many of the upper tributaries which are ephemeral and flow in direct response to storm events do not meet the standards during periods of flow. By improving the

cover and distribution of livestock, the watershed cover would begin to improve causing these drainages to move toward meeting the standards.

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

*Affected Environment:* Of the six allotments affected by this permit renewal, only two of them have riparian systems occurring on public land. On the South Fork Price Creek allotment there is approximately 1.25 miles of lotic (flowing water) riparian system (Price Creek) on public land. These reaches of stream have a relatively steep gradient with a confined channel. Riparian vegetation ranges from woody dominated sections with boxelder (*Acer negundo*) and willows (*Salix spp.*) to herbaceous mats of sedges (*Carex spp*) and rushes (*Juncus spp*). Mature boxelders line the system in several places and sub-irrigation is allowing boxelder regeneration well outside of the active floodplain. Price Creek was initially inventoried for Proper Functioning Condition (PFC) in 1997 and was reassessed in May of 2005. On both occasions the system was rated as being in low proper functioning condition with higher potential condition possible. Historic entrenchment of the lower portions of Price Creek as well as the deep, fine textured, erosive soils make this riparian system vulnerable to degradation.

On the Cave Gulch allotment there is a total of 1.3 miles of riparian system (Cave Gulch) on public land. Large scale land slides occurred throughout the Cave Gulch allotment in the mid 1980's and erosion and sediment loads still appear to be above normal. Riparian vegetation while present is not yet adequate to stabilize soils and capture sediment. In the initial 1997 assessment the upper 0.7 mile of the system was rated as non-functional due primarily to a large active V shaped head-cut and the lack of riparian vegetation. At that same time the lower 0.6 mile of system showed a lack of adequate riparian vegetation and was rated as functional-at-risk with an upward (improving) trend. In 2005 both reaches were re-assessed and given the same ratings. The upper reach has heavy deposits of sediment and only scattered patches of riparian vegetation. The lower reach also has heavy sediment loads but sedges and rushes are beginning to form vegetative mats across the channel. This system has high potential to function well in terms of capturing sediment load from this drainage.

*Environmental Consequences of the Proposed Action:* Under the proposed action it is expected that reduced stocking rates, reduced critical growing season use, and shortened grazing seasons will allow for improvements in the riparian systems in both South Fork Price Creek and Cave Gulch. Under the proposed grazing schedule there will be no livestock grazing in South Fork Price Creek until July 1 every other year. Grazing use on the non-deferred years will start two weeks later than previously permitted. Cave Gulch will have no livestock grazing until July 15 two out of every three years. Riparian vegetation will have greater opportunity for establishment and growth through the critical growing season allowing for better sediment retention, bank building, and prolonged water release. This proposal should result in continued improvement and riparian development in South Fork Price Creek and an upward trend toward proper functioning condition in Cave Gulch.

*Environmental Consequences of Continuation of Current Management:* Under current management both South Fork Price Creek and Cave Gulch are permitted above calculated livestock grazing capacity. If fully stocked, riparian conditions in South Fork Price Creek would be at risk of degradation through over-use, trampling and accelerated erosion. It is uncertain if the riparian system in South Fork Price Creek would maintain at the level of proper functioning

condition. It is unlikely that the Cave Gulch riparian system would have adequate opportunity for riparian vegetation to become established; therefore the system would remain well below its potential. Erosion and associated sediment loads would be excessive. In both allotments stocking rates and critical growing season use would be higher than under the proposed action resulting in less potential opportunity for riparian vegetative growth, maintenance, replenishment of biomass, and especially in Cave Gulch, for establishment.

*Environmental Consequences of the No Action Alternative:* With no livestock grazing it is likely the South Fork Price Creek riparian system would continue to function properly and possibly soon reach its full potential. The Cave Gulch riparian system would have maximum opportunity for establishment of riparian vegetation. It is likely that over time both the upper and lower reaches of this system would progress to proper functioning condition. There are noxious weeds in and near both of these systems and without permittee participation; spread of noxious weeds is likely.

*Mitigation:* Both of these riparian systems are at risk of becoming non-functional if over-grazing were to occur in the future and should continue to be monitored. A minimum stubble height of four inches should be maintained on riparian vegetation. Fencing off portions of these streams is not part of this proposal but it should be an option if future riparian conditions should warrant it. However, the proposed grazing schedule and stocking rates should result in improvement of these riparian systems.

*Finding on the Public Land Health Standard for riparian systems:* The riparian system in South Fork Price Creek while not at full potential, does currently meet the Public Land Health Standards. In the Cave Gulch allotment existing riparian conditions do not meet the Public Land Health Standards. In the upper reach riparian plants are sparse, do not exhibit high vigor and lack diversity of age class. Throughout the system erosion and sedimentation are excessive. Under the proposed action, reduced stocking rates and reduced critical growing season use are expected to allow improvement of the stream condition over time, resulting in achieving, or moving toward achieving the Public Land Health Standard for riparian systems.

## **WILDERNESS**

*Affected Environment:* Approximately 5,268 acres of the Windy Gulch Wilderness Study Area (WSA) and 749 acres of Black Mountain WSA will be affected by the proposed action. The Upper Smith Gulch Allotment consists of 4,880 acres of Windy Gulch WSA and 749 acres of Black Mountain WSA. Strawberry Peak Allotment consists of approximately 390 acres Windy Gulch WSA.

*Environmental Consequences of the Proposed Action:* The natural ecological condition of the vegetation in the Upper Smith Gulch Allotment will be an improving trend, however; due to historical grazing practices, it is unlikely that species such as the invasive non-native cheatgrass (*Bromus tectorum*) will be removed and it is likely some of these sites have crossed a threshold that is irreversible regardless of livestock grazing management. The natural ecological condition of the vegetation in the Strawberry Peak Allotment will remain unchanged and is currently meeting Colorado Public Land Health standards.

The visual condition of the lands and waters within both the Black Mountain and Windy Gulch WSAs will remain unchanged.

Soils within the Smith Gulch Allotment will be an improving trend and the soil condition in the Strawberry Peak Allotment will remain unchanged and is currently meeting Colorado Public Land Health standards.

Numbers and diversity of fish and wildlife would remain unchanged with the exception of small mammals which may fare better due to a reduction in numbers of livestock and improvement of grass and forb availability.

All other wilderness values such as naturalness, solitude and opportunities for primitive and unconfined recreation will continue to persist at the same levels as identified in the initial wilderness inventory.

*Environmental Consequences of the Continuation of Current Management Alternative:* The natural ecological condition of the vegetation in the Upper Smith Gulch Allotment will be an improving trend, however; due to historical grazing practices, it is unlikely that species such as the invasive non-native cheatgrass (*Bromus tectorum*) will be removed and it is likely some of these sites have crossed a threshold that is irreversible regardless of livestock grazing management. The natural ecological condition of the vegetation in the Strawberry Peak Allotment will remain unchanged and is currently meeting Colorado Public Land Health standards.

The visual condition of the lands and waters within both the Black Mountain and Windy Gulch WSAs will likely continue to degrade.

Soils within the Smith Gulch Allotment will be a decreasing trend and the soil condition in the Strawberry Peak Allotment will remain unchanged and is currently meeting Colorado Public Land Health standards.

Numbers and diversity of fish and wildlife would remain unchanged.

All other wilderness values such as naturalness, solitude and opportunities for primitive and unconfined recreation will continue to persist at the same levels as identified in the initial wilderness inventory.

*Environmental Consequences of the No Action Alternative:* The natural ecological condition of the vegetation in the Upper Smith Gulch Allotment will be an improving trend, however; due to historical grazing practices, it is unlikely that species such as the invasive non-native cheatgrass (*Bromus tectorum*) will be removed and it is likely some of these sites have crossed a threshold that is irreversible regardless of livestock grazing management. The natural ecological condition of the vegetation in the Strawberry Peak Allotment will remain unchanged and is currently meeting Colorado Public Land Health standards.

The visual condition of the lands and waters within both the Black Mountain and Windy Gulch WSAs will likely continue to degrade.

Soils within the Smith Gulch Allotment will be a decreasing trend and the soil condition in the Strawberry Peak Allotment will remain unchanged and is currently meeting Colorado Public Land Health standards.

Numbers and diversity of fish and wildlife would remain unchanged with the exception of small mammals which may fare better due to a reduction in numbers of livestock and improvement of grass and forb availability.

All other wilderness values such as naturalness, solitude and opportunities for primitive and unconfined recreation will continue to persist at the same levels as identified in the initial wilderness inventory.

*Mitigation:* None.

### **CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:**

No ACEC's, flood plains, prime and unique farmlands, or Wild and Scenic Rivers, threatened, endangered or sensitive plants exist within the area affected by the proposed action. For threatened, endangered and sensitive plant species Public Land Health Standard is not applicable since neither the proposed nor the no-action alternative would have any influence on populations of, or habitats potentially occupied by, special status plants. There are also no Native American religious or environmental justice concerns associated with the proposed action.

### **NON-CRITICAL ELEMENTS**

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

#### **SOILS** (includes a finding on Standard 1)

*Affected Environment:* See tables in the Range Management section of this document for a breakdown of soil units and associated ecological sites of BLM and private acres within each allotment being considered under this permit renewal. Soils analyzed in this document have been covered either in the Rio Blanco Soil Survey or the Moffat County Soil Survey. These soil surveys delineate individual soil unit polygons and associated ecological sites.

Soils with plant communities rated as a mid seral, late seral, or PNC (Potential Natural Community) have sufficient cover of desirable plant species to produce adequate litter and ground cover to minimize runoff and provide for soil protection (refer to the Vegetation section below). These soils are meeting the Colorado Public Land Health Standard for upland soils. The allotments have the following BLM acres achieving or moving toward achieving for Standards for Public Land Health: South Fork Price Creek – 1,552 acres (96%), Chokecherry – 1,419 acres (99%), Upper Smith Gulch - 8568 acres (97%), Strawberry Peak - 783 acres (100%), Cave Gulch – 1,648 acres (95%), Cabin Gulch - 999 acres (96%) (Refer to Vegetation section of this document).

Soils with plant communities rated as early seral do not have sufficient diversity and/or cover of native plant species to provide effective ground cover to prevent overland flow, runoff, and general soil degradation. These soils exhibit some pedestaling, minor rills, and active gully erosion. Areas with active erosion are typically along major drainages (Price Creek, Cave Gulch, Cabin Gulch, and Smith Gulch) that have down-cut in the past, which has caused side drainages to down-cut to the level of the major drainages to obtain equilibrium. Early seral sites generally occur on alkaline slope, foothill swale, pinyon/juniper/clayey slope ecological sites primarily in the Upper Smith Gulch allotment. Approximately 82 acres of brushy loam ecological sites in the South Fork Price Creek and Cave Gulch allotments are not meeting Public Land Health Standards for upland soils primarily due to inadequate diversity or cover of native plant species. Most early seral sites are not meeting Public Land Health Standards. The allotments have the following BLM acres not achieving the standards for public land health: South Fork Price Creek - 53 acres (4%), Chokecherry - 12 acres (1%), Upper Smith Gulch - 259 acres (3%), Cave Gulch- 80 acres (5%), and Cabin Gulch- 39 acres (4%).

*Environmental Consequences of the Proposed Action:* Groundcover of native perennial plant species and adequate litter are central to the protection and stabilization of soils. Under the proposed action mid seral and early seral ecological sites in the South Fork Price Creek, Chokecherry Upper Smith Gulch, and Cabin Gulch allotments would benefit from reduced critical growing season use. Soils in all allotments except Strawberry Peak would potentially have increased surface litter accumulation, canopy cover, and ground cover due to adjustments in the grazing schedule resulting in reduced grazing intensity and duration. Livestock grazing will occur later, so key forage plants are not heavily grazed during the critical growing season. Utilization levels should be moderate enough to allow for plant re-growth, seed production and biomass accumulation for soil surface protection.

On soils with late seral or PNC plant communities, little change from the current status is expected with regard to soil protection related to plant cover. Ecological sites already at full potential and meeting health standards will not be appreciably influenced by the proposal.

Without some form of intensive management disturbance such as fire or chemical treatment with follow-up drill seeding, soils with early seral plant communities dominated by annual plants and sites dominated by old decadent sagebrush stands will continue at their current state because they have crossed a threshold. This situation is nearly irreversible regardless of the livestock management. Historical grazing practices created most of the early seral plant communities that do not meet the rangeland health standards for soils.

*Environmental Consequences of the Continuation of Current Management Alternative:* Under this alternative, stocking rates above the calculated carrying capacity on South Fork Price Creek, Upper Smith Gulch, Cave Gulch and Cabin Gulch would have considerable potential for negative impacts on vulnerable ecological sites if utilization levels were not closely monitored and livestock moved accordingly. Mid seral sites and to a lesser degree later seral plant communities would also have potential for negative impacts to soils including reduced diversity, composition and cover of desirable plant species, and/or reduced production for many of the rangelands. At current stocking rates it is not apparent whether PNC communities would continue to meet health standards; early seral communities would not.

*Environmental Consequences of the No Grazing Alternative:* Under a no grazing by livestock alternative, most areas that are currently being grazed by livestock would experience a

short term increase in both perennial plant cover and soil surface litter accumulation. Mid seral ecological sites would likely experience the greatest benefit of increased perennial plant cover. On early seral ecological sites, such as the monocultures of sagebrush and on rangelands dominated by cheatgrass, the majority of areas are not expected to change in perennial plant cover because they have crossed a threshold of total sagebrush and/or annual plant domination. Soils associated with PNC ecological sites would continue to meet standards and experience minimal changes in plant species composition and diversity.

*Mitigation:* Continue long-term trend monitoring in key areas to identify trends and changes in plant community cover and composition affecting soil health.

*Finding on the Public Land Health Standard for plant and animal communities* (partial: see also Wildlife, Aquatic and Wildlife, Terrestrial): Soils of early seral plant communities generally are not meeting land health standards due to inadequate soil surface protection caused by a significant component of non-native annual grasses, primarily cheatgrass (Upper Smith Gulch), in addition to noxious weed infestations (South Fork Price Creek, Chokecherry, Upper Smith Gulch, Cave Gulch, and Cabin Gulch) . As noted in the vegetation section below, historic grazing practices created the situation in which most of the identified early seral plant communities do not meet the Public Land Health Standard for upland soils. This situation is largely irreversible, regardless of livestock grazing management practices employed now or in the future, without intensive management such as human induced disturbance, chemical treatment and subsequent seeding of desirable perennial species to preempt cheatgrass dominance in these communities. Soils of mid seral, late seral, and PNC communities make up the bulk of the acreage included in these allotments and currently meet Public Land Health Standards. Implementation of the proposed action will enhance the ability of the rangelands to meet the Public Land Health Standards in the future.

**VEGETATION** (includes a finding on Standard 3)

*Affected Environment:* The following table lists plant communities and the dominant plant species for the ecological sites or woodland types on the allotments as associated with the proposed action. Forb species, though important to the diversity of a community and comprising up to 25 – 30 percent of the composition of several of the plant communities listed, are not presented in the following table because they generally are not significant contributors to the general appearance of the community.

<b>Ecological Site / Woodland Type</b>	<b>Plant Community Appearance</b>	<b>Predominant Plant Species in the Plant Community</b>
Alkaline Slopes	Sagebrush/grass Shrubland	Wyoming big sagebrush, winterfat, low rabbitbrush, wheat grasses, Indian rice grass, squirreltail
Brushy Loam	Deciduous Shrub/grass Shrubland	Serviceberry, oakbrush, snowberry, mountain brome, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses
Clayey Foothills	Grass/Open Shrub Shrubland	Western wheatgrass, mutton grass, Indian rice grass, squirreltail, June grass, Wyoming big sagebrush, black sagebrush
Clayey Salt-desert	Salt Desert Shrubland	Gardner saltbush, shadscale, mat saltbush, galleta, Salina wildrye, squirreltail, Indian rice grass
Clayey Slopes	Grassland	Salina wildrye, mutton grass, western wheatgrass, June grass, squirreltail, shadscale
Deep Clay Loam	Grass/Open Shrub Shrubland	Western wheatgrass, slender wheatgrass, mutton grass, squirreltail, June grass, Letterman and Columbia needle grasses, mountain big sagebrush

<b>Ecological Site / Woodland Type</b>	<b>Plant Community Appearance</b>	<b>Predominant Plant Species in the Plant Community</b>
Deep Loam	Grassland	Bluebunch wheatgrass, mottongrass, needle-and-thread, western wheatgrass, slender wheatgrass, big sagebrush, serviceberry, snowberry.
Dry Exposure	Grassland	Beardless bluebunch wheatgrass, needle-and-thread, June grass, Indian rice grass, fringed sage, buckwheats
Foothill Swale	Grass/Open Shrub Shrubland	Basin wildrye, western wheatgrass, slender wheatgrass, streambank wheatgrass, Indian rice grass, Nevada bluegrass, basin big sagebrush, fourwing saltbush, rubber rabbitbrush
Loamy Salteddesert	Grass/Salt Desert Shrubland	Needle-and-thread, galleta, Sandberg bluegrass, squirreltail, Indian rice grass, Gardner saltbush, shadscale, winterfat, horsebrush
Loamy Slopes	Mix Shrub/grass Shrubland	Mountain mahogany, bitterbrush, serviceberry, mountain big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, June grass, Indian rice grass
Mountain Loam	Grass/Open Shrub Shrubland	Mountain brome, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses, mountain big sagebrush, bitterbrush, low rabbitbrush, snowberry, serviceberry
Mountain Swale	Grass/Open Shrub Shrubland	Basin wildrye, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses, sedges, rushes, mountain big sagebrush, rubber rabbitbrush, snowberry,
Rolling Loam	Sagebrush/grass Shrubland	Wyoming big sagebrush, winterfat, low rabbitbrush, horsebrush, bitterbrush, western wheat grass, Indian rice grass, squirreltail, June grass, Nevada and Sandberg bluegrass
Salteddesert Breaks	Salt Desert Shrubland	Galleta, salina wildrye, squirreltail, Indian rice grass, needle-and-thread, shadscale, winterfat
Salteddesert Overflow	Grassland	Alkali sacaton, galleta, Indian ricegrass, squirreltail, sand dropseed, fourwing saltbush, rubber rabbitbrush, greasewood.
Salt Meadow	Grassland	Inland salt grass, western wheatgrass, slender wheatgrass, fourwing saltbush, rubber rabbitbrush
Sandy Salteddesert	Grass/Salt Desert Shrubland	Needle-and-thread, Indian rice grass, sand dropseed, Sandberg bluegrass, squirreltail, galleta, shadscale, winterfat, horsebrush
Semidesert Clay Loam	Grass/Sagebrush Shrubland	Western wheatgrass, squirreltail, galleta, Salina wildrye, Indian rice grass, Wyoming big sagebrush, fourwing saltbush, shadscale
Semidesert Loam	Grass/Sagebrush Shrubland	Needle-and-thread, western wheatgrass, galleta, Sandberg bluegrass, squirreltail, Indian rice grass, sand dropseed, Wyoming big sagebrush, fourwing saltbush, winterfat
Stony Foothills	Grass/Open Shrub Shrubland	Beardless bluebunch wheatgrass, western wheatgrass, needle-and-thread, June grass, Indian rice grass, fringed sage, Wyoming big sagebrush, black sage, serviceberry, pinyon and juniper
Stoney Loam	Grass/Shrubland	Bluebunch wheatgrass, Indian ricegrass, needle grasses, mutton grass, western wheatgrass, serviceberry, bitterbrush, bog sagebrush, snowberry
Pinyon/Juniper	Pinyon/Juniper Woodland	Pinyon pine, Utah juniper, mountain mahogany, bitterbrush, serviceberry, Wyoming big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, June grass, Indian rice grass, mutton grass

The following table shows the seral rating used by the BLM to rate rangeland vegetation communities in comparison to the Potential Natural Plant Community (PNC) for a particular ecological site.

<b>ECOLOGICAL SITE SIMILARITY RATINGS</b>	
<b>Seral Rating</b>	<b>% Similarity to the Potential Natural Plant Community (PNC)</b>
Potential Natural community (PNC)	76-100% composition of species in the PNC
Late seral	51-75% composition of species in the PNC
Mid seral	26-50% composition of species in the PNC
Early seral	0-25% composition of species in the PNC

The following tables show an estimate of the public land acreage falling within each of the seral

ratings for ecological sites on each of the allotments associated with this permit renewal. These estimates are based on professional judgment of the Rangeland Management Specialist trained in the use of the rating system. During the 2005 field season most significant ecological sites on the allotments were visited for a plant community assessment of the Colorado Public Land Health Standards. Historical grazing practices (yearly critical growing season use, historic overstocking, etc.) created the situation where some early seral plant communities do not meet the rangeland health standards. Some early seral sites have crossed a threshold that is nearly irreversible without some form of intensive management, such as fire or use of chemicals followed by re-seeding with desirable adapted perennial species, regardless of livestock management.

South Fork Price Creek:

South Fork Price Creek #06608						
Ecological Site Similarity Rating						
Ecological Site	Total BLM Acres	PNC	Late Seral	Mid Seral	Early Seral	BLM Acres Classified
Brushy Loam	622	396	112	75	39	622
Brushy Loam/Brushy Loam	46	29	8	6	3	46
Clayey Slopes/PJ woodlands	37	28	7	2	0	37
Deep Clay Loam/Mountain Loam	13	10	3	0	0	13
Dry Exposure/Dry Exposure	30	23	6	1	0	30
Mountain Loam	26	8	5	4	9	26
None (Rock outcrop, steep slopes, etc.)	97	n/a	n/a	n/a	n/a	n/a
PJ woodlands/PJ woodlands	258	n/a	n/a	n/a	n/a	n/a
Stoney Foothills	477	358	95	22	2	477
<b>Total</b>	<b>1605</b>	852	236	110	53	1251

In the South Fork Price Creek allotment (#06608), 95 percent of the classifiable ecological sites have plant communities within acceptable, desired thresholds (mid to PNC) as defined in the White River ROD/RMP. Over time, lack of fire and influence from livestock grazing has resulted in the PNC to mid seral plant communities in the steeper brushy loam ecological sites being dominated by thick cover of Gambel oak (*Quercus gambelii*), serviceberry (*Amelanchier alnifolia*), and snowberry (*Symphoricarpos spp.*). Vegetation production and composition of native species on these sites provide adequate cover for soil protection and forage to meet livestock demands. These sites are not presently at risk of degradation and are at low risk of invasion by non-native species. Approximately 355 acres of pinyon/juniper woodland, rock outcrops, and steep slopes do not fall into classifiable seral stages. Inaccessibility and lack of forage result in low impact from livestock or wildlife and accordingly these areas generally meet public land health standards.

Early seral brushy loam ecological sites are primarily in valley bottoms, toe-slopes and/or flatter sites that have experienced higher grazing pressure historically. Some of these areas have a strong presence of cheatgrass in plant community. Probable causative factors for the early seral conditions are early season livestock use, water availability, and historic high grazing intensity. Other undesirable noxious weed species present in the allotment include houndstongue, whitetop, musk thistle, Canada thistle, and bull thistle. Overall, early seral communities do not

currently meet the Colorado Public Land Health Standards for species diversity, soil protection, and/or forage production due to the presence of cheatgrass.

Chokecherry:

Chokecherry #06609						
Ecological Site Similarity Rating						
Ecological Site	Total BLM Acres	PNC	Late Seral	Mid Seral	Early Seral	BLM Acres Classified
Brushy Loam/Brushy Loam	932	699	186	47	0	932
Deep Clay Loam/Mountain Loam	3	3	0	0	0	3
Deep Loam	30	23	6	1	0	30
Loamy Slopes	2	2	0	0	0	2
Loamy Slopes/Loamy Slopes/Clayey Foothills	43	32	9	2	0	43
Mountain Loam	26	19	5	2	0	26
None (Rock outcrop, steep slopes, etc.)	188	n/a	n/a	n/a	n/a	n/a
Pinyon-Juniper woodlands	21	n/a	n/a	n/a	n/a	n/a
PJ woodlands/PJ woodlands	61	n/a	n/a	n/a	n/a	n/a
Stoney Foothills	125	94	25	6	0	125
<b>Total</b>	<b>1430</b>	872	231	58	0	1161

Strawberry Peak:

Strawberry Peak #06615						
Ecological Site Similarity Rating						
Ecological Site	Total BLM Acres	PNC	Late Seral	Mid Seral	Early Seral	BLM Acres Classified
Alkaline Slopes	29	22	6	1	0	29
Brushy Loam/Brushy Loam	184	138	37	9	0	184
Clayey Foothills	228	171	46	11	0	228
Deep Loam	87	65	17	5	0	87
Foothill Swale	25	19	5	1	0	25
Loamy Slopes/Loamy Slopes/Clayey Foothills	178	133	36	9	0	178
None (Rock outcrop, steep slopes, etc.)	31	n/a	n/a	n/a	n/a	n/a
Rolling Loam	22	16	5	1	0	22
<b>Total</b>	<b>783</b>	564	152	37	0	753

Public lands in the Chokecherry allotment (#06609) and Strawberry Peak allotment (# 06615) are characterized generally by steep slopes with shallow soils of brushy loam/loamy slopes ecological sites. As in South Fork Price Creek these sites are dominated by thick cover of Gambel oak, serviceberry and snowberry. Strawberry Peak has approximately 228 acres of clayey foothill ecological sites with vigorous native plant communities. Approximately 301 acres of pinyon/juniper woodland, rock outcrops, and steep slopes in these two allotments do not fall into classifiable seral stages. Livestock use and forage is limited in these areas resulting in acceptable land health standard status. Within these two allotments all classifiable ecological sites have plant communities within acceptable, desired thresholds (mid to PNC) as defined in the White River ROD/RMP. Vegetation production and composition of native species on public

lands in these allotments provide adequate cover for soil protection and forage to meet livestock demands. These sites are not presently at risk of degradation and are at low risk of invasion by non-native species. Terrain limits livestock accessibility on these public lands and most livestock grazing use on these allotments occurs on private lands.

Upper Smith Gulch:

Upper Smith Gulch #06613						
Ecological Site Similarity Rating						
Ecological Site	Total BLM Acres	PNC	Late Seral	Mid Seral	Early Seral	BLM Acres Classified
Alkaline Slopes	44	4	6	11	23	44
Brushy Loam/Brushy Loam	1283	1192	51	26	14	1283
Clayey Foothills	72	54	14	12	0	80
Deep Loam	123	76	31	16	0	123
Foothills Swale	316	26	46	118	126	316
Loamy Slopes	411	308	82	19	2	411
Loamy Slopes/Loamy Slopes/Clayey Foothills	583	427	105	35	16	583
None (Rock outcrop, steep slopes, etc.)	73	n/a	n/a	n/a	n/a	n/a
Pinyon-Juniper woodland	1754	n/a	n/a	n/a	n/a	n/a
PJ woodland/Rolling Loam	201	151	40	9	1	201
PJ Woodlands/Clayey Slopes	1944	1458	389	93	4	1944
Rolling Loam	361	133	130	65	33	361
Stoney Foothills	1644	1233	329	61	21	1644
<b>Total</b>	<b>8809</b>	5062	1223	465	240	6990

As shown for the Upper Smith Gulch allotment (#06613), 96% of the classifiable ecological sites on the allotment represent plant communities within the acceptable thresholds for healthy communities and within acceptable limits of a desired plant community as defined in the White River ROD/RMP. Vegetation production and species composition on these sites provide adequate cover for soil protection and sufficient forage production to meet forage demands and provide for sustainability. Approximately 25% of the allotment acreage is pinyon-juniper woodlands; this acreage is unclassifiable by seral stage. The mid and late seral sites are primarily on clayey slopes with Wyoming sage and native perennial grasses. Lack of fire and influence from livestock grazing is resulting in a shift in the natural plant communities. Long-term trend photos taken in the clayey slopes ecological sites show a substantial amount of pinyon/juniper encroachment into the grass and sagebrush dominated communities. Currently these communities have adequate production and cover of native species and are not at risk of degradation or invasion of non-native plant species. Over time the pinyon/juniper community will continue to invade the sagebrush communities and degrade these sites as the natural plant community progression occurs.

The early seral areas primarily occur in Smith Gulch proper, Windy Gulch and Jordan Gulch on foothill swale ecological sites and are primarily classified as such due to a high percentage of the alien cheatgrass (*Bromus tectorum*) in the plant composition and a dense over-story of large, old, decadent big sage (*Artemisia tridentata*). These sites were originally degraded from excessive use during the first third of the 20<sup>th</sup> century. Though these early seral sites may have desirable

perennial species in their composition, they do not meet the Colorado Public Land Health Standards for species diversity, soil protection or forage production; however, without intensive management in-put or disturbance followed by re-seeding to establish desirable forage species their condition would not significantly change with or without livestock grazing.

Cave Gulch:

<b>Cave Gulch #06617</b>						
<b>Ecological Site Similarity Rating</b>						
Ecological Site	Total BLM Acres	PNC	Late Seral	Mid Seral	Early Seral	BLM Acres Classified
Brushy Loam	588	474	58	36	20	588
Brushy Loam/Brushy Loam	745	609	67	45	24	745
Brushy Loam/Aspen Woodland/Aspen Woodland	44	33	9	2	0	44
Clayey Foothills	11	8	2	1	0	11
Deep Loam	12	0	0	1	11	12
Dry Exposure	11	9	3	0	0	12
Loamy Slopes/Loamy Slopes/Clayey Foothills	184	114	37	22	11	184
None (Rock outcrop, steep slopes, etc.)	15	n/a	n/a	n/a	n/a	n/a
Pinyon-Juniper woodland	64	n/a	n/a	n/a	n/a	n/a
PJ Woodlands/Clayey Slopes	51	38	10	3	0	51
Rolling Loam	2	2	0	0	0	2
<b>Total</b>	<b>1728</b>	1260	179	108	66	1649

Cabin Gulch:

<b>Cabin Gulch #06618</b>						
<b>Ecological Site Similarity Rating</b>						
Ecological Site	Total BLM Acres	PNC	Late Seral	Mid Seral	Early Seral	BLM Acres Classified
Brushy Loam	63	47	12	3	1	63
Brushy Loam/Brushy Loam	362	272	72	18	0	362
Brushy Loam/Aspen Woodland/Aspen Woodland	1	1	0	0	0	1
Deep Loam	28	21	6	1	0	28
Dry Exposure	1	1	0	0	0	1
Foothill Swale	1	0	0	0	1	1
Loamy Slopes/Loamy Slopes/Clayey Foothills	234	175	31	19	9	234
None (Rock outcrop, steep slopes, etc.)	81	n/a	n/a	n/a	n/a	n/a
Pinyon-Juniper woodland	260	n/a	n/a	n/a	n/a	n/a
PJ Woodlands/Clayey Slopes	2	2	0	0	0	2
Rolling Loam	7	0	1	3	3	7
<b>Total</b>	<b>1038</b>	519	122	44	14	699

Both Cave Gulch (#06617) and Cabin Gulch (#06618) are characterized by steep slopes of primarily brushy loam ecological sites subject to slumping. As shown within the Cave Gulch and Cabin Gulch allotments 95% of the classifiable ecological sites represent plant communities within acceptable thresholds for healthy communities and within acceptable levels of desired plant communities (mid to PNC) as defined in the White River ROD/RMP. Vegetation production and species composition on these sites provide adequate cover for soil protection and vegetative production to meet resource needs and forage demands. Currently these communities have adequate production and cover of native species and are not at risk of degradation and are at low risk of invasion by non-native plant species. Approximately 420 acres (15%) of the allotments acreages are pinyon/juniper woodlands, rock outcrop, or steep slopes; this acreage is unclassifiable by seral stage. Early seral sites are primarily in the bottoms where livestock use tends to be high or areas associated with large scale soil movement (land slides) that occurred in the mid 1980's. The sites where soil movement has occurred still lack adequate vegetative cover and composition of desirable species to stabilize and protect the soil surface from excessive erosion. Early seral sites in the valley bottoms are primarily a result of excessive grazing pressure resulting in an undesirable composition of invasive annual grasses such as cheatgrass and an over abundance of more grazing tolerant less productive species such as Kentucky bluegrass (*Poa pratensis*). Due to this plant community composition and the presence of several noxious species including houndstongue, Scotch thistle, musk thistle, Canada thistle, bull thistle as well as the large infestation of spotted knapweed in Cabin Gulch, these sites do not meet the Colorado Public Land Health Standards for species diversity, soil protection or forage production. Over time, with appropriate stocking rates, most of the early seral sites would be expected to have establishment of desirable plant communities and progress out of the early seral stage; however meanwhile they are vulnerable to invasion by non-native and noxious plant species.

*Environmental Consequences of the Proposed Action:* Under the proposed grazing schedule, with all allotments combined, livestock use during the critical growing season (various dates between 04/05-07/15 for six allotments being considered) would be reduced by 58% compared to the 1998 AMP grazing schedule of the Current Management alternative. Permitted AUMs on public land would be reduced by 17% overall and duration of the grazing season would be reduced in all allotments except Strawberry Peak, which would remain unchanged. It should be noted that the critical growing season varies somewhat year to year dependent upon climatic conditions.

Grazing use under the proposed action would continue to incorporate the minimum rest requirement outlined in the White River ROD/RMP. Livestock grazing in South Fork Price Creek would be deferred until July 1st and in Chokecherry until July 15th every other year. Use would be deferred until July 15th in Upper Smith Gulch every 4<sup>th</sup> year, and in Cave Gulch and Cabin Gulch two out of every three years. Use would occur outside the critical growing period every year in each of the allotments, but at a reduced level in all allotments except Strawberry Peak, which will have an overall increase of 17% based on forage production calculations. All grazing will be within calculated rangeland carrying capacity in order to meet Public Land Health Standards. Applying the rest requirements will allow plant communities greater opportunity to complete full growth cycles and resist invasion by undesirable plant species.

The proposed action will promote grazing at sustainable levels through reduced total AUM use (reduced grazing intensity), reduced grazing season duration, reduced use during the critical growing season, and application of required rest periods as outlined in the proposed action.

Vegetation would have greater opportunity for seed production, replenishment of root reserves, biomass accumulation, and plant propagation. This would lead to improved water holding capability of soils (increased surface litter) and enhance seedling survival necessary to maintain a healthy, reproducing plant community.

The proposed grazing system would have a neutral to slightly positive impact on PNC and late seral ecological sites on all allotments, as they are already meeting or exceeding the standards for public land health. The greatest benefit of increased perennial cover and litter accumulation would occur on the mid seral sites because they have not crossed a threshold and have an opportunity for improvement. In mid to late seral sagebrush communities where Pinyon/Juniper encroachment is occurring (primarily in Upper Smith Gulch) there will not be significant improvement without some form of influencing action such as fire. Early seral sites that have crossed a threshold to cheatgrass domination and areas with decadent sagebrush stands lacking adequate herbaceous understory would probably continue at their current state unless some influencing agent such as fire occurred.

*Environmental Consequences of the Continuation of Current Management Alternative:* Management under the 1998 AMP will continue to allow all allotments a growing season rest as scheduled in the White Rive ROD/RMP but at higher total AUMs authorized for longer grazing seasons (except Strawberry Peak) and with more critical growing season use than under the proposed action. Compared to the proposed action total AUM use currently permitted in the South Fork Price Creek allotment is more than two times greater. AUMs currently permitted in each South Fork Price Creek, Cave Gulch, and Cabin Gulch exceeds the calculated rangeland carrying capacity. In Upper Smith Gulch permitted season long use combined with inadequate distribution are primary detrimental factors contributing to rangelands producing below potential. Season long use does not allow plants to complete a full life cycle without being grazed repeatedly, particularly in areas near water sources and favored foraging areas.

Under a continuation of current management, degradation of rangeland resources is likely in four of the six allotments. Plant reproductive capabilities, seed production, and desirable ground cover and litter accumulation will likely be far less than desired for maintenance and recovery of public land health. There would be greater opportunity for cheatgrass and other undesirable plants to establish and spread. Season, timing, and intensity of use are not conducive for meeting public land health standards. Mid and early seral sites would continue to receive the greatest impact under this situation and likely continue to degrade.

Overall, negative impacts would result with regard to achieving public land health standards if the 1998 AMP or current grazing permit were re-issued. Impacts would likely include a downward trend in species composition, diversity, desired plant cover, and/or reduced production for many of the ecological sites, which would occur mostly within mid seral sites and to a lesser degree within the late seral communities. The PNC communities would most likely continue to meet public land health standards and the early seral communities would not.

*Environmental Consequences of the No Grazing Alternative:* Under a no grazing by livestock alternative, most areas currently being grazed by livestock would experience a short-term increase in both perennial plant cover and soil surface litter accumulation. Mid seral ecological sites would likely experience the greatest benefit of increased perennial plant cover. On early seral ecological sites (primarily monocultures of sagebrush or rangelands dominated by cheatgrass) that have crossed a threshold notable change in perennial plant cover would not be

expected. PNC ecological sites would continue to meet standards and experience minimal changes in plant species composition and diversity.

*Mitigation:* Continue long term trend monitoring, rangeland health evaluations and make necessary adjustments to livestock management practices to meet resource objectives.

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Most areas not meeting the Standards are the early seral communities. This is primarily due to considerable composition of the annual invasive cheatgrass and to old decadent stands of sage brush in some sagebrush plant communities with limited herbaceous composition in the understory. Most other seral communities (Mid – PNC) are currently meeting Standards and make up the bulk of acres in the allotments. Except in the early seral plant communities that have crossed a threshold, implementation of the proposed action will enhance the ability of the rangelands to meet the Standards in the future.

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

*Affected Environment:* South Fork Price Creek and Cave Gulch are the only two allotments which contain aquatic systems on public lands. Proper Functioning Condition (PFC) was assessed on both systems in 2005. South Fork Price Creek received a low PFC rating, with higher potential possibility, while the Cave Gulch system received a non-functional rating along the upper 0.7 mile and a functional-at-risk along the lower 0.6 mile. Currently, these systems support a simple invertebrate-based aquatic community. Higher order vertebrate forms or riparian obligates are not associated with either of these systems.

*Environmental Consequences of the Proposed Action:* Although reductions in critical growing season use, stocking rates and grazing seasons will likely improve conditions of the riparian systems within the South Fork Price Creek and Cave Gulch allotments, the condition of aquatic habitats available within these allotments would not be subject to substantive change under the proposed action. Capabilities of the aquatic systems are limited by the characteristics of the site (e.g., low flows, isolated system) and neither system has the potential to support anything higher than a simple invertebrate-based community.

*Environmental Consequences of the Continuation of Current Management Alternative:* Same as the Proposed Action.

*Environmental Consequences of the No Action Alternative:* While reductions in growing season use, stocking rates and grazing seasons will likely improve vegetation conditions, this alternative would have no potential to alter aquatic wildlife within the allotment.

*Mitigation:* None, refer to “Wetland and Riparian Zones” section.

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also Vegetation and Wildlife, Terrestrial): The aquatic systems within the South Fork Price Creek and Cave Gulch allotments currently meet and, under the proposed action, will continue to meet the Public Land Health standards for aquatic wildlife communities.

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

*Affected Environment:* The permit area spans ranges used year-round by big game. The majority of all six allotments is categorized by Colorado Division of Wildlife as general winter range for mule deer and elk and is typically occupied from December through April. The mountain shrub community along the northern slope of the South Fork Price Creek allotment is considered mule deer summer range and is occupied from May through September. The mountain shrub within the northern half of the Cave and Cabin Gulch allotments is categorized as summer range for both elk and mule deer and is generally occupied from May through September. During allotment inspections in October 2005, BLM biologists observed no obvious instances of prolonged animal concentration or forage conditions that indicated excessive levels of seasonal use.

Breeding raptor use of project area is represented largely by red-tailed hawk and accipitrine species. Mature pinyon-juniper woodlands throughout the project area may support a small number of breeding sharp-shinned hawk, Cooper's hawk and long-eared owl. The abundance and variety of raptor use in the project area remains high during the winter, with opportunistic foraging by golden and bald eagle, rough-legged and red-tailed hawk, and prairie falcon.

Small mammal populations are poorly documented, however, the 14 or so species that are likely to occur in this area display broad ecological tolerance and are widely distributed throughout the Great Basin and/or Rocky Mountain regions. No narrowly distributed or highly specialized species or subspecific populations are known this allotment.

*Environmental Consequences of the Proposed Action:* Reductions (average 43%) in growing season use on the allotments' lower elevation shrub and grasslands would promote the development of higher quality and density of perennial grasses and forbs that would be available as big game forage in spring, fall and winter. It is likely that there would be no measurable affect on the extent or quality of woody forage available for big game during the winter months.

Reductions in growing season use should elicit favorable responses in the vigor, density, and composition of herbaceous ground cover and may enhance the variety and abundance of small mammal populations in the 244 acres of early-seral bottomland sites within the Upper Smith Gulch allotment.

*Environmental Consequences of the Continuation of Current Management Alternative:* Based on ground cover conditions, the timing and intensity of livestock use in conjunction with ongoing big game use currently have no adverse influence on the composition, vigor, or regeneration of herbaceous vegetation. Current livestock use has no apparent influence on the availability or production of woody forage for big game winter use. Selection and availability are not at issue since these ranges are largely used and vacated by big game prior to cattle entering the pastures.

*Environmental Consequences of the No Action Alternative:* Removal of livestock would likely result in minor increases in herbaceous ground cover over the permit area's ~4600 acres of woodlands and ~5700 acres of mountain shrub types. Rugged terrain and dense vegetation currently impedes use by livestock. It is expected that perennial grass and forb cover would increase substantially, particularly in the bottomlands of Upper Smith Gulch.

Small mammal populations would be expected to respond to increasing cover and forage bases with minor increases in pinyon-juniper communities and steep mountain shrub slopes.

*Mitigation:* None

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also Vegetation and Wildlife, Aquatic): BLM-administered woodlands and shrublands encompassed by this allotment generally meet the land health standard for animal communities. The proposed action would expand the extent and distribution of habitats that more fully satisfy the land health standard. Strong reductions in growing season use would promote substantive enhancement in the vigor, density, and composition of herbaceous ground cover particularly in the bottomlands. It is expected that the no-action alternative would dramatically increase the perennial grass and forb cover within the allotments bottomlands.

Without intensive intervention, neither the no-action or proposed action alternatives would, in and of themselves, substantially reduce the extent of ranges not meeting the standard - approximately 200 acres of cheatgrass dominated understory (2% of winter range extent) in Upper Smith Gulch allotment. While this provides an abundant but short duration forage source in spring, these inclusions do not substantially impair winter forage conditions.

**OTHER NON-CRITICAL ELEMENTS:** For the following elements, only those brought forward for analysis will be addressed further.

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

## FOREST MANAGEMENT

*Affected Environment:* The following table lists the woodland community on allotments associated with the proposed action.

Allotment	Pinyon Juniper Acres	Percent of the allotment
South Fork Price Creek	735	59%
Chokecherry	207	14%
Strawberry	0	0%
Upper Smith Gulch	5543	63%
Cave Gulch	115	7%
Cabin Gulch	262	25%
<b>Total</b>	<b>6862</b>	

Within the current land use plan all of the pinyon/juniper woodlands in the Danforth/Jensen and Crooked Wash/Deep Channel Geographic Reference Areas (GRA) are classified as non-commercial based on productivity and harvest suitability. These woodlands are not considered in the decadal harvest for the WRFO, and will not be managed for commercial firewood production. Woodlands in this GRA are available for harvest by private individuals. The majority of harvesting is for fuel wood and fence posts. These woodlands are available for manipulation to enhance other resource values.

The Upper Smith Gulch allotment also contains isolated Douglas-fir stands on steep, north and west facing slopes. No inventory has been conducted to determine the acres of these stands but a rough estimate would place the acreage at less than 10 (acres). These stands generally contain large old trees (<200 years). The isolated nature of the stands prevents any opportunities for stand improvement or harvest.

Cave Gulch and Cabin Gulch allotments both contain aspen stands estimated at 44 acres and 1 acre respectively. Aspen forests are classified as non-commercial based on their limited range and importance to plant community diversity. Limited harvest of firewood and transplants is allowed. Overall aspen communities are decreasing in range in Colorado. The current land use plan identifies aspen as being available for treatment to maintain and enhance these stands and achieve the desired plant community. Any aspen treatments would be analyzed in activity plans. The aspen stands in the Cave Gulch and Cabin Gulch allotments are mature stands with limited reproduction. Grazing by livestock and wildlife has been shown to decrease or eliminate reproduction. At such time as these stands start to die out, there is expected to be a need to restore the individual stands. This would require treatment of the individual stands followed by fencing to prevent grazing by livestock and wildlife. Fencing would be required until saplings are large enough to survive browsing which is estimated at five years.

*Environmental Consequences of the Proposed Action:* Livestock grazing in general has not been shown to adversely impact existing pinyon/juniper woodlands. Livestock grazing may play some role in increasing invasion of pinyon/juniper woodlands on sagebrush sites by decreasing the competitive nature of native plant communities. Grazing also decreases fine fuel loading decreasing the intensity and frequency of fires which would kill seedling and sapling trees. Under this alternative there would be an increase in the cover and composition of desired forage species which would compete with pinyon/juniper seedlings, decreasing the rate of invasion of sagebrush sites. There would be an increase in the litter and fine fuels increasing the frequency of fires which would limit the encroachment of pinyon/juniper woodlands into sagebrush types.

Douglas-fir stands would not be affected by grazing because of their isolated nature.

The proposed grazing program is expected to decrease grazing use within some of the aspen stands. This may allow for limited sprouting of aspen. The impacts of elk on saplings can not be managed for and may prevent reproduction in these stands. In the event that treatments are required to restore aspen communities, an activity plan and environmental assessment would be prepared. Stands would be inventoried and prioritized for treatment. Treatment is not expected to involve more than 20 acres of aspen at any one time. Treatment of aspen is also expected to allow for development of more productive grass/forb communities under the aspen and increase the competition against noxious weed invasion.

*Environmental Consequences of the Continuation of Current Management Alternative:* Invasion of pinyon/juniper into sagebrush associations would continue at the current rate. The lack of fire in sagebrush types would allow pinyon/juniper woodlands to dominate these sites over extended periods of time.

Douglas-fir stands would not be affected by grazing because of their isolated nature.

Livestock grazing impacts combined with elk use would continue to limit reproduction within aspen stands. There remains the opportunity to treat aspen stands as described above, although elk use of fenced areas is expected to be greater because of improved forage quantity and quality of the fenced areas. Aspen reproduction within the fenced areas would be less successful than the preferred management alternative

*Environmental Consequences of the No Grazing Alternative:* There would be a rapid increase in fine fuel loadings in the sagebrush types. Fire frequencies would go up significantly with sagebrush communities burning regularly. These fires are expected to carry into the pinyon/juniper associations creating stand-replacing fires. Over the long term pinyon/juniper woodlands would be relegated to those areas that are fire resistant such as bluffs and areas containing rim-rock. The distribution of pinyon/juniper would be the same as before European influence.

Large scale stand replacing fires in the pinyon/juniper type are expected to carry into the heads of the draws and also remove the Douglas-fir stands.

Reproduction within aspen stands is expected to increase significantly. The need for fencing of aspen stands would not be required.

*Mitigation:* None

## HYDROLOGY AND WATER RIGHTS

*Affected Environment:* The majority of the resource area was inventoried in the early 1980's for springs. The following table lists springs which were identified in the WRFO Water Atlas for the assessment area.

BLM Spring	Legal	Water Rights Filling	SC	pH	Q (gpm)	Development/ Project number	Date Measured
124.05	T3N, R94W, Sec. 19 NESE	AR72	371	7.9	0.045	Pond-4325	9/20/1984

BLM Spring	Legal	Water Rights Filling	SC	pH	Q (gpm)	Development/ Project number	Date Measured
124.07	T3N, R94W, Sec. 20 NESW	82CW265	3400	6.6	2.73	Trough/Pond-0202	7/10/1981
124.08	T3N, R94W, Sec. 29 NWNE	none	2714	7.8	< 0.1	Pond-4325	7/11/1981
124.11	T3N, R94W, Sec. 31 NWNE	82CW265	2904	6	20	Pond-0900	8/26/1981

All of the springs listed above are situated within the Cave Gulch drainage of the Strawberry Creek water shed. Spring 124.08 was identified as a perennial spring in 1981 but with its low flow rate it is reasonable to assume that this spring is indeed seasonal. Typically water rights are not granted on springs that do not maintain a perennial flow.

All of these springs have been developed in the past and have supported small riparian communities. Allowing rest and alternating pastures would be helpful in maintaining the obligate vegetation types that are necessary to anchor stream banks and reduce sediment production. Furthermore, maintenance of existing developments and use of these water rights will enable the BLM to retain its water right for continued multiple use management.

*Environmental Consequences of the Proposed Action:* Livestock tend to congregate near perennial water sources resulting in significant reductions in vegetal cover and increased ground disturbance due to hoof action. Reduced ground cover in these areas leave soils vulnerable to erosion increasing sediment loads down gradient. However, with reduced AUMs and decreased livestock grazing during critical growing seasons, the health and functionality of spring sources and associated riparian/wetland communities will improve with implementation of the proposed grazing plan.

*Environmental Consequences of the Continuation of Current Management Alternative:* Potential adverse environmental impacts associated with the current grazing management plan mirror those of the proposed grazing plan. However, higher livestock numbers associated with current management will increase the potential and severity of impacts from grazing.

*Environmental Consequences of the No Action Alternative:* The State of Colorado requires holders of state water to use those water rights in order to retain them. A beneficial use identified by the BLM for retention of these water rights is livestock grazing. The no-grazing alternative would not provide the beneficial use needed for the state to ensure the BLM is adhering to their “use it or lose it” doctrine.

*Mitigation:* Spring developments must be maintained and all non-functional items (e.g. old water troughs, pipes, fence, etc...) must be removed and properly disposed of by the permit holder. Spring monitoring must continue to evaluate the functionality of developments and assess water quality at spring sources. The BLM will obtain water rights on spring 124-08 if it proves to be a productive site.

## RANGELAND MANAGEMENT

*Affected Environment:* Buffalo Horn Ranch (0501417) is the authorized grazing permittee on the South Fork Price Creek allotment (06608), Chokecherry allotment (06609), Upper Smith Gulch allotment (06613), Strawberry Peak allotment (06615), Cave Gulch allotment (06617) and Cabin Gulch allotment (06618) and holds preference to the existing grazing permit. Each allotment is currently being used as an individual unit. The first table below (Summary of Proposed AUMs...) summarizes the livestock carrying capacity for the individual allotments by land status (BLM and Private). The following tables show the livestock carrying capacity in Animal Unit Months (AUMs) broken down by BLM acres of the soil unit polygons present for each of these allotments individually.

<b>Summary of Proposed AUMs for all allotments of Buffalo Horn Ranch</b>							
<b>Livestock Grazing Capacity</b>							
<b>Allotment</b>	<b>BLM AUMs</b>	<b>Pvt AUMs</b>	<b>Total AUMs: (BLM &amp; Pvt)</b>	<b>% PL</b>	<b>BLM Acres</b>	<b>Pvt Acres</b>	<b>Total Acres</b>
South Fork Price Creek	315	493	808	39%	1605	3069	<b>4674</b>
Chokecherry	110	500	610	18%	1431	4825	<b>6256</b>
Upper Smith Gulch	698	245	943	74%	8808	2738	<b>11546</b>
Strawberry Peak	61	182	243	25%	783	2251	<b>3034</b>
Cave Gulch	279	84	363	77%	1728	790	<b>2518</b>
Cabin Gulch	165	368	533	31%	1038	2295	<b>3333</b>
<b>Totals:</b>	<b>1628</b>	<b>2,380</b>	<b>3501</b>	<b>44%</b>	<b>15393</b>	<b>15968</b>	<b>31361</b>

<b>South Fork Price Creek Allotment (06608)</b>				
<b>Livestock Grazing Capacity</b>				
<b>Soil Unit Name</b>	<b>Ecological Site</b>	<b>BLM Acres</b>	<b>Acres/AUM</b>	<b>BLM AUMs</b>
Bulkley-Quilt complex,12-45%slopes	Deep Clay Loam/Mountain Loam	13	3	5
Danavore-Waybe Complex,5-30%slopes	Dry Exposure/Dry Exposure	30	13	2
Hesperus fine sandy loam,Dry,2-15%slopes	Mountain Loam	26	3	8
Moyerson-Rentsac Complex,15-45%slopes	Clayey Slopes/PJ woodlands	37	8	4
Rentsac-Moyerson-Complex,25-65%slope	PJ woodlands/PJ woodlands	258	25	10
Rhone-Jerry complex,25-65%slopes	Brushy Loam/Brushy Loam	33	3	10
Rhone-Jerry complex,3-25%slopes	Brushy Loam/Brushy Loam	13	3	4
Rock Outcrop-Torriorthents Complex, Very Steep	None	97	0	0
Skyway fine sandy loam,Dry,15-75%slopes	Brushy Loam	622	3	180
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	477	4	114
<b>Total</b>		<b>1605</b>		<b>337</b>
<b>Average Acres/AUM</b>			<b>5</b>	

<b>Chokecherry Allotment (06609)</b>				
<b>Livestock Grazing Capacity</b>				
<b>Soil Unit Name</b>	<b>Ecological site</b>	<b>BLM Acres</b>	<b>Acres/AUM</b>	<b>BLM AUMs</b>
Badland	None	1	0	0
Battlement Fine Sandy Loam, 0-3% slope	Foothill Swale	0	5	0
Bulkley-Quilt complex,12-45%slopes	Deep Clay Loam/Mountain Loam	3	5	1
Gullied land	None	4	0	0
Hesperus fine sandy loam,Dry,2-15%slopes	Mountain Loam	26	7	4
Jerry-Thornburgh-Rhone complex,8-65%slopes	Brushy Loam/Brushy Loam	579	7	87
Mergel-Redthayne-Dollard complex,8-65%slopes	Loamy Slopes/Clayey Foothills	43	13	3
Patent loam,3-8%slopes	Rolling Loam	0	25	0
Rentsac-Moyerson-Complex,25-65%slope	PJ woodlands/PJ woodlands	61	35	2
Rentsac-Moyerson-RockOutcrop,complex,5-65%slps	PJ Woodlands/Clayey Slopes	0	30	0

<b>Chokecherry Allotment (06609)</b>				
<b>Livestock Grazing Capacity</b>				
<b>Soil Unit Name</b>	<b>Ecological site</b>	<b>BLM Acres</b>	<b>Acres/AUM</b>	<b>BLM AUMs</b>
Rhone Fine Sandy Laom,3-25 %slopes	Pinyon-Juniper woodlands	21	35	1
Rhone-Jerry complex,25-65%slopes	Brushy Loam/Brushy Loam	353	7	53
Rhone-Jerry complex,3-25%slopes	Brushy Loam/Brushy Loam	1	7	0
Rock Outcrop-Torriorthents Complex, Very Steep	None	11	0	0
Torriorthents-Rock Outcrop, Sandstone Complex, VS	Stoney Foothills	125	8	15
Ustorthents, Frigid-Borolls Complex, steep	None	172	0	0
Veatch channery loam,12-50%slopes	Loamy Slopes	2	11	0
Weed sandy loam,1-12%slopes	Deep Loam	0	7	0
Zoltay clay loam, 3-8%slope	Deep Loam	4	7	1
Zoltay clay loam, 8-15%slope	Deep Loam	26	7	4
<b>Total</b>		<b>1431</b>		<b>170</b>
<b>Average Acres/AUM</b>			<b>8</b>	

<b>Upper Smith Gulch Allotment (06613)</b>				
<b>Livestock Grazing Capacity</b>				
<b>Soil Unit Name</b>	<b>Ecological Site</b>	<b>BLM Acres</b>	<b>Acres/AUM</b>	<b>BLM AUMs</b>
Abor Clay Loam,5-30%slopes	Clayey Foothills	72	13	6
Blazon, moist-Rentsac Complex,6-65%slopes	Pinyon-Juniper woodland	442	25	18
Forelle loam, 3-8%slopes	Rolling Loam	57	8	7
Forelle loam, 8-15%slopes	Rolling Loam	218	8	27
Glendive fine sandy loam	Foothills Swale	294	6	49
Havre loam,0-4%slopes	Foothill Swale	22	6	4
Jerry-Thornburgh-Rhone complex,8-65%slopes	Brushy Loam/Brushy Loam	1283	5	257
Mergel-Redthayne-Dollard complex,8-65%slopes	Loamy Slopes/Clayey Foothills	583	6	93
Patent loam,3-8%slopes	Rolling Loam	71	20	4
Patent loam,8-15%slopes	Rolling Loam	15	25	1
Rabbitex flaggy loam,10-65%slopes	Pinyon-Juniper woodland	1250	25	50
Rentsac channery loam,5-50%slopes	Pinyon Juniper woodlands	62	35	2
Rentsac-Moyerson-RockOutcrop,complex,5-65%slps	PJ Woodlands/Clayey Slopes	1944	30	65
Rentsac-Piceance complex,2-30%slopes	PJ woodland/Rolling Loam	201	25	8
Tisworth fine sandy loam,0-5%slopes	Alkaline Slopes	44	20	2
Torrifluvents, gullied	None	73	0	0
Torriorthents-Rock Outcrop, complex,15-90%slopes	Stoney Foothills	1644	10	164
Veatch channery loam,12-50%slopes	Loamy Slopes	411	9	46
Work Loam, 8-15%slope	Deep Loam	123	6	21
<b>Total</b>		<b>8808</b>		<b>822</b>
<b>Average AUMs/Acre</b>			<b>11</b>	

<b>Strawberry Peak Allotment (06615)</b>				
<b>Livestock Grazing Capacity</b>				
<b>Soil Unit Name</b>	<b>Ecological Site</b>	<b>BLM Acres</b>	<b>Acres/AUM</b>	<b>BLM AUMs</b>
Abor Clay Loam,5-30%slopes	Clayey Foothills	228	13	18
Absher loam,3-8%slopes	Alkaline Slopes	29	20	1
Havre loam,0-4%slopes	Foothill Swale	25	5	5
Jerry-Thornburgh-Rhone complex,8-65%slps	Brushy Loam/Brushy Loam	184	7	28
Mergel-Redthayne-Dollard complex,8-65%slps	Loamy Slopes/Clayey Foothills	178	13	14
Patent loam,3-8%slopes	Rolling Loam	22	25	1

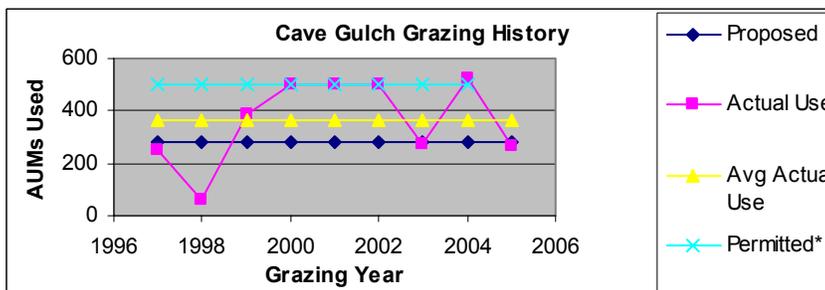
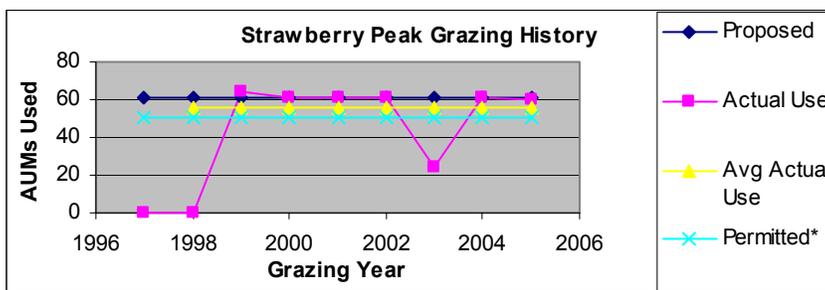
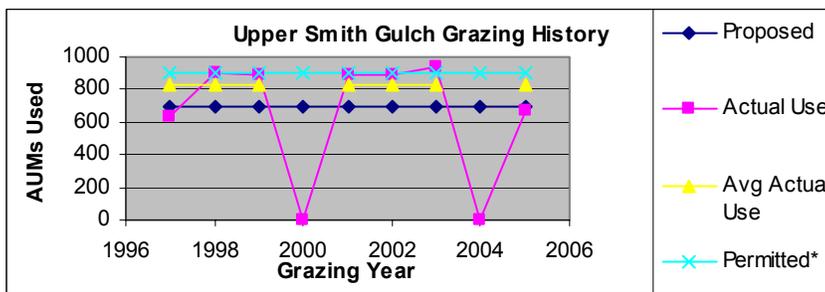
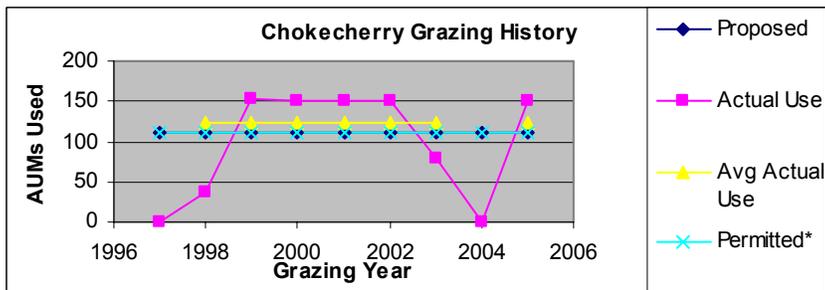
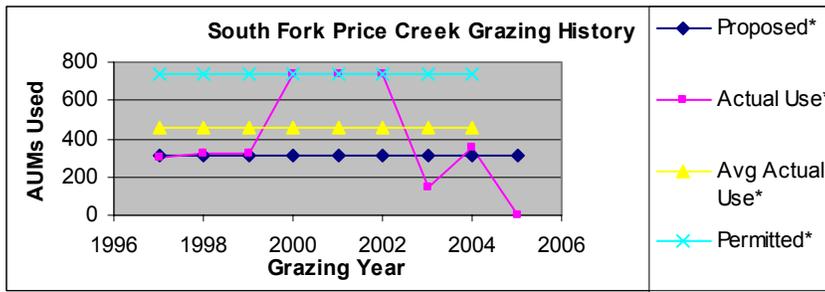
<b>Strawberry Peak Allotment (06615)</b>				
<b>Livestock Grazing Capacity</b>				
<b>Soil Unit Name</b>	<b>Ecological Site</b>	<b>BLM Acres</b>	<b>Acres/AUM</b>	<b>BLM AUMs</b>
Rock Outcrop	None	30	0	0
Water	None	0	0	0
Zoltay clay loam, 3-8% slope	Deep Loam	87	7	13
<b>Total</b>		<b>783</b>		<b>80</b>
<b>Average Acres/AUM</b>			<b>10</b>	

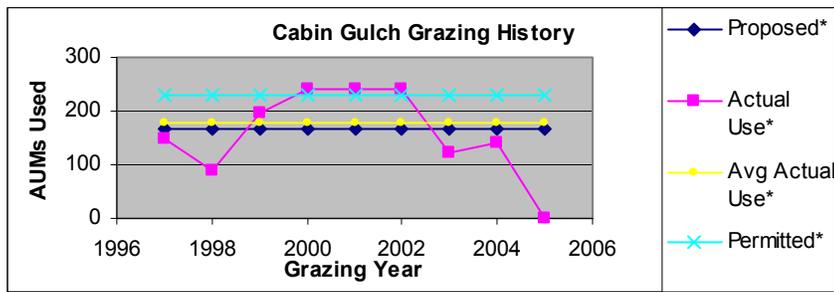
<b>Cave Gulch Allotment (06617)</b>				
<b>Livestock Grazing Capacity</b>				
<b>Soil Unit Name</b>	<b>Ecological Site</b>	<b>BLM Acres</b>	<b>Acres/AUM</b>	<b>BLM AUMs</b>
Abor Clay Loam,5-30%slopes	Clayey Foothills	11	7	2
Blazon, moist-Rentsac Complex,6-65%slopes	Pinyon-Juniper woodland	64	25	3
Jerry-Thornburgh-Rhone complex,8-65%slopes	Brushy Loam	745	5	149
Mergel-Redthayne-Dollard complex,8-65%slopes	Loamy Slopes	184	6	29
Owen Creek-Jerry-Burnette loams,5-35%slopes	Brushy Loam	588	5	118
Patent loam,3-8%slopes	Rolling Loam	2	6	0
Rentsac-Moyerson-RockOutcrop,complex,5-65%slps	PJ Wood/Clayey Slopes	51	20	3
Rhone-Northwater-Lamphier loams,3-50%	Brushy Loam/Aspen Woodlands	44	35	1
Rock Outcrop	None	15	0	0
Shawa loam,3-8%slopes	Deep Loam	12	3	4
Waybe-Vandamore Variant-RO,complex,5-30%slopes	Dry Exposure	11	13	1
<b>Total</b>		<b>1728</b>		<b>309</b>
<b>Average Acres/AUM</b>			<b>6</b>	

<b>Cabin Gulch Allotment (06618)</b>				
<b>Livestock Grazing Capacity</b>				
<b>Soil Unit Name</b>	<b>Ecological Site</b>	<b>BLM Acres</b>	<b>Acres/AUM</b>	<b>BLM AUMs</b>
Abor Clay Loam,5-30%slopes	Clayey Foothills	0	6	0
Blazon, moist-Rentsac Complex,6-65%slopes	Pinyon-Juniper woodland	260	25	10
Havre loam,0-4%slopes	Foothill Swale	1	3	0
Jerry-Thornburgh-Rhone complex,8-65%slopes	Brushy Loam	362	3	105
Mergel-Redthayne-Dollard complex,8-65%slopes	Loamy Slopes/Clayey Foothills	234	6	37
Owen Creek-Jerry-Burnette loams,5-35%slopes	Brushy Loam	63	3	18
Patent loam,3-8%slopes	Rolling Loam	7	6	1
Rentsac-Moyerson-RockOutcrop,complex,5-65%slps	PJ Woodlands/Clayey Slopes	2	20	0
Rhone-Northwater-Lamphier loams,3-50%	Brushy Loam/Aspen Woodland	1	35	0
Rock Outcrop	None	81	0	0
Shawa loam,3-8%slopes	Deep Loam	28	3	8
Waybe-Vandamore Variant-RO,complex,5-30%slps	Dry Exposure	1	13	0
<b>Total</b>		<b>1038</b>		<b>180</b>
<b>Average Acres/AUM</b>			<b>6</b>	

The tables below reflect actual AUMs used (based on actual use reports), average AUMs used for the period, current active AUMs, and proposed active AUMs for allotments permitted to Buffalo Horn Ranch. In some cases the permitted numbers have been adjusted based on percent public land to allow a clear comparison. In the South Fork Price Creek and Cabin Gulch

allotment tables all numbers have been adjusted for the same reason. The grazing year begins March 1<sup>st</sup> and ends February 28<sup>th</sup>.





*Environmental Consequences of the Proposed Action:* Refer to the Vegetation section of this document for an analysis of rangeland vegetation impacts. The proposed active BLM AUMs of 1628 is 17% lower than the previously permitted 1966 BLM AUMs. The proposed AUMs more accurately reflect rangeland livestock carrying capacity on BLM administered lands. As shown in the Vegetation section, the proposed action is expected to improve rangeland condition through a reduction in total AUMs used (reduced grazing intensity), a shorter grazing season, a reduction in AUMs used during the critical growing season, and rest periods during the growing period as required in the White River ROD/RMP. Forage plant species would have improved opportunity to complete a full life cycle on deferred use years or a partial life cycle on the non-deferred use years on all allotments. Shorter grazing periods help reduce repeated cattle grazing on individual forage plants. The proposed action would give forage plants a greater opportunity for seed production, replenishment of root reserves, biomass accumulation, and plant propagation.

The Buffalo Horn Ranch was instrumental in development of the proposed action so it is anticipated that management of the rangelands by Buffalo Horn Ranch will not be impaired by implementation of the proposed action. Also, implementation of the proposed action will further enhance the ability of the rangelands to meet the various Standards for Public Land Health in the future.

*Environmental Consequences of the Continuation of Current Management Alternative:* Refer to the Vegetation section of this document for an analysis of rangeland vegetation impacts. The current authorized AUM numbers and grazing period allow greater flexibility for use of the allotments throughout the grazing season but with these goes a higher potential for over utilization. Compared to the proposed action, all allotments (except Strawberry Peak), are currently scheduled at higher grazing intensities, with more use during the critical growing season and over longer periods of time. These conditions are not conducive to sustaining viable plant communities able to maintain in functional condition. There is greater potential of reduced ground cover and available forage for livestock in the long-term. There would be considerable potential for downward trend in rangeland health resulting in soil and plant community degradation.

*Environmental Consequences of the No Grazing Alternative:* Under this alternative, Buffalo Horn Ranch would not have the ability to authorize the existing grazing permit (0501417). Forage produced on private lands owned by Buffalo Horn Ranch accounts for approximately 53% of the total forage on the six allotments combined. Generally private lands are not fenced separately from BLM administered lands and it would not be economically feasible to do so. Without the adjoining BLM grazing permits, Buffalo Horn Ranch would not be able to make use of the privately held forage. Lacking use of forage produced on BLM administered lands Buffalo Horn Ranch would not have a viable livestock operation.

*Mitigation:* Continue monitoring utilization, long-term trend, and rangeland health and make necessary adjustments to livestock management practices to meet resource objectives.

**CUMULATIVE IMPACTS SUMMARY:** Cumulative impacts from the proposed action would not exceed those discussed in the White River Resource Area PRMP/FEIS.

**PERSONS / AGENCIES CONSULTED:** A Public Notice of the NEPA action is posted on the White River Field Office Internet website at the Colorado BLM Home Page asking for public input on lease renewals and the assessment of public land health standards within the White River Field Office area. Local notification is published in the Rio Blanco Herald Times newspaper located here in Meeker, Colorado on a monthly basis. Individual letters are sent to the lessees/permittees informing them that their permit is up for renewal and request any information they want included in or taken into consideration during the renewal process.

**INTERDISCIPLINARY REVIEW:**

<b>Name</b>	<b>Title</b>	<b>Area of Responsibility</b>
Nate Dieterich	Hydrologist	Air Quality, Water Quality, Surface and Ground Hydrology and Water Rights
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern, Threatened and Endangered Plant Species
Gabrielle Elliott	Archaeologist	Cultural Resources, Paleontological Resources
Mary Taylor	Rangeland Mgmt Specialist	Invasive, Non-Native Species, Wetlands and Riparian Zones, Soils, Rangeland Management
Lisa Belmonte	Wildlife Biologist	Migratory Birds, Threatened, Endangered and Sensitive Animal Species, Wildlife, Wildlife Terrestrial and Aquatic, Vegetation,
Melissa Kindall	Hazmat Collateral	Wastes, Hazardous or Solid
Chris Ham	Outdoor Recreation Planner	Wilderness, Access and Transportation, Recreation, Visual Resources
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Linda Jones	Realty Specialist	Realty Authorizations
Valerie Dobrich	Natural Resource Specialist	Wild Horses

# **Finding of No Significant Impact/Decision Record (FONSI/DR)**

**CO-110-2005-102-EA**

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE:** The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

**DECISION/RATIONALE:** It is my decision to implement the proposed action; to renew the grazing permit for Buffalo Horn Ranch (0501417) for a period of ten years and to approve the allotment management plan, as described in the proposed action, with the addition of the mitigation listed below.

The grazing rest periods are consistent with the minimum rest periods developed in the White River ROD/RMP and are also consistent with the Livestock Grazing Management Guidelines developed for the Colorado Public Land Standards for Rangeland Health. The proposed action offers the best option for attaining Public Land Health Standards and achieving the vegetation management objectives presented in the White River ROD/RMP.

**MITIGATION MEASURES:** 1. Allow pastures appropriate rest and reduce AUMs during critical growing seasons as outlined in the proposed grazing management plan.

2. The operator is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places
- The mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- A timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

3. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items,

sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the operator must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

4. Managed grazing and aggressive rehabilitation and re-vegetation efforts (including aerial and drill seeding with adapted species) immediately following disturbances such as wildfire events will be applied to limit the spread and establishment of cheatgrass. This same aggressive management will apply to re-vegetation of soil disturbances.

5. The permittee shall be required to collect and properly dispose of any solid wastes generated by the proposed action.

6. Compliance monitoring for vegetation improvement would help identify if additional actions were needed to comply with the *Clean Water Act*. If necessary, additional structures will be utilized to minimize disturbance to stream banks/channel and riparian areas within the allotment boundaries.

7. A minimum stubble height of four inches should be maintained on riparian vegetation. Fencing off portions of these streams is not part of this proposal but it should be an option if future riparian conditions should warrant it. However, the proposed grazing schedule and stocking rates should result in improvement of these riparian systems.

8. Continue long-term trend monitoring in key areas to identify trends and changes in plant community cover and composition affecting soil health.

9. Continue long term trend monitoring, rangeland health evaluations and make necessary adjustments to livestock management practices to meet resource objectives.

10. Spring developments must be maintained and all non-functional items (e.g. old water troughs, pipes, fence, etc...) must be removed and properly disposed of by the permit holder. Spring monitoring must continue to evaluate the functionality of developments and assess water quality at spring sources. The BLM will obtain water rights on spring 124-08 if it proves to be a productive site.

11. Continue monitoring utilization, long-term trend, and rangeland health and make necessary adjustments to livestock management practices to meet resource objectives.

**NAME OF PREPARER:** Mary Taylor

**NAME OF ENVIRONMENTAL COORDINATOR:** Caroline Hollowed

**SIGNATURE OF AUTHORIZED OFFICIAL:**



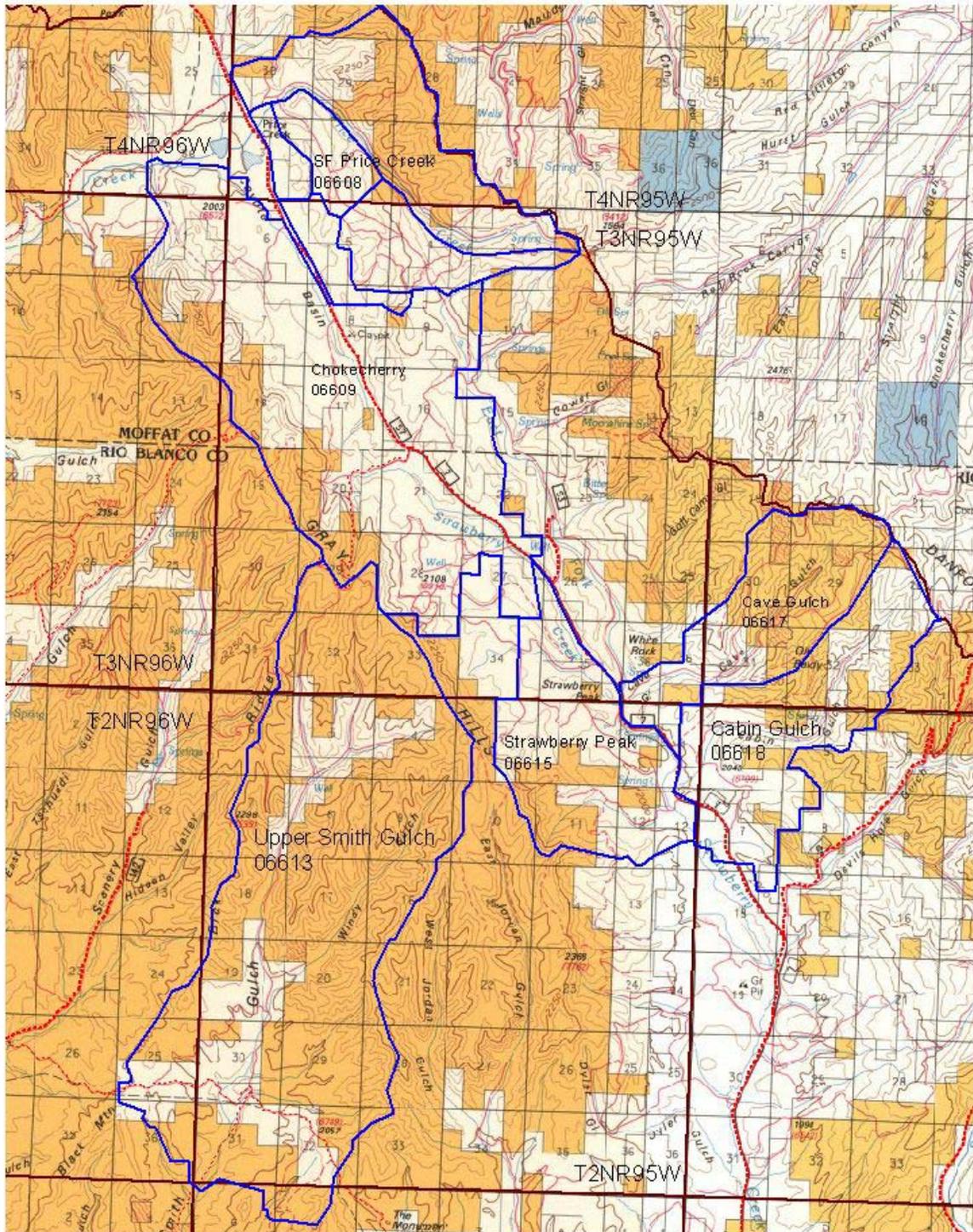
Field Manager

**DATE SIGNED:** 03/17/06

**ATTACHMENTS:** Grazing Allotments on 1:100,000 BLM Surface Ownership  
General Location Map of the Proposed Action

# Buffalo Horn Ranch Grazing Permit Renewal

- Water
- Turnout
- Road
- Highway
- County Road
- Pack Service
- Forest Service
- B.M.



# Location of Proposed Action CO-110-2005-102-EA

