

U.S. Department of the Interior  
 Bureau of Land Management  
 White River Field Office  
 220 E Market St  
 Meeker, CO 81641

## ENVIRONMENTAL ASSESSMENT

**NUMBER:** DOI-BLM-CO-110-2011-0071-EA

**CASEFILE/GRAZING PERMIT NUMBER:** Authorization #0501418, #0501535

**PROJECT NAME:** Grazing Permit Renewal on the Cow Creek (06019), Coal Mine Ind. (06017) and Woodward T (06835) allotments.

**LEGAL DESCRIPTION:**

Legal Description						
Allotment		BLM Acres	Private Acres	Township	Range	Section(s)/Lots or Portions Of
Name	No.					
Cow Creek	6019	8416	4027	4S	95W	1, 12,13,24,25,36, 35
				4S	94W	5-9,16-21,28-33
				5S	94W	4,5,6,7
				5S	95W	1,2
Coal Mine Ind.	6017	203	0	4S	95W	3
Woodward T	6835	960	320	3S	94W	27, 33,34, 35, 36

**APPLICANT:** Aaron Woodward

**PURPOSE & NEED FOR THE ACTION:** The purpose of this action is to facilitate the orderly use of public lands for livestock grazing in accordance with the Taylor Grazing Act of 1934 as amended; the Federal Land Policy and Management Act of 1976 as amended; and the Public Rangelands Improvement Act of 1978. Implementation of the proponent's proposed grazing plan is expected to facilitate acceptable livestock management on the Cow Creek, Coal Mine Ind., and Woodward T allotments.

**Decision to be Made:** The BLM will decide whether to implement the Proposed Action or one of the other alternatives for issuance of a revised grazing permit on the Cow Creek (06019), Coal Mine Ind. (06017) and Woodward T (06835) allotments.

### **SCOPING, PUBLIC INVOLVEMENT, AND ISSUES:**

**Scoping:** Scoping was the primary mechanism used by the BLM to initially identify issues. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on 3/8/2011. External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on 3/11/2011.

**Issues:** No issues were identified during public scoping.

### **DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:**

**Background/Introduction:** Cow Creek, Coal Mine Ind. and Woodward T allotments are all currently used by the same permittee. The livestock grazing permit for the Cow Creek and Coal Mine Ind. allotments expired on February 28, 2012. The permittee had previously made application to renew this permit in 2011. However, due to work load priorities, the permit renewal was not completed and was renewed under the appropriations rider language for a ten year period. The Woodward T allotment is a Section 15 lease and is not due to be re-analyzed till 2018; however, since the three allotments are all used by the same permittee and are in the same geographic area, having one Environmental Assessment (EA) for all three allotments and having the same renewal period for the grazing permits makes management of the permits easier.

The Coal Mine Ind. and Woodward T allotments are located on the east side of Colorado Highway 13 and the Cow Creek allotment is located on the west side of Highway 13. The three allotments are approximately 20 miles south of Meeker, at the south edge of the White River Field Office boundary. Elevations in these allotments range from 7,200 feet along Colorado Highway 13 to near 8,800 feet near the headwaters of Trapper Creek. Vegetation in the allotments is a mix of open shrub (sagebrush) grassland communities, mixed mountain shrub (serviceberry, snowberry Gambel oak), and pinyon-juniper woodlands. The Cow Creek allotment also contains approximately 500 acres of aspen woodland and around 165 acres of spruce fir woodland. Table 1 provides a breakdown of acreage for the three allotments. The Woodward T and Coal Mine Ind. allotments are located almost entirely on the steep slopes of the Grand Hogback. The Cow Creek allotment borders Rio Blanco County Road 5 on its northern edge and extends southward nearly seven miles to Trapper Creek.

Grazing allotments within the White River Field Office (WRFO) have been placed in one of three management categories that define the intensity of management: (1) improve, (2) custodial and (3) maintain. These categories broadly define rangeland management objectives in response to an analysis of an allotment's resource characteristics, potential, opportunities, and needs. The Coal Mine Ind. and Woodward T allotments are in the "custodial" category and have no specific resource concerns. The Cow Creek allotment is in the "improve" category with noxious weeds and riparian systems having been identified as resource concerns in the past.

**Table 1: Allotments Included in Permits #0501418 and #0501535**

Allotment Name	Number	BLM Acres	State Acres	Private Acres	Total Acres
Cow Creek	06019	7,810	NA	4,866	12,676
Coal Mine Ind.	06017	171	NA	32	203
Woodward T	06835	959	NA	319	1,278
Total acres:		8,940	NA	5,217	14,157

**The Following Items will be Common to Both Alternatives A and B:**

**Plan of Operation:** Each summer, 30 days prior to turnout within the allotment, the permittee will submit a plan of operation (grazing application) for the grazing year for the BLM to approve. The plan of operation will include anticipated turnout dates, number of animals, and the sequence the pastures will be used for the year.

**Limits of Flexibility:** With prior approval from the Authorized Officer, livestock may be turned out as much as two weeks early or two weeks late to adjust to annual climate variations, operational needs, or unforeseen circumstances. Livestock use days would also shift accordingly so overall allotment use does not exceed authorized AUMs. The permittee will also be allowed to adjust animal numbers +10 percent from the annual plan of operation provided the total AUMs do not exceed the AUMs scheduled.

**Monitoring and Evaluation:** Long term trend monitoring, utilization studies, riparian assessments and Grazing Response Index (GRI) will occur as determined necessary to assess rangeland conditions.

**Rangeland Improvements Necessary to Implement the Grazing System:** No rangeland improvements (RI) are proposed to implement the proposed grazing systems. Future evaluations of allotment conditions may identify improvements that may aid in achieving objectives and those projects would be analyzed in future EA documents on a site specific basis. Maintenance of existing RI (e.g., removal of excess sediment from reservoirs, fencing of spring sources, maintaining fences, etc.) would facilitate improved livestock distribution and associated grazing practices, reducing livestock grazing related impacts to rangelands.

**Grazing Permit Terms and Conditions:**

The following terms and conditions as required by 43 CFR 4130.3 would be included in the grazing permit issued under this alternative:

1. Grazing permit or lease terms and conditions and the fees charged for grazing use are established in accordance with the provisions of the grazing regulations now or hereafter approved by the Secretary of the Interior.
2. This grazing permit 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.
  - f) Loss of qualifications to hold a permit or lease.
3. This grazing permit/lease is subject to the terms and conditions of an allotment management plan if such plan has been prepared. If an allotment management plan has not been prepared, it must be incorporated in this permit/lease when completed.
  4. The permittee/lessee must own or control and be responsible for the management of the livestock authorized to graze under this grazing permit/lease.
  5. The authorized officer may require counting and/or additional or special marking or tagging of the livestock authorized to graze under this grazing permit/lease.
  6. The permittee/lessee grazing case file is available for public inspection as required by the Freedom of Information Act.
  7. This grazing permit/lease is subject to the provisions of executive Order NO. 11246 of September 24, 1964, as amended, which sets forth nondiscrimination clauses. A copy of this order may be obtained from the authorized officer.
  8. Livestock grazing use that is different from that authorized by a permit or lease must be applied for prior to the grazing period and must be filed with and approved by the authorized officer before grazing use can be made.
  9. Billing notices are issued which specify fees due. Billing notices, when paid become a part of the grazing permit or lease. Grazing use cannot be authorized during any period of delinquency in the payment of amounts due, including settlement for unauthorized use.
  10. The permittee is responsible for informing all persons who are associated with the allotment that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts. If archaeological materials are discovered as a result of operations under this authorization, the permittee must immediately contact the BLM authorized officer.
  11. Grazing fee payments are due on the date specified on the billing notice and must be paid in full within 15 days of the due date, except as otherwise provided in the grazing permit or lease. If payment is not made within that time frame, a late fee (the greater of \$25 or 10 percent of the amount owed but not more than \$250) will be assessed.
  12. No Member of or Delegate to, Congress or Resident Commissioner, after his/her election of appointment, or either before or after he/she has qualified, and during his/her continuance in office, and no officer, agent, or employee of the Department of the Interior, other than members of Advisory committees appointed in accordance with the Federal Advisory Committee Act (5 U.S. C. App. 1) and Sections 309 of the Federal

Land Policy and Management Act of 1976 (43 U.S. C. 1701 et sec.) shall be admitted to any share or part in a permit or lease, or derive any such benefit to arise therefrom; and the provision of Section 3741 Revised Statute (41 U.S. C. 22), 18 U.S.C. Sections 431-433, and 43 CFR Part 7, enter into and form a part of a grazing permit or lease so far as the same may be applicable.

13. This grazing permit conveys no right, title or interest held by the United States in any lands or resources.

14. This permit is subject to (a) modification, suspension or cancellation as required by land plans and applicable law; (b) annual review and modification of terms and conditions as appropriate; and (c) the Taylor Grazing Act, as amended, the Federal Land Policy and Management Act, as amended, the Public Rangelands Improvement Act, and the rules and regulations now or hereafter promulgated thereunder by the Secretary of Interior.

**Proposed Action (Alternative A):** Tables 2, 3, and 4 outline the proposed grazing use on the three allotments. Under the Proposed Action for the Cow Creek allotment, cattle would enter into the allotment in mid- June and would be out by the end of September every year. For the Coal Mine Ind. allotment cattle would enter into the allotment in May and would be taken out by the end of September.

**Table 2: Proposed Grazing Permit for Cow Creek, Woodward T and Coal Mine Ind. Allotments.**

Allotment Number	Allotment Name	Livestock	Kind	Date On	Date Off	% PL	BLM AUMs	Total AUMS
06019	Cow Creek	350	Cattle	6/15	9/30	64	709	1,242
06017	Coal Mine Ind.	3	Cattle	5/15	9/30	100	14	14
06385	Woodward T	60	Cattle	5/15	7/14	73	88	120

In the Cow Creek allotment cattle will rotate through five pastures throughout the summer. Total duration of grazing would be 132 days, the same amount of grazing days being utilized with the current grazing permit. On even grazing years the west side of the Long Ridge pasture would be the first in the pasture rotation, being entered into on June 15. The rotation for even grazing years is provided in Table 3. On odd grazing years the east side of the Long Ridge pasture would be the first pasture in the rotation cycle, cattle would enter the pasture on June 15. The odd year rotation is provided in Table 4.

**Table 3: Proposed Grazing Schedule – Even Years**

Allotment Name	Livestock		Pasture	Date		# Days Grazed	Total AUMs	% PL	BLM AUMs	Pvt AUMs
	No.	Kind		On	Off					
Cow Creek	350	C	Long Ridge-west	6/15	6/20	5	69	95	44	25
Cow Creek	350	C	Cow	6/21	8/06	47	541	33	178	363
Cow Creek	116	C	Trapper	8/07	8/31	25	95	100	95	0
Cow Creek	234	C	Corral	8/07	8/31	25	192	18	35	157

Cow Creek	350	C	Bear	9/01	9/16	16	184	99	182	2
Cow Creek	350	C	Long Ridge-east	9/17	9/30	14	161	95	153	8
<b>Totals:</b>						<b>132</b>	<b>1,242</b>		<b>687</b>	<b>555</b>

**Table 4: Proposed Grazing Schedule – Odd Years**

Allotment Name	Livestock		Pasture	Date		# Days Grazed	Total AUMs	% PL	BLM AUMs	Pvt AUMs
	No.	Kind		On	Off					
Cow Creek	350	C	Long Ridge-east	6/15	6/20	5	69	95	66	3
Cow Creek	350	C	Bear	6/21	7/06	16	184	99	182	2
Cow Creek	234	C	Corral	7/07	7/31	25	192	18	35	157
Cow Creek	116	C	Trapper	7/07	7/31	25	95	100	95	0
Cow Creek	350	C	Cow	8/1	9/16	47	541	33	178	363
Cow Creek	350	C	Long Ridge-west	9/17	9/30	14	161	95	153	8
<b>Totals:</b>						<b>132</b>	<b>1,242</b>		<b>709</b>	<b>533</b>

Under Alternative A, all pastures with the exception of the Long Ridge pasture would be used every other year at different times of the grazing season helping improve vegetation use within the pastures. The Bear and Cow pastures are the second and third largest pastures and would rotate every other year being used early (June) or late (August) in the grazing season. The Trapper and Corral pastures would be used in August on even years and July on odd years. The Long Ridge pasture is divided into an east and west side using a long steep ridge that divides the pasture and will be used as a geographic barrier to manage livestock. The west side of the Long Ridge Pasture will be used early on the even years, and the east side of the Pasture will be used early on the odd years so that all minimum rest requirements in the 1997 White River ROD/RMP will be met. The last time the pasture would be used would be for trailing and gathering cattle to be taken out of the Cow Creek allotment by September 30. The objective of this grazing plan is to sustain a rotational grazing plan that meets the needs of the livestock operator while also allowing improvements on overall rangeland health.

The Coal Mine Independent and Woodward T allotments do not include any kind of a pasture rotation, and use on these allotments will be just as outlined in Table 2.

**Grazing Permit Terms and Conditions:**

The following additional terms and conditions would be included in the grazing permit issued under Alternative A:

1. Livestock grazing use will occur as outlined in the Proposed Action grazing schedules (Allotment Management Plan) portion of the Environmental Assessment document CO-110-2011-0071-EA that analyzes grazing on the Cow Creek, Coal Mine Ind. and Woodward T allotments.

2. The permittee or lessee must provide reasonable administrative access across private and leased lands to the BLM for the orderly management and protection of the public lands, as outlined 43 CFR 4130.3-2(h).
3. In order to improve livestock distribution on the public lands, no salt blocks and/or mineral supplements will 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).
4. The permittee shall submit an Actual Use form within 15 days after completing their annual grazing use as outlined in 43 CFR 4130.3-2(d).
5. Livestock grazing on the Cow Creek, Coal Mine Ind. and Woodward T allotments will be managed to achieve the Standards for Public Land Health in Colorado.

**Continuation of Current Management (Alternative B):** Under Alternative B the Cow Creek, Coal Mine Ind., and Woodward T allotments would be re-issued with the current grazing permit/lease (no changes) for a 10 year period as outlined below in Tables 5, 6, and 7. This alternative would result in re-issuance of a grazing permit with the same grazing schedules that have been in place for the past ten years on the Cow Creek and Coal Mine Ind. allotments. This alternative does not have any built in pasture rotation, and use will occur at the same time every year in each pasture. Refer to CO-110-WRFO-56 EA (2001) page 3 for detailed analysis of these grazing schedules. Woodward T would result in re-issuance of a grazing permit with the same grazing schedule that has been in place for the past five years. Refer to CO-110-2008-219-DNA (2008) for an analysis of the grazing schedule.

**Table 5: Current Grazing Permit for the Cow Creek allotment, 06019.**

Allotment Number	Allotment Name	Pasture Name	Livestock	Kind	Date On	Date Off	% PL	BLM AUMs	Total AUMs
06019	Cow Creek	Cow	350	Cattle	6/15	7/31	64	346	541
06019	Cow Creek	Trapper	116	Cattle	8/1	8/25	64	61	95
06019	Cow Creek	Corral	235	Cattle	8/1	8/25	64	124	193
06019	Cow Creek	Bear	350	Cattle	8/26	9/10	64	118	184
06019	Cow Creek	Long Ridge	350	Cattle	9/11	9/30	64	147	230

**Table 6: Current Grazing Permit for the Coal Mine Ind. allotment, 06017.**

Allotment Number	Allotment Name	Livestock	Kind	Date On	Date Off	% PL	BLM AUMs	Total AUMs
06017	Coal Mine Ind.	3	Cattle	5/15	9/30	100	14	14

**Table 7: Current Grazing Permit for Woodward T allotment, 06835.**

Allotment Number	Allotment Name	Livestock	Kind	Date On	Date Off	% PL	BLM AUMs	Total AUMs
06835	Woodward T	60	Cattle	5/15	7/14	83	100	120

**No Livestock Grazing (Alternative C):** The grazing permit would not be renewed and there would be no livestock grazing on public lands within the Cow Creek, Coal Mine Ind. or Woodward T allotments where it is currently permitted. The grazing permit held by Aaron Woodward (0501418) and (0501535) would not be reissued.

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

**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 (White River ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Page 2-23

Decision Language: "With minor exceptions, 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)."

**AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES**

**Standards for Public Land Health:** Refer to CO-110-WRFO-56, page 6 for a more detailed description for the following summary of the Cow Creek and Coal Mine Ind. allotments. In January 1997, the Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, special status 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 (EA). Table 8 summarizes the assessment of each public land health standard for each allotment. The findings are located in specific elements listed below.

**Table 8: Summary of Assessment of the 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
<b>#1-Upland Soils</b>							
Coal Mine Independent 06017	171	0	N/A	171	0	171	0
Cow Creek 06019	7,347	463	Historic Grazing/Noxious Weeds	7,547	263	7,547	263

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
			(Houndstongue and Cheatgrass)				
Woodward T 06835	959	0	N/A	959	0	959	0
<b>#2-Riparian Systems</b>							
Coal Mine Independent 06017	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cow Creek 06019	9.55 Miles	0.33 Miles	Livestock	9.88	0	9.88	0
Woodward T 06835	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>#3-Plant Communities</b>							
Coal Mine Independent 06017	171	0	N/A	171	0	171	0
Cow Creek 06019	7,347	463	Historic Grazing/Noxious Weeds (Houndstongue and Cheatgrass)	7,547	263	7,547	263
Woodward T 06835	959	0	N/A	959	0	959	0
<b>#3-Animal Communities</b>							
Coal Mine Independent 06017	171	0	N/A	171	0	171	0
Cow Creek 06019	7,777	33	Historic Grazing/Noxious Weeds (Houndstongue and Cheatgrass)	7,777	33	7,777	33
Woodward T 06835	959	0	N/A	959	0	959	0
<b>#4-Special Status, T&amp;E Species</b>							
Coal Mine Independent 06017	No acreages or habitats for special status plants or animals were identified.						
Cow Creek 06019	7,810	0	N/A	7,810	0	7,810	0
Woodward T 06835	No acreages or habitats for special status plants or animals were identified.						
<b>#5-Water Quality</b>							
Coal Mine Independent 06017	171	0	N/A	171	0	171	0
Cow Creek 06019	7,810	0	N/A	7,810	0	7,810	0
Woodward	959	0	N/A	959	0	959	0

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
T 06835							

\*06017 Coal Mine Ind.

\*06019 Cow Creek

\*06835 Woodward T

**Cumulative Effects Analysis Assumptions:** Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations (40 CFR 1508.7) as "...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." Table 9 lists the past, present, and reasonably foreseeable future actions within the area that might be affected by the Proposed Action; for this project the area considered was the Cow Creek, Coal Mine Ind. and Woodward T allotments. However, the geographic scope used for analysis may vary for each cumulative effects issue and is described in the Affected Environment section for each resource.

**Table 9: Past, Present, and Reasonably Foreseeable Actions**

Action Description	STATUS		
	Past	Present	Future
Livestock Grazing	X	X	X
Wild Horse Gathers	No	No	No
Recreation	X	X	X
Invasive Weed Inventory and Treatments	X	X	X
Range Improvement Projects : Water Developments Fences & Cattleguards	X	X	X
Wildfire and Emergency Stabilization and Rehabilitation	X	X	X
Wind Energy Met Towers	No	No	No
Oil and Gas Development: Well Pads Access Roads Pipelines Gas Plants Facilities	X	X	X
Power Lines	X	X	X
Oil Shale	No	No	No
Seismic	No	No	No
Vegetation Treatments	X	X	X

**Affected Resources:**

The CEQ Regulations state that NEPA documents "must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail" (40 CFR 1500.1(b)).

While many issues may arise during scoping, not all of the issues raised warrant analysis in an environmental assessment (EA). Issues will be analyzed if: 1) an analysis of the issue is necessary to make a reasoned choice between alternatives, or 2) if the issue is associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of the impacts. Table 10 lists the resources considered and the determination as to whether they require additional analysis.

**Table 10: Resources and Determination of Need for Further Analysis**

<b>Determination<sup>1</sup></b>	<b>Resource</b>	<b>Rationale for Determination</b>
<b>Physical Resources</b>		
PI	Air Quality	See discussion below.
NI	Geology and Minerals	The proposed renewal of the existing grazing permit would not have impacts on the geologic or mineral resources within the permit area.
PI	Soil Resources*	See discussion below.
PI	Surface and Ground Water Quality*	See discussion below.
<b>Biological Resources</b>		
PI	Wetlands and Riparian Zones*	See discussion below.
PI	Vegetation*	See discussion below.
PI	Invasive, Non-native Species	See discussion below.
PI	Special Status Animal Species*	See discussion below.
NP	Special Status Plant Species*	No special status plants are found within the Cow Creek, Woodward T or Coal Mine Ind. grazing allotments.
PI	Migratory Birds	See discussion below.
PI	Aquatic Wildlife*	See discussion below.
PI	Terrestrial Wildlife*	See discussion below.
NP	Wild Horses	These allotments are not located within the Piceance-East Douglas Herd Management Area, or the North Piceance or West Douglas Herd Areas; therefore wild horses will not be impacted.
<b>Heritage Resources and the Human Environment</b>		
PI	Cultural Resources	See discussion below.
PI	Paleontological Resources	See discussion below.
PI	Native American Religious Concerns	See discussion below.
NI	Visual Resources	Visual resource management objectives would not be impacted as a result of the Proposed Action or any of the proposed alternatives.
NP	Hazardous or Solid Wastes	There will be no impacts from Hazardous or Solid Wastes from the Proposed Action.

Determination <sup>1</sup>	Resource	Rationale for Determination
NI	Fire Management	Grazing will reduce “flashy” fuels. There would be no negative impacts to fire management.
NI	Social and Economic Conditions	There would not be any substantial changes to local social or economic conditions.
NP	Environmental Justice	According to Census Bureau statistics (2000), there are no minority or low income populations within the WRFO.
NP	Lands with Wilderness Characteristics	There are no lands with wilderness characteristics identified in or near the allotments.
<b>Resource Uses</b>		
PI	Forest Management	See discussion below.
PI	Rangeland Management	See discussion below.
NI	Floodplains, Hydrology, and Water Rights	Floodplains will not be altered by grazing to the extent that their function changes, with good grazing management hydrology is not likely to be impacted, springs on public lands have water rights, and no new water developments are being proposed.
NI	Realty Authorizations	There are authorized rights-of-way for roads, power lines, telephone cables, an air monitoring site, pipelines, and Cow Creek ditch. There are two communication sites within the grazing allotments: Rio Blanco Hill and Monument Peak. Existing rights-of-way would not be impacted as a result of the Proposed Action or any of the proposed alternatives.
PI	Recreation	See discussion below.
PI	Access and Transportation	See discussion below.
NP	Prime and Unique Farmlands	There are no Prime and Unique Farmlands within the project area.
<b>Special Designations</b>		
PI	Areas of Critical Environmental Concern	See discussion below.
NP	Wilderness	There are no designated wilderness areas or wilderness study areas in or near the proposed alternatives.
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers in the WRFO.
NP	Scenic Byways	There are no Scenic Byways within the project area.

<sup>1</sup> NP = Not present in the area impacted by the Proposed Action or Alternatives. NI = Present, but not affected to a degree that detailed analysis is required. PI = Present with potential for impact analyzed in detail in the EA.

\* Public Land Health Standard

## AIR QUALITY

*Affected Environment:* The Proposed Action is an attainment area for national and state air quality standards based on a review of designated non-attainment areas for criteria pollutants, published by the Environmental Protection Agency (EPA 2013). Non-attainment areas are areas designated by U.S. Environmental Protection Agency (EPA) as having air pollution levels that persistently exceed the national ambient air quality (NAAQ) standards. The Dinosaur National

Monument is the closest special designation area (designated Class II airshed with Prevention of Significant Deterioration (PSD) with thresholds for sulfur oxides and visibility).

The Proposed Action is in Rio Blanco County within the Western Counties Monitoring Region of Colorado. The 2010 CDPHE monitoring assessment showed four gaseous pollutant monitoring sites and 11 particulate monitoring sites in the Western Counties area (APCD 2012). Local air quality parameters including particulates are being measured at monitoring sites located at Meeker, Rangely, Dinosaur, and Maybell. The closest location for an Interagency Monitoring of Protected Visual Environments (IMPROVE) site is near the Flat Tops Wilderness. IMPROVE sites are designed to measure the visibility impairment from air borne particles.

*Environmental Consequences of the Proposed Action (Alternative A):*

Direct and Indirect Effects: This Proposed Action would authorize livestock grazing in three allotments within the WRFO. The environmental consequences to air quality from the Proposed Action would include the periodic and local production of dust due to cattle trailing and emissions from vehicles used in managing the cattle grazing. Dust levels may be noticeable locally especially during drier times. The Colorado Air Pollution Control Division (APCD) estimates the maximum PM<sub>10</sub> levels (24-hour average) in rural portions of western Colorado to be near 50 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). The increase in airborne particulate matter expected from the Proposed Action is not expected to exceed Colorado ambient air quality (CAAQ) or NAAQ standards on an hourly, 8-hour average or daily basis.

Cumulative Effects: Statewide, more than 70 percent of PM<sub>10</sub> (coarse particles) are created from windblown dust and soil from roads, fields and construction sites. A smaller percentage of coarse particles comes from automobile and diesel engine exhaust, soot from wood and coal fires, and sulfates and nitrates from combustion sources such as industrial boilers (CAQCC 2011). There have been several PM<sub>10</sub> exceedances in recent years (past 10 years) in the western counties area. These exceedances were caused by dust storms from regional blowing dust/high wind events, which are natural and uncontrollable, and are likely “exceptional” events, and therefore would not require a change in regulation.

Industrial facilities in White River Basin include coal mines, soda ash mines, and natural gas processing plants. Due to these industrial uses, increased population and oil and gas development in this region, emissions of air pollutants in the White River Basin due to exhaust emissions and dust (particulate matter) are likely to increase into the future. Despite increases in emissions, overall air quality conditions in the White River Basin are likely to continue to be good for some time due to effective atmospheric dispersion conditions and limited transport of air pollutants from outside the area.

*Environmental Consequences of Continuation of Current Management (Alternative B):*

Direct and Indirect Effects: The continuation of current management would authorize livestock grazing in three allotments within the WRFO and would not include the odd and even year rotation in Alternative A. Air quality impacts would be similar to the Proposed Action. The increase in airborne particulate matter expected from alternative B would not be expected to exceed Colorado ambient air quality (CAAQ) or NAAQ standards on an hourly, 8-hour average or daily basis.

**Cumulative Effects:** Cumulative impacts would be the same as those described for the Proposed Action (Alternative A).

*Environmental Consequences of No Livestock Grazing (Alternative C):*

**Direct and Indirect Effects:** Impacts from the no-grazing alternative would result in no dust production due to grazing activities.

**Cumulative Effects:** Overall air quality conditions in the White River Basin are likely to continue to be good for some time due to effective atmospheric dispersion conditions and limited transport of air pollutants from outside the area. There would be reductions in local dust production from cattle trailing and vehicle use if livestock are no longer authorized on the allotments.

*Mitigation:* None.

**SOIL RESOURCES**

*Affected Environment:* The grazing allotments are all in steep terrain, 51 percent of the slopes in the allotments (7,153 acres) are greater than 35 percent. There are also two areas of saline soils; one in the Coal Mine Ind. allotment and one in the Woodward T allotment totaling 213 acres.

Soils have been mapped and analyzed by the Natural Resources Conservation Service (NRCS) in Order III soil surveys. These include Rio Blanco County Area (1982) and the Rifle Area (1985). Hard copies of these soil surveys are available on the following website: [http://soils.usda.gov/survey/online\\_surveys/colorado/](http://soils.usda.gov/survey/online_surveys/colorado/). Soil surveys are also available in a digital format via the soil data viewer. The Soil Data Viewer (<http://soils.usda.gov/sdv/>) is a digital map based tool built as an extension to ArcMap that allows a user to create soil-based thematic maps (NRCS, 2011). Relevant soil mapping was retrieved for areas within the WRFO boundaries in 2012, and these soils data were used to evaluate this project. A summary of soils the allotments is shown in Table 11.

**Table 11: Soil Classification within the Proposed Grazing Allotments**

Soils Classification	Ecological Site	Erosion Hazard	Rutting Hazard	Acres
Parachute-Rhone loams, 5 to 30 percent slopes	Mountain Loam	Moderate	Severe	3,298
Irigul channery loam, 9 to 50 percent slopes	Loamy Slopes	Moderate	Slight	1,458
Parachute loam, 25 to 75 percent slopes	Brushy Loam	Severe	Severe	1,342
Rhone loam, 5 to 30 percent slopes	Mountain Loam	Moderate	Severe	1,182
Northwater loam, 15 to 65 percent slopes	None	Severe	Severe	933
Parachute loam, 25 to 65 percent slopes	Brushy Loam	Severe	Severe	854
Torriorthents-Rock outcrop complex, 15 to 90 percent slopes	Stony Foothills	Severe	Severe	701
Irigul-Starman channery loams, 5 to 50 percent slopes	Loamy Slopes	Moderate	Slight	680
Irigul-Parachute complex, 5 to 30 percent slopes	Loamy Slopes	Moderate	Severe	528
Rhone loam, 30 to 70 percent slopes	Brushy Loam	Severe	Severe	306
Razorba channery sandy loam, 30 to 75 percent slopes	None	Very severe	Slight	291
Absarokee-Delson channery loams, 8 to 65 percent slopes	Brushy Loam	Severe	Severe	269

Soils Classification	Ecological Site	Erosion Hazard	Rutting Hazard	Acres
Jerry loam, 12 to 50 percent slopes	Brushy Loam	Moderate	Severe	307
Silas loam, 3 to 12 percent slopes	Mountain Swale	Slight	Severe	179
Irigul channery loam, 5 to 50 percent slopes	Loamy Slopes	Moderate	Severe	172
Cochetopa-Jerry complex, 25 to 50 percent slopes	Brushy Loam	Severe	Severe	146
Cochetopa loam, 9 to 50 percent slopes	Brushy Loam	Moderate	Severe	142
Bucklon-Inchau loams, 25 to 50 percent slopes	Brushy Loam	Severe	Severe	138
Torriorthents-Rock outcrop complex, steep	None	Very severe	Moderate	264
Veatch channery loam, 12 to 50 percent slopes	Loamy Slopes	Moderate	Severe	123
Silas loam, 0 to 8 percent slopes	Mountain Swale	Slight	Severe	98
Northwater loam, 5 to 50 percent slopes	None	Moderate	Severe	91
Torriorthents-Camborthids-Rock outcrop complex, steep	None	Very severe	Moderate	95
Havre loam, 0 to 4 percent slopes	Foothill Swale	Slight	Severe	77
Glendive fine sandy loam	Foothill Swale	Slight	Severe	75
Olney loam, 6 to 12 percent slopes	Rolling Loam	Slight	Severe	60
Lamphier loam, 15 to 50 percent slopes	None	Moderate	Severe	46
Rhone loam, 30 to 75 percent slopes	Brushy Loam	Very severe	Severe	46
Jerry loam, 12 to 45 percent slopes	Brushy Loam	Moderate	Severe	43
Tanna silty clay loam, 25 to 45 percent slopes	Brushy Loam	Moderate	Severe	39
Badland	None	Very severe	Slight	28
Starman-Vandamore complex, 5 to 40 percent slopes	Dry Exposure	Slight	Moderate	22
Shawa loam, 3 to 8 percent slopes	Deep Loam	Slight	Severe	18
Dollard-Rock outcrop, shale, complex, 25 to 65 percent slopes	Mountain Shale	Severe	Severe	17
Rock outcrop-Torriorthents complex, very steep	None	Very severe	Slight	16
Holderness variant clay loam, 6 to 25 percent slopes	Deep Clay Loam	Moderate	Severe	15
Cryaquolls, nearly level	None	Slight	Slight	23
Shawa loam, wet, 0 to 5 percent slopes	Swale Meadow	Slight	Severe	13
Silas variant loam	Mountain Swale	Slight	Severe	7
Work loam, 8 to 15 percent slopes	Deep Loam	Slight	Severe	6
Detra fine sandy loam, 12 to 25 percent slopes	Mountain Loam	Moderate	Moderate	6
Castner channery loam, 5 to 50 percent slopes	None	Moderate	Severe	3

In saline soils, plant growth is limited because soil moisture is less available to plants. The ability of soil to provide available moisture is at least as important as nutrient availability. Salinity in soils limits its ability to provide available moisture due to soil texture and chemical conditions that make water unavailable to plant roots. There are 213 acres of saline soils within the allotments; this is about 14 percent of the Coal Mine Ind. allotment and the Woodward T allotment.

*Environmental Consequences of the Proposed Action (Alternative A):*

**Direct and Indirect Effects:** This alternative would implement an even/odd year grazing schedule in the Cow Creek allotment with six pastures and by far the largest amount of public lands. Direct impacts to soils from livestock grazing include the reduction and removal of vegetation, churning of soils, hoof action, deposition of excrement and/or soil compaction in localized areas. Removal of vegetation from either grazing or trampling reduces the herbaceous cover which is critical in these environments for protecting soils from wind and water erosion. Deposition of cattle excrement may add trace elements to depleted soils including nitrates and phosphorus.

Indirect impacts based on these direct impacts would include the increased or decreased productivity of soils in localized areas due to changes in soil aeration due to hoof action, changes in soil nutrients, and changes in soil moisture availability to plants. Detrimental impacts are more likely in areas with fragile or saline soils (roughly 14 percent of Coal Mine Ind. allotment and the Woodward T allotment), along streams in some of the pastures in the Cow Creek allotment such as Trapper Creek pasture and in areas with a severe erosion/rutting rating. Areas with both a severe soil erosion rating and severe soil rutting rating are about 4,747 acres or 34 percent of the soils in the allotments. Erosion is likely to occur in localized areas, especially where cattle trail along drainages from or concentrate around water or food sources.

Livestock generally show preference for areas that have shade, food, nutrients and water nearby and often avoid steep and thickly vegetated areas. This means that not all areas within the allotment will be grazed and grazing intensity will vary widely. Most of the cattle use is likely to be on the valley bottoms. For areas that are frequented by cattle, the identification of localized areas that are contributing to erosion early on is critical to reducing impacts. Application of best management practices (BMPs) are an effective way to reduce impacts from livestock trailing and grazing. Effective BMPs include increased herding control, avoidance of poor soils, limited drift fences, seeding, water bars, providing additional water or nutrient sources, other techniques to reduce trailing impacts in identified areas.

Cumulative Effects: Oil and gas development in areas near or within allotments would likely continue to contribute surface disturbance, truck traffic, drilling, road building and maintenance actions, and development on steep slopes which impact soils. Dispersed recreation may cause erosion of soils in some locations of concentrated use. Recreation use is more likely in the Cow Creek allotment due to better public access. No other impacts in addition to grazing, other than oil and gas development and recreation are expected in this area. In general, soil disturbance in the Proposed Action and other activities are unlikely to reduce soil productivity, but may lead to increased erosion and instability of soils in specific locations.

*Environmental Consequences of Continuation of Current Management (Alternative B):*

Direct and Indirect Effects: For livestock pastures with the continuation of current management direct impacts would be similar to impacts described in Alternative A. It is difficult to determine if there would be much change to soils due to the large allotments and the relative similarity with Alternative A. Alternative B in the Cow Creek allotment does not have a grazing rotation to aid in plant regrowth which can protect soils from erosion. Since impacts on soils under both alternatives could result in localized impacts, where there is concentrated use, steep slopes, and/or saline soils the managing of these localized impacts from cattle are likely to determine the direct and indirect impacts more than differences in the Proposed Action.

Cumulative Effects: Cumulative impacts would be the same as those described for the Proposed Action (Alternative A).

*Environmental Consequences of No Livestock Grazing (Alternative C):*

Direct and Indirect Effects: Impacts from the no-grazing alternative would result in no disturbance to soils from livestock use and reduce will reduce the likelihood of erosion.

**Cumulative Effects:** No soil disturbance from livestock grazing would occur therefore there would be no additional cumulative impacts to soils in addition other activities occurring within the analysis area. It is anticipated that impacts from dispersed recreation and oil and gas development would continue to impact soils in the analysis area.

**Mitigation:** The following should be added as conditions of approval (COAs):

1. In order to protect public health standards for soils, erosion features such as rilling, gullyng, piping and mass wasting as a result of this action will be addressed immediately after observation by contacting the AO and by submitting a plan to assure successful soil stabilization with BMPs to address erosion problems. BMPs that would be effective include increased herding control, avoidance, limited drift fences, seeding, water bars, providing additional water sources or other techniques to reduce erosional impacts in identified areas.

**Finding on the Public Land Health Standard #1 for Upland Soils:** With mitigation this action is unlikely to reduce the productivity of soils on public lands in Alternatives A & B.

## SURFACE & GROUND WATER QUALITY

**Affected Environment:** The terrain of the all three allotments can be characterized as steep with well vegetated valley bottoms in the headwaters of Piceance and a small portion of Trapper Creek that drains into the East fork of Middle Parachute Creek. The Cow Creek allotment is a large allotment with six pastures that span from Piceance Creek to Trapper Creek. Water quality classifications of surface waters that may be impacted are included in Table 12.

**Table 12: Water Quality Classification Table (WQCC 2013)**

Segment	Segment Name	Use Protected	Protected Beneficial Uses			
			Aquatic Life	Recreation	Agriculture	Water Supply
14a	Mainstem of Piceance Creek from the headwaters to Hunter Creek.	No	Cold 1	Primary Contact Recreation	Yes	No
11c	Tributaries to Middle Fork of Parachute Creek	No	Cold 2	Non-Primary Contact Recreation	Yes	No
16	Tributaries to Piceance Creek	No	Warm 2	Non-Primary Contact Recreation	Yes	No

Segment 14a of the White River describes the mainstem of Piceance Creek which is protected for cold water aquatic life (Cold 1). The cold designation means the classification standards would be protective of aquatic life normally found in waters where the summer weekly average temperatures does not frequently exceed 20 °C. The Cold 1 designation means that it has been determined that these waters are capable of sustaining a wide variety of cold water biota. This segment also has standards that are protective of recreation and agriculture, but not water supply.

Segment 11a of the Lower Colorado describes the mainstem of Piceance Creek which is protected for cold water aquatic life (Cold 2). The Cold 2 designation means that it has been determined that these waters are not capable of sustaining a wide variety of cold water biota. This segment also has standards that are protective of recreation and agriculture, but not water supply.

Segment 16 of the White River describes tributaries of Piceance Creek which is protected for warm water aquatic life (Warm 2). The warm designation means the classification standards would be protective of aquatic life normally found in waters where the summer weekly average temperatures frequently exceeds 20 °C. The Warm 2 designation means that it has been determined that these waters are not capable of sustaining a wide variety of warm water biota. This segment also has standards that are protective of recreation and agriculture, but not water supply.

There are no surface waters listed on the Colorado List of Impaired waters or on the Monitoring and Evaluation List (WQCC 2012) within the allotment boundaries. The closest listed segment is Piceance Creek from Willow Creek to Hunter Creek and is listed for total recoverable iron. The Mainstem of Piceance Creek from Ryan Gulch to the confluence of the White River is also provisionally listed for aquatic life.

The surface waters in these allotments are dominated by groundwater inputs and there are numerous springs that would likely be used by cattle. Contact springs are common in the area and are often the result of upper bedrock aquifers consisting of fractured sandstones and shales. These contact zones can occur in the ridges between surface water drainages and may be manifested as springs and seeps above the valley floor in outcrop areas (Table 13).

**Table 13. Spring Inventories**

Spring Number	Allotment	Location	Name	Water Rights	Last Inventoried	Flow (gpm)	Specific Conductance (µS/cm)
P.169.09	Coal Mine Ind.	T4S R94W Sec 8	Blanco Hill	85CW535	1983	2.1	1,174
P.169.14	Coal Mine Ind.	T4S R94W Sec 8	County Line	85CW535	1983	10.9	1,213
P.188.09	Cow Creek	T4S R94W Sec 29	Black Bear #1	98CW0140	1984	8.0	963
P.188.10	Cow Creek	T4S R94W Sec 29	Black Bear #2		1984	1.3	744
P.188.11	Cow Creek	T4S R94W Sec 33	Cow Canyon Spring	W0467-71	1984	7.7	754
P.188.12	Cow Creek	T4S R94W Sec 32	Spotted Cow	85CW496	1984	8.6	1,071
P.188.16	Cow Creek	T4S R94W Sec 8	Schultz Gulch Spring	W0467-71	1984	1.9	953
P.188.18	Cow Creek	T4S R94W Sec 8	Coughs Spring	85CE552	1984	2.7	1,044

The spring inventories in 1983 and 1984 indicated poor maintenance of springs and direct use by livestock with evidence of erosion around the sites. Nearly all the springs have water rights filed and some of the springs have substantial flows.

*Environmental Consequences of the Proposed Action (Alternative A):*

**Direct and Indirect Effects:** The Proposed Action will change the timing and duration of grazing, specifically implement an odd and even year rotation schedule in the Cow Creek allotment. There are three allotments, and the Cow Creek allotment consists of six pastures.

All pastures in the Cow Creek allotment will have variations in timing by even and odd years that benefit vegetation recovery. Springs can experience water quality impacts from cattle hoof action near the source and grazing of wetland plants typical of springs. Due to the steep topography in these allotments direct impacts to perennial waters from intense use in the valley bottoms are likely to be the most severe direct impact. Grazing removes vegetation that may help reduce rain splash erosion, lessen surface runoff and livestock often preferentially remove grass and forb species that form root masses that hold together soil matrices better than non-desirable species. Hoof action from trailing to and from water, nutrient and forage sources as well as travel through pastures create preferential flow paths that can concentrate overland flow and intercept subsurface flows. In some cases trampling by cattle can cause springs to cease production or result in more surface water that can be subject to evaporation. Vegetation loss and trailing would be expected to contribute to potential increases in sediment production from exposed soils, gully initiation and channel erosion in some locations. These impacts are more likely near water sources due to higher utilization. Impacts from cattle use around water sources and concentration areas include compaction and direct impacts to vegetation from grazing.

The soils section describes many areas with alkaline and saline soils corresponding to outcrops of geologic features that naturally occur throughout the allotment. Once these soils are disturbed (i.e., from hoof action or removal of perennial vegetation during grazing), the potential for the release of sediment and salt is increased. All of the soils within the allotments have the potential to create water quality-related sediment and/or salinity problems when disturbed, but this is especially true with the saline soils in the Coal Mine Ind. and Woodward T. allotments. Salts from these eroded soils are likely to move in surface waters during storm events. The two areas with saline soils are along alluvial fans near Piceance Creek, if mobilized these salts would likely enter Piceance Creek. This would be above the section of Piceance Creek that is classified as cold water 1, which generally has higher standards for water quality parameters to protect aquatic life, but no standards for salinity.

**Cumulative Effects:** Future oil and gas development is expected in the Cow Creek allotment, which is what is called the Mesaverde Gas Play Area and expected to have 2-3 drilling well pads per square mile. Oil and gas development typically includes surface disturbance for well pads, pipelines, roads and support facilities. Dispersed recreation also occurs on public lands including off-highway vehicle use, hunting and other activities. Impacts other than oil and gas development, dispersed recreation and grazing are not expected in the analysis area (Grazing allotment boundary). In general, the Proposed Action and other activities would increase sediment and salt loading to Piceance Creek but are not likely to exceed State standards for water quality. Range improvements can protect the integrity of springs and maintain water quality downstream from springs. A typical range improvement project will include fencing off the vegetation and the water source associated with the spring, installation of a spring box or infiltration chamber that collects water below the surface and feeds a pipeline that is run to a trough outside the fenced area. Any proposed range improvement for these springs would go

through environmental analysis before being implemented. The Proposed Action is unlikely to impact the listing of impaired surface waters or change the current listings on Piceance Creek. Although there are some cumulative and indirect impacts from the potential to increase sediment and salt loading to surface waters, the impacts of the Proposed Action are likely to be indistinguishable from other factors.

*Environmental Consequences of Continuation of Current Management (Alternative B):*

Direct and Indirect Effects: This alternative would continue current grazing practices. In general current management has a similar duration of grazing compared to the Proposed Action, but no even/odd year grazing rotation. Impacts would be similar in nature to those described for the Proposed Action, but are likely to be greater since there is no rotation of pastures in Cow Creek between even and odd years. There would likely be more impacts to native vegetation from grazing; however; local issues with sediment loading should be addressed under each alternative with range improvements or changes in grazing management and thus these alternatives should not result in noticeably different impacts.

Cumulative Effects: Cumulative impacts would be similar in nature to those described for the Proposed Action. There is the potential for increased erosion and sediment loading springs associated with the cow pasture since there is no rotation; however it is not expected to exceed what is currently happening from other activities in the area.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

Direct and Indirect Effects: No impacts to vegetation or localized erosion from concentrated grazing use, access to water or trailing would occur from livestock under this alternative. Therefore this alternative would have the least potential for impacting surface or groundwater resources.

Cumulative Effects: No grazing will remove all impacts associated with removal of vegetation, trampling, trailing. This will reduce the potential increased in sediment production from exposed soils, gully initiation, and channel erosion. Impacts from other land uses such as oil and gas development and dispersed recreation are expected to continue impacting surface and ground water.

*Mitigation:* None

*Finding on the Public Land Health Standard #5 for Water Quality:* There is currently no water bodies listed on Colorado's section 303(d) of the Clean Water Act in the grazing allotment or directly downstream. None of the alternatives are likely to cause the exceedance of the Colorado water quality standards.

## **WETLANDS AND RIPARIAN ZONES**

*Affected Environment:* The Cow Creek allotment has two major lotic riparian systems called Cow Creek and Piceance Creek. The Cow Creek riparian system encompasses the main Cow Creek drainage, the No Name Cow Creek drainage, and multiple small tributaries. The primary Cow Creek drainage and No Name Cow Creek drainage are perennial systems, and most

of the tributaries are ephemeral. The entire Cow Creek system had Proper Functioning Condition (PFC) assessments completed in 2011 and 2012. Almost all the reaches were classified as functional at risk (FAR) with two reaches being classified as proper functioning condition (PFC), and one reach being classified as non-functioning (NF). The one reach of the Piceance system is 0.75 miles long and is rated as PFC. There are no riparian areas in the Woodward T and Coal Mine Independent allotments. Table 14 is a breakdown of the riparian reaches and their classification.

**Table 14: Riparian System Reaches and Classifications**

System	Reach	Length (Miles)	Rating	Trend
Cow Creek	1	1.7	FAR	Not Apparent
Cow Creek	2	0.7	FAR	Not Apparent
Cow Creek	3	0.3	FAR	Upward
Cow Creek	4	1.1	FAR	Not Apparent
Cow Creek	4a	0.2	FAR	Not Apparent
Cow Creek	5	0.3	FAR	Not Apparent
Cow Creek	5a	0.4	FAR	Not Apparent
Cow Creek	6	0.9	FAR	Not Apparent
West Branch Cow Creek	1	0.5	FAR	Not Apparent
Bitter Creek Cow Creek	1a	0.6	PFC	Not Apparent
No Name Cow Creek	1	1	FAR	Not Apparent
No Name Cow Creek	2	0.6	PFC	Not Apparent
No Name Cow Creek	3	0.5	FAR	Not Apparent
No Name Cow Creek	4	0.33	NF	Not Apparent
Piceance Creek	1	0.75	PFC	Not Apparent

*Environmental Consequences of the Proposed Action (Alternative A):*

**Direct and Indirect Effects:** The primary impacts to riparian areas are going to be consumption of riparian vegetation, trampling, and trailing. These impacts reduce the stability of soils in the riparian area and reduce the likelihood of a riparian zone being able to withstand a large flood event. Use in riparian areas is generally somewhat concentrated due to the fact that there is both water and forage for livestock. Livestock often congregate around water in the heat of the day to stay cool which can increase these impacts.

All of the riparian within the Cow Creek allotment is in the Long Ridge, Cow and Bear pastures. The Proposed Action implements a rotation between pastures that will change season of use in riparian areas every other year. Alternating use from early in the growing season to later in the growing season every other year allows more opportunity for riparian vegetation to recover and complete reproductive functions. The implementation of the rotation between pastures is expected to improve riparian health of areas rated as FAR or NF, and maintain riparian areas that are currently PFC.

Cumulative Effects: Past and present impacts to riparian areas include livestock grazing, oil and gas development, dispersed recreation and roads with low-water crossings in the riparian areas. All of these activities are expected to continue into the future, but management of livestock using a two year rotation is not expected to add to cumulative effects to riparian areas or wetlands beyond those that currently exist, and implementation of this grazing system should improve impacts from grazing in riparian areas.

*Environmental Consequences of Continuation of Current Management (Alternative B):*

Direct and Indirect Effects: Impacts to riparian areas are generally going to be the same as those analyzed in the Proposed Action. Primary impacts will include the consumption of vegetation, trampling, and trailing. The continuation of current management alternative does not have any type of grazing rotation to aid in riparian area recovery and maintenance. Use in the Cow Pasture will occur every year in the growing season, but outside of the critical growing season from June 15<sup>th</sup> to July 31<sup>st</sup>. Riparian areas in the Cow Pasture are expected to have the greatest impacts since use will occur every year during the growing season. Use in the rest of the allotment will occur at the end of the growing season allowing those areas adequate opportunity for vegetative growth during the summer months.

Cumulative Effects: Past and current impacts in riparian areas are the same as those analyzed in the Proposed Action. Future use under this alternative is expected to have greater impacts to riparian areas within the Cow Pasture. These areas include the West Branch of Cow Creek, Bitter Creek of Cow Creek, and the main fork of Cow Creek reaches 3, 4, 4a, 5, 5a, and 6. These areas will have use from livestock every year from June 15<sup>th</sup> to July 31<sup>st</sup> and may experience a downward trend in riparian health.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

Direct and Indirect Effects: The no grazing alternative will have the greatest benefit for riparian areas. Removal of livestock would leave more vegetation along banks to anchor soils during large flood events. It would also eliminate trampling and trailing in riparian areas from livestock that can reduce vegetation density and composition.

Cumulative Effects: Past and present effects would be the same as those analyzed in the Proposed Action and the Continuation of Current Management. Implementation of the no grazing alternative into the future would have the greatest benefit to riparian areas in the future by eliminating one of the impacts to riparian areas, and would be expected to put all riparian areas in the Cow Creek allotment on an upward trend towards being rated as PFC.

*Mitigation:* None.

*Finding on the Public Land Health Standard #2 for Riparian Systems:* Riparian areas are classified as meeting Public Land Health Standards if they are PFC or FAR with an upward or not apparent trend. Riparian areas that are FAR with a downward trend or NF are classified as not meeting Public Land Health Standards. This would mean all riparian areas are meeting Public Land Health Standards except for No Name Cow Creek Reach 4. There are a total of 9.88 miles of riparian in the Cow Creek allotment, and 9.55 acres are currently meeting Public Land Health Standards, and 0.33 acres are not meeting. Actions under the Proposed Action and No Grazing alternatives are anticipated to improve overall standards and put all riparian areas on an

upward trend meeting Public Land Health Standards. Alternative B would retain or increase acres of riparian area not meeting Public Land Health Standards.

## VEGETATION

*Affected Environment:* Tables 15, 16, and 17 lists the plant community appearance for the ecological sites or woodland types on the allotment associated with the Proposed Action, along with the predominant plant species comprising the composition of each community. Forb species, though important to the diversity of a community and making up to 25 to 30 percent of the composition of several of the plant communities listed, are not presented in Tables 15, 16, and 17 because they generally are not contributors to the appearance or dominance of the community.

**Table 15: Ecological Site Breakdown within the Cow Creek Allotment.**

<b>Ecological Site / Woodland Type</b>	<b>Plant Community Appearance</b>	<b>Predominant Plant Species in the Plant Community</b>
Brushy Loam	Deciduous Shrub / Grass Shrubland	Serviceberry, oakbrush, snowberry, mountain brome, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses
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 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
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
None	Badland, Rock outcrop, Water	N/A

**Table 16: Ecological Site Breakdown within the Coal Mine Ind. Allotment.**

<b>Ecological Site / Woodland Type</b>	<b>Plant Community Appearance</b>	<b>Predominant Plant Species in the Plant Community</b>
Brushy Loam	Deciduous Shrub / Grass Shrubland	Serviceberry, oakbrush, snowberry, mountain brome, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses
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
Rock Outcrop	barren exposures of sandstone and shale	90% exposed bedrock with accumulations of boulders and stones at the base of the slope
Marsh	wetlands	sedges, carex, catails, willows

**Table 17: Ecological Site Breakdown within the Woodward T Allotment.**

<b>Ecological Site / Woodland Type</b>	<b>Plant Community Appearance</b>	<b>Predominant Plant Species in the Plant Community</b>
Deep Clay Loam	Grass / Open Shrub Shrubland	Western wheatgrass, slender wheatgrass, mutton grass, squirreltail, June grass, Letterman and Columbia needle grasses, mountain big sagebrush
Brushy Loam	Deciduous Shrub / Grass Shrubland	Serviceberry, oakbrush, snowberry, mountain brome, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses
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
None	Rock outcrops, Badland, Water	N/A
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,

Figure 1 is a representation of the vegetation growth periods for different vegetation types found on allotments associated with the permit renewal. These dates are based upon estimated averages and can vary from year to year dependent upon climatic conditions.

**Figure 1: Vegetative Growth Periods on Allotments Associated with the Permit Renewal**

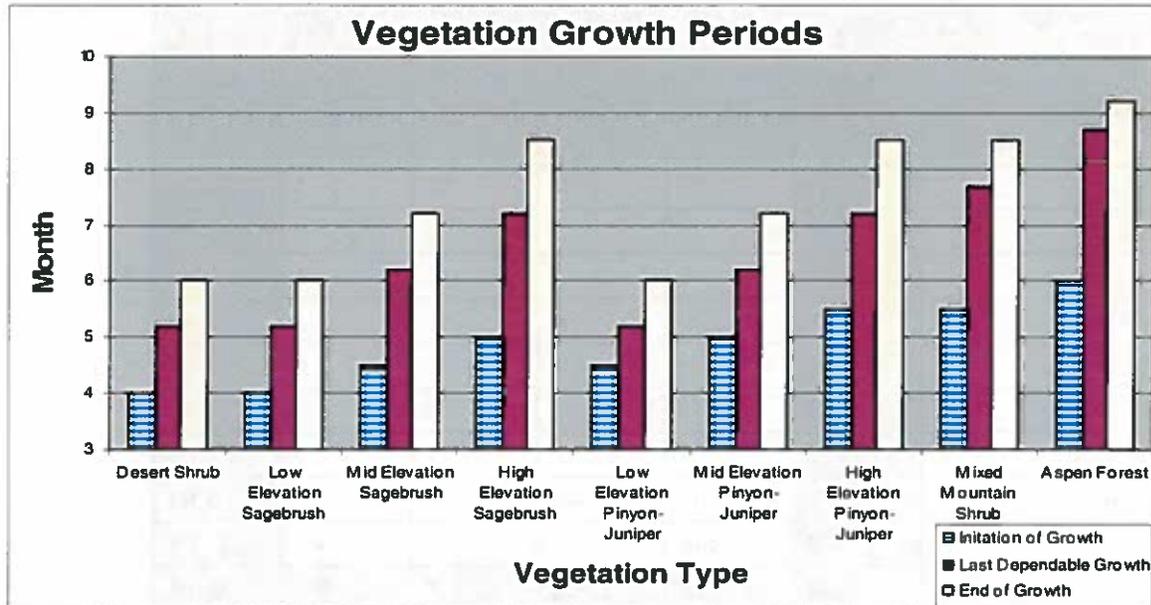


Table 18 shows the seral rating used by the BLM to rate rangeland vegetation communities in comparison to the Potential Natural Plant Community (PNC) for a particular ecological site.

**Table 18: Ecological Site Similarity Ratings.**

Ecological Site Similarity Ratings	
Seral Rating	% Similarity to the Potential Natural Plant 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

Tables 19-21 show an estimate of the public land acreage falling within one of the seral ratings for each ecological site on allotments associated with this permit renewal. These estimates are based upon professional judgments of the Rangeland Management Specialist trained in the use of the rating system. Ecological sites were visited during the 2012 field season for a plant community assessment of the Colorado Public Land Health Standards for each allotment. Historical grazing practices (spring use, over utilization, etc.) and prolonged drought conditions have created the situation of early seral plant communities not meeting the rangeland health standards. There are also areas of common livestock congregation around water sources, areas where mineral blocks have been placed, and areas used for shelter that are rated as early seral and are not meeting Public Land Health Standards. The early seral sites not meeting standards have crossed a threshold and are nearly irreversible regardless of the livestock management without some form of disturbing activity such as fire or chemicals.

**Table 19: Ecological Site Similarity Rating for the Cow Creek Allotment**

<b>Cow Creek Allotment (06019)</b>						
<b>Ecological Site Similarity Rating</b>						
<b>Ecological Site</b>	<b>Total BLM ACRES</b>	<b>PNC</b>	<b>Late Seral</b>	<b>Mid Seral</b>	<b>Early Seral (Not Meeting Standards)</b>	<b>BLM Acres Classified</b>
Brushy Loam	1330	279	851	200	0	1330
Dry Exposure	20	15	3	2	0	20
Foothill Swale	47	6	5	30	6	47
Loamy Slopes	2353	195	443	1,270	15	2353
Mountain Loam	2705	490	1,345	870	0	2705
Mountain Swale	109	16	65	23	5	109
Rolling Loam	3	3	0	0	0	3
Stony Foothills	541	16	205	313	7	541
None	702	N/A	N/A	N/A	N/A	N/A
<b>Total:</b>	<b>7,810</b>	<b>1,020</b>	<b>2,917</b>	<b>2,708</b>	<b>463</b>	<b>7108</b>
<b>% BLM Acres Classified:</b>	<b>91%</b>	<b>13%</b>	<b>37%</b>	<b>38%</b>	<b>6%</b>	

**Table 20: Ecological Site Similarity Rating for the Coal Mine Independent Allotment**

<b>Coal Mine Independent (06017)</b>						
<b>Ecological Site Similarity Rating</b>						
<b>Ecological Site</b>	<b>Total BLM ACRES</b>	<b>PNC</b>	<b>Late Seral</b>	<b>Mid Seral</b>	<b>Early Seral (Not Meeting Standards)</b>	<b>BLM Acres Classified</b>
Brushy Loam	136	48	51	37	0	136
Pinyon Juniper Woodland	25	20	5	0	0	25
None	7	N/A	N/A	N/A	N/A	0
Marsh	3	0	3	0	0	3
<b>Total:</b>	<b>171</b>	<b>68</b>	<b>59</b>	<b>37</b>	<b>0</b>	<b>164</b>
<b>% BLM Acres Classified:</b>	<b>96%</b>	<b>40%</b>	<b>35%</b>	<b>22%</b>	<b>0</b>	

**Table 21: Ecological Site Similarity Rating for the Woodard T. Allotment**

<b>Woodward T (06835)</b>						
<b>Ecological Site Similarity Rating</b>						
<b>Ecological Site</b>	<b>Total BLM ACRES</b>	<b>PNC</b>	<b>Late Seral</b>	<b>Mid Seral</b>	<b>Early Seral (Not Meeting Standards)</b>	<b>BLM Acres Classified</b>
Deep Clay Loam	1	0	1	0	0	1
Brushy Loam	590	294	196	100	0	590

Stony Foothills	4	0	3	1	0	4
None	294	N/A	N/A	N/A	N/A	0
Loamy Slopes	35	5	20	10	0	35
Mountain Loam	5	0	2	3	0	5
Mountain Swale	30	3	16	11	0	30
<b>Total:</b>	<b>959</b>	<b>302</b>	<b>238</b>	<b>125</b>	<b>0</b>	<b>665</b>
<b>% BLM Acres Classified:</b>	<b>69%</b>	<b>31%</b>	<b>25%</b>	<b>13%</b>	<b>0%</b>	

*Environmental Consequences of the Proposed Action (Alternative A):*

Direct and Indirect Effects: Primary impacts to vegetation with implementation of the Proposed Action are vegetation consumption by livestock and trampling. Vegetation is important for the stabilization of soils, and aids in the maintenance of soil health. Vegetation also provides forage, and concealment for wildlife.

Cow Creek

Under the Proposed Action, all grazing use will occur outside of the critical growing season (April 1<sup>st</sup> to May 31<sup>st</sup>), but there will be grazing use that occurs during the growing season which generally can extend to the end of July. The Proposed Action does implement a two year rotation that will alternate grazing use during the growing season every other year. Implementation of the Proposed Action will provide the best opportunity for plant maintenance and recovery in the presence of grazing, while also allowing plants to complete reproductive functions every other year with no grazing during the growing season.

Implementation of this alternative is expected to maintain plant health in areas currently meeting Public Land Health Standards while allowing plant communities to continue on a positive trend upward through successional pathways. The most notable improvements in plant composition and health will be seen in mid-seral ecological sites that are on the verge on not meeting Public Land Health Standards. Of the 463 acres classified as not meeting Public Land Health Standards, 430 acres were classified as not meeting by the Colorado River Valley Field Office (Formerly the Glenwood Springs Field Office) during designation of the Trapper/Northwest Creek ACEC designation. This ACEC was designated in the 2008 Glenwood Springs Field Office Resource Management Plan Amendment and EIS to protect “important trout fisheries, sensitive plant species and communities, and remnant vegetation.” Implementation of the this grazing plan is anticipated to aid in the recovery of 200 acres of the 463 acres not currently meeting in conjunction with fencing and other range improvement projects that have occurred in the ACEC since the 2008 designation. The remaining 263 acres classified as not meeting Public Land Health Standards within the Cow Creek allotment are expected to continue not meeting Public Health Standards regardless of grazing management without other extensive management actions.

Coal Mine Independent and Woodward T

The Coal Mine Independent and Woodward T allotments are both classified as custodial allotments with all the BLM lands currently meeting Public Land Health Standards. Grazing

would occur every year during the growing season on these two allotments, but the stocking rates are at a moderate level that is expected to maintain plant health within these two allotments.

**Cumulative Effects:** Past and current impacts to vegetation on the allotments include historic grazing use, dispersed recreation, and oil and gas development. All of these land uses are expected to continue into the future, and will have varying impacts on vegetation within the allotments. Implementation of the Proposed Action is expected to aid in the improvement of vegetative communities that are currently impacted by grazing, and is not expected to add any additional cumulative effects to vegetation over what is currently taking place in the analysis area.

*Environmental Consequences of Continuation of Current Management (Alternative B):*

**Direct and Indirect Effects:** Impacts from Alternative B are expected to be similar to those analyzed in the Proposed Action. Primary impacts are expected to be the removal of vegetation from grazing and trampling. Vegetation is important for soil stabilization, maintenance of soil health while also providing forage and concealment for wildlife.

**Cow Creek**

Under the Continuation of Current Management alternative, all use would occur outside the critical growing season the same as the Proposed Action, but there will still be use during the growing season that can extend to the end of July. There is no rotation built into this grazing system, so the same pasture (Cow) will be used in the growing season every year. This could inhibit the ability of vegetation to fully complete reproductive cycles, and over the long-term impact plant vigor and health. Use does generally occur outside of the critical growing season, so there would be opportunity for plant growth and seed head production through May and early June. Use on the rest of the allotment would occur outside the growing season, and with moderate stocking rates, there are expected to be minimal impacts to vegetation.

**Cumulative Effects:** Past and current impacts to vegetation on the allotments include historic grazing use, dispersed recreation, and oil and gas development. All of these land uses are expected to continue into the future, and will have varying impacts on vegetation within the allotments. Implementation of the Continuation of Current Management is expected to have minimal impacts to vegetation within the Woodward T and Coal Mine Independent allotments. On the Cow Creek allotment, use would occur every year on the Cow Pasture during the growing season with no rotation. Since use would be outside of the critical growing season impacts are generally expected to be minimal, and would not cause any additional cumulative impacts to vegetative communities in addition to what is already present.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

**Direct and Indirect Effects:** Under a no grazing by livestock alternative, most localities that are being grazed by cattle would experience a short-term increase in both perennial plant cover and soil surface litter accumulation. Mid and late seral ecological sites would likely experience the greatest benefit in increased perennial plant cover, such as western wheatgrass. On early seral ecological sites dominated by cheatgrass and other noxious weeds (263 acres), there is not expected to be substantial change in perennial plant cover because they have crossed a threshold of noxious weed and/or annual plant domination. It is expected that 200 acres of early seral sites will progress on an upward trend to meet Public Land Health Standards in the future. The PNC

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

The proliferation of invasive annuals and noxious weeds would be lessened as the interspersed native grass community would have a greater chance of completing a full growth cycle without being grazed by livestock. Therefore, the native community would have a greater ability to compete with undesirable vegetation. Such an effect would occur principally within the mid seral plant communities that have not crossed a threshold of annual plant domination. However, this effect would be limited in nature due to the current cheatgrass domination of early seral plant communities that have crossed a threshold and due to other grazers within the area.

Cumulative Effects: Past and present impacts are similar to those analyzed in the Proposed Action. Under the no grazing alternative, there would be no cumulative impacts to vegetative communities from grazing.

*Mitigation:* None

*Finding on the Public Land Health Standard #3 for Plant and Animal Communities:* All of acres within the Woodward T (960 acres) and Coal Mine Independent (203 acres) allotments are currently meeting Public Land Health Standard 3 and are expected to continue to meet standards into the future. With implementation of the Proposed Action, 7,547 acres in the Cow Creek allotment are expected to continue meeting or make progress towards meeting Public Land Health Standards into the future. The remaining 263 acres that are currently not meeting Public Land Health Standards are not expected to improve through grazing management alone. Intensive management actions such as weed treatments, seeding, fire, or plowing would need to be implemented to convert areas currently not meeting Public Land Health Standards to meeting.

## INVASIVE, NON-NATIVE SPECIES

*Affected Environment:* The state of Colorado has noxious weeds classified into three different groups. List A species are species that are designated for eradication, List B species are weeds that have management plans to stop their spread, and List C species are weeds that have management plans to minimize spread to those jurisdictions that choose to manage those species. There are no known List A species that occur on any of the three allotments associated with this permit renewal. Houndstongue is a List B species that is scattered in isolated patches in each of the allotments, and during riparian assessments along Cow Creek yellow toadflax, Canada thistle, bull thistle, and scotch thistle were noted. Cheatgrass and common mullein are List C species that are scattered throughout the Cow Creek allotment. Isolated patches of cheatgrass present in areas of common cattle congregation dominate portions of the plant community in areas on the Cow Creek allotment and these areas are not currently meeting Public Land Health Standards.

*Environmental Consequences of the Proposed Action (Alternative A):*

Direct and Indirect Effects: Impacts from the Proposed Action include reductions in native plant cover that competes within invasive/noxious weeds and the spread of noxious weed

seeds and propogules in livestock fur and feces. Management for the Proposed Action does provide the best opportunity to maintain vegetation health to compete with noxious and invasive weeds in the presence of grazing. Areas of common congregation have the greatest potential for the introduction and establishment of noxious and invasive weeds since these areas generally see heavier use and there is less native vegetation to compete with invasive species.

Areas where cheatgrass is the dominate vegetation in the plant community are expected to remain since grazing management alone will not reduce cheatgrass abundance. Management is designed to limit spread of cheatgrass into adjacent plant communities by leaving enough native vegetation to compete with invasive species.

Cumulative Effects: Past and current land uses from dispersed recreation, oil and gas development, and livestock grazing have all contributed to the introduction of noxious and invasive weeds into the analysis area. Implementation of the Proposed Action still has the potential to introduce new populations of weeds into the analysis area, but there are not anticipated to be cumulative effects that impact vegetative communities under management from the Proposed Action.

*Environmental Consequences of Continuation of Current Management (Alternative B):*

Direct and Indirect Effects: Continuation of current management on the Cow Creek allotment does not provide any rotation for the Cow pasture. This pasture will be used every year from June 15<sup>th</sup> to July 31<sup>st</sup>. Mid and late seral ecological sites potentially affected by grazing would be relatively less resistant to the invasion and proliferation of noxious weeds and/or invasive plants due to removal of native vegetation that competes with undesirable weeds. Cheatgrass communities on mid seral sites would continue in their current state with a potential for a slight decline of desired vegetation towards early seral conditions.

Spread of other noxious weeds such as houndstongue and common mullein by livestock in their fur or digestive track will be that same as the Proposed Action. Areas of common livestock congregation will continue to be more susceptible to weed introduction and establishment due to the lack of native vegetation to compete with introduced species.

Cumulative Effects: Cumulative impacts are similar to those analyzed in the Proposed Action.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

Direct and Indirect Effects: The no grazing alternative will have the greatest influence on limiting the proliferation and spread of noxious weeds. The absence of livestock in the grazing allotment will eliminate spread of seeds and propogules in livestock fur and feces while also limiting spread into native plant communities that are being grazed. Since no grazing will be taking place by livestock, native vegetation will display greater vigor and produce/disseminate more seed to compete with noxious weeds.

Areas where noxious weeds are already present will continue to have noxious weeds in the absence of livestock grazing. Control of already established weeds will require other management actions along with the removal of grazing to manage these populations.

**Cumulative Effects:** Past and present impacts are similar to those analyzed in the Proposed Action. Implementation of the no grazing alternative will remove the potential for domesticated livestock to introduce new weeds into the analysis area and no cumulative impacts to noxious and invasive weed species management on rangelands would occur.

*Mitigation:* None.

## **SPECIAL STATUS ANIMAL SPECIES**

*Affected Environment:* There are no threatened or endangered animal species that are known to inhabit or derive important use from the project area.

Approximately 2,200 acres of BLM administered greater sage-grouse preliminary general habitat is located within the Cow Creek allotment (mainly confined to the Trapper, Cow and Bear pastures). The greater sage-grouse is a candidate for listing under the Endangered Species Act (ESA), and is considered a sensitive species by the BLM. Based on recent Colorado Parks and Wildlife (CPW) mapping efforts, sage-grouse habitat has been classified into two types: 1) Preliminary Priority Habitat (PPH) and 2) Preliminary General Habitat (PGH). PPH is defined by BLM as those areas having the highest conservation value to maintaining sustainable greater sage-grouse populations. These areas would include breeding, late brood-rearing, and winter concentration areas. PGH is defined by BLM as greater sage-grouse occupied range outside of PPH. Isolated areas with low activity are typically considered to be general habitat.

The height and cover of herbaceous ground cover, both current growth and residual from the previous growing season, are known to influence sage-grouse nest site selection, nest success, and chick survival and suggests that grazing by livestock or wild herbivores, particularly during the nest and brood-rearing seasons, have potential to affect grouse populations. Sage-grouse begin nesting from mid-April through mid-May with chicks appearing from mid-May through mid-July; peaking from mid to late June.

The nearest active lek is over 10 miles from BLM administered lands potentially capable of supporting grouse in the allotment. It has been shown that the majority (80 percent) of nests and nesting/brood-rearing habitat is located within 4 miles of a lek (Colorado Greater Sage-grouse Steering Committee 2008). It is unlikely these sagebrush communities support strong numbers of sage-grouse. CPW telemetry data and BLM staff experience indicates that there is extremely limited use in the area (one bird in 2007). Nearly all telemetered bird use is concentrated over seven miles from the project area.

Brewer's sparrow, a BLM sensitive species, is a sagebrush-obligate that is widely distributed and one of the most common migratory birds in northwest Colorado. These birds nest in virtually all sagebrush and mixed shrub habitats from late May through mid-July. Although not particularly sensitive to understory conditions in shrubland stands, the nestlings are reliant on abundant and diverse sources of insect prey through fledging and brood-rearing. Brewer's sparrows would be expected in nearly all sagebrush communities throughout the allotment. Discussion and analysis below in the Migratory Bird section would be directly applicable to Brewer's sparrow.

Aspen and Douglas fir woodlands and mature components of pinyon-juniper woodlands in the Cow Creek and Woodward T allotments may provide nesting substrate for northern goshawk, a BLM sensitive species. Goshawks generally nest in more contiguous stands of aspen and or spruce/fir woodlands. However, nearly a dozen nests have been located in mature components of lower elevation pinyon-juniper woodlands throughout the Piceance Basin. There are no known goshawk nests within several miles of the project area. Scattered aspen and younger-aged pinyon juniper woodlands located in the Coal Mine Ind. allotment would not be expected to support the nesting functions of woodland raptors, including northern goshawk.

See discussion on BLM sensitive aquatic species in Aquatic Wildlife below.

*Environmental Consequences of the Proposed Action (Alternative A):*

Direct and Indirect Effects:

Northern Goshawk

Woodward T allotment: Although the proposed grazing schedule would allow for livestock grazing during the majority of the goshawk nesting season, it is unlikely livestock use would have strong potential to interfere with goshawk breeding activities. Nearly all of the BLM administered lands in this allotment capable of supporting goshawk nesting functions (woodlands) are on slopes that are 25 percent or greater, with the majority comprising slopes of 35 percent or greater. In general livestock tend to concentrate in bottomlands or areas with more mild terrain and typically avoid steep, rugged areas.

Cow Creek allotment: There are no BLM-administered woodland habitats within the Trapper or Corral pastures that would be capable of supporting the nesting functions of woodland raptors, including northern goshawk. Similarly, public lands within the Cow pasture support small, isolated fingers of woodland habitat that have minimal potential to support nesting functions of woodland raptors.

Both the Bear and Long Ridge east and west pastures contain more continuous stands of aspen and or spruce/fir woodlands that may support nesting functions of woodland raptors. As proposed, use of the both the east and west portions of the Long Ridge pasture would not be expected to have any conceivable influence on northern goshawk breeding activities as livestock use would only occur for a five-day period during the breeding season (6/15 – 6/20) in alternate years. Topography (rugged, steep terrain) likely limits livestock in these woodland habitats as well. As proposed, livestock use in the Bear pasture would be coincident with goshawk nesting activities from 6/21 – 7/6 in alternate years. This schedule would not be expected to have any substantial influence on breeding activities due to the short duration of use. As is common with the other pastures in the allotment, rugged terrain likely precludes much use of these woodland communities.

Greater Sage-Grouse:

Woodward T and Coal Mine Ind. Allotments: Sage-grouse PPH or PGH does not occur within either of these allotments.

Cow Creek allotment: Under the proposed grazing system livestock use would be synchronous with portions of the sage-grouse reproductive period in the Cow pasture during even years (June 21<sup>st</sup> – August 6<sup>th</sup>), and Bear and Trapper pastures during odd years (June 21<sup>st</sup> – July 6<sup>th</sup> and July 7<sup>th</sup> – July 31<sup>st</sup>, respectively). Of the 2,200 acres classified as PGH in these three pastures, only about 750 acres (ridge top habitat) would actually be capable of supporting grouse. Sagebrush communities classified as PGH in this allotment are largely fingerlike extensions on the periphery of core habitat. There has been little recent or historical evidence of grouse occupation in the vicinity of this allotment and it appears this area supports only small numbers of grouse on a sporadic basis during the summer and fall months. Although livestock use during the sage-grouse nesting and brood-rearing periods may result in reductions in herbaceous ground cover that provide concealment and protection from predators for hens and chicks, it is unlikely that the proposed grazing system would have any substantial influence on local grouse populations due mainly to the limited use this area receives by grouse during the reproductive period.

Cumulative Effects: Seasonal consumption of herbaceous ground cover by livestock and big game are the primary sources of cumulative influences on special status species in the project vicinity. The proposed grazing schedule is not expected to have any overall influence on habitats capable of supporting the reproductive functions of northern goshawk or greater sage-grouse due to limited occupation by species (sage-grouse) or limited use by livestock in breeding habitats (goshawk).

*Environmental Consequences of Continuation of Current Management (Alternative B):*

Direct and Indirect Effects:

Northern Goshawk:

Woodward T and Coal Mine Ind. Allotments: As there is no change in the grazing schedule, impacts to northern goshawk would be identical to those discussed above.

Cow Creek Allotment: The current grazing schedule would not be expected to influence nesting activities of woodland raptors (including northern goshawk) as livestock use in those pastures that contain woodland habitats (Bear and Long Ridge) would occur outside the breeding season.

Greater Sage-Grouse:

Woodward T and Coal Mine Ind. Allotments: Sage-grouse PPH or PGH does not occur within either of these allotments.

Cow Creek Allotment:

Currently the potential to influence sage-grouse during the breeding season would be limited to approximately 200 acres (ridge top habitat) in the Cow pasture. Discussions above under the Proposed Action would be directly relevant to the current management.

Cumulative Effects: Cumulative impacts would be identical to those discussed above under the Proposed Action.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

Direct and Indirect Effects: Livestock removal from the allotment would allow for full ground cover expression and residual cover and would be expected to provide sustained optimal

habitat conditions for sage-grouse reproductive functions. Although there is little recent or historical evidence of grouse use in the area, improved habitat conditions may promote future expansion from occupied ranges.

Cumulative Effects: Removing livestock use would stabilize or lead to progressive improvement in the condition and function of reproductive habitats for greater sage-grouse in the allotment. This effect would remain localized, but would contribute incrementally toward the achievement of desirable habitat and population objectives for affected shrubland species in the WRFO and northwest Colorado. As stated above, although there is little recent or historical evidence of grouse use in the area, improved habitat conditions may promote future expansion from occupied ranges.

*Mitigation:* None

*Finding on the Public Land Health Standard #4 for Special Status Species:* Overall, shrubland communities encompassed by the allotments are generally well suited for the support of those animal species presented above. Small, degraded inclusions that would provide little in the way of forage or cover resource are scattered throughout the allotment, but at a landscape scale, the project area would be considered to be meeting Land Health Standard #4. None of the alternatives would be expected to detract from the continued meeting of the land health standards.

## **MIGRATORY BIRDS**

*Affected Environment:* The allotment's mid to upper elevation (7,200 – 8,700 ft) woodland, mountain shrub and sagebrush communities provide nesting habitat for a wide array of migratory birds including: yellow-rumped warbler, red-naped sapsucker, house wren, warbling vireo (aspen associates), black-throated gray warbler, Bewick's wren, juniper titmouse (pinyon-juniper associate) orange-crowned warbler, Virginia's warbler, dusky flycatcher, spotted towhee, green-tailed towhee (mountain shrub associates), Vesper sparrow, sage thrasher (sagebrush associates). Brewer's sparrow, a BLM sensitive species is also common throughout the allotments sagebrush habitats.

Most of these birds begin nesting in mid-May and have largely finished by mid to late-July. With the exception of areas of concentrated use closely associated with water, these species generally nest in situations that are not particularly vulnerable to trampling or repeated disturbance by livestock (e.g., shrub canopy or base of shrub), though the nestlings are reliant on abundant and diverse sources of insect prey through fledging and brood-rearing.

*Environmental Consequences of the Proposed Action (Alternative A):*

Direct and Indirect Effects:

Coal Mine Ind. and Woodward T allotments: There would be no change in the grazing system from current management for these two allotments. Impacts to migratory birds would be identical to those discussed below under *Consequences of Continuation of Current Management.*

Cow Creek allotment: As proposed, overall livestock use and intensity would remain relatively the same as current management (< one percent increase) throughout the allotment as a whole however, livestock would rotate throughout the five pastures allowing for use at different times in alternate years (see Proposed Action). For example current use of the Trapper pasture occurs throughout the month of August, relatively avoiding the migratory bird breeding season. Under the proposed grazing schedule livestock use would shift ahead one month (August to July) in alternating years. It is expected that in those years there would be localized impacts to nesting birds, particularly in areas that are easily accessible to livestock (ridge tops, water gaps along Trapper Creek), but these would likely be minor. Reductions in herbaceous ground cover would be expected throughout the pasture as a whole, but most of these reductions would not be realized until near the point when most birds have fledged.

As proposed, grazing use of the Long Ridge pasture would remain relatively the same with the exception of a five-day period from June 15<sup>th</sup> – June 20<sup>th</sup> (coincident with the nesting season) where livestock use would alternate from the east to the west side of the pasture depending on the year. It is unlikely that this short duration use would have any measureable influence on migratory bird nesting activities. Use of the Bear pasture shifts from dormant season use to growing season use in alternate years with intensity remaining the same; however grazing would be coincident with the migratory bird nesting period for a 16-day period. This may have some localized impacts (nest disruption) for nesting birds particularly along the ridge tops and drainage bottoms. Although reductions in ground cover would be expected it is likely not enough to alter nesting outcomes.

Grazing use in Cow Creek would shift from annual growing season use to alternate year growing season use. Approximately 1,700 acres (36 percent) of this pasture is administered by the BLM. Of those 1,700 acres, the majority is comprised of slopes that are 25 percent or greater and likely currently receive light use by livestock. While this change in the grazing system would be expected to improve herbaceous groundcover as a source of forage and cover for migratory birds throughout the pasture as a whole, substantial gains on BLM-administered lands would likely be nominal. Grazing intensity within the Corral pasture would remain the same however, the period of use would shift ahead one month (August to July) in alternating years and similar to the Trapper pasture, would coincide with the latter portions of the migratory bird nesting season in those years. Approximately 15 percent of this pasture is administered by the BLM and while reductions in herbaceous vegetation as a source of forage and cover would be expected, these reductions would likely not begin to take place until most young have fledged.

Cumulative Effects: Seasonal consumption of herbaceous ground cover by livestock and big game are the primary sources of cumulative influences on nesting and brood-rearing habitats for migratory birds in the project vicinity. Rotating throughout the pastures would be expected to benefit certain pastures more than others (e.g., Cow pasture) but cumulatively speaking, influences on migratory bird nesting activities would likely be nominal.

*Environmental Consequences of Continuation of Current Management (Alternative B):*

Direct and Indirect Effects:

Coal Mine Ind. and Woodward T allotments: Currently, livestock use in these allotments takes place throughout the entire migratory bird nesting season (May 15<sup>th</sup> – September 30<sup>th</sup> in Coal Mine and May 15<sup>th</sup> – July 14<sup>th</sup> in Woodward T). Due to steep (> 35 percent slopes), rugged

terrain, potential to influence nesting activities is likely limited to roughly 100 acres with more open, gentle terrain. Livestock use throughout the nesting season may result in nest trampling, particularly for ground nesting species, however, most species that inhabit the area are generally shrub nesters and would be expected to be less influenced by trampling impacts. Progressive declines in herbaceous vegetation (as a source of supplemental cover and invertebrate prey) throughout the nestling/fledgling stages and longer term shifts in herbaceous composition, related to annual growing season use, would be expected to incrementally reduce former levels of migratory bird reproductive success and ultimately recruitment potential.

Cow Creek allotment: Under the current grazing system livestock use in the Bear and Long Ridge pastures is not coincident with the migratory bird breeding season and would have no conceivable influence on nesting activities. Similarly, current use of the Trapper and Corral pastures begins August 1<sup>st</sup> and while there may be some coincident use with late nesters (second-nesting attempts), generally avoids the majority of the nesting season. Any declines in herbaceous ground cover are likely not realized until most young have fledged. Although use during the latter stages of the growing season and/or dormant season would be expected to result in a reduction in residual cover available for the following breeding season, ground cover would be supplemented by 4 - 6 weeks of new growth prior to most birds returning to establish nests.

The greatest potential to influence migratory bird nesting activities would be limited to the Cow pasture. Currently, livestock use of this pasture takes place from June 15<sup>th</sup> – July 31<sup>st</sup> annually and incorporates a large portion of the migratory bird breeding season. Nearly all of the lands administered by the BLM (~1,700 acres) are on slopes of 35 percent or greater. These areas likely only receive incidental use by livestock. Instead, use is likely more concentrated in the narrow drainages, toe slopes and ridge tops (where accessible). Impacts to migratory birds resulting from annual growing season use would be similar to those described above in the Coal Mine and Woodward T allotments.

Cumulative Effects: Seasonal consumption of herbaceous ground cover by livestock and big game are the primary sources of cumulative influences on nesting and brood-rearing habitats for migratory birds in the project vicinity. Annual growing season use in the Woodward T and Coal Mine Ind. allotments as well as the Cow pasture of the Cow Creek allotment would result in reductions in herbaceous cover as well as longer term shifts in composition to more grazing tolerant species. Over time, reductions in breeding bird densities may be expected. The remainder of the Cow Creek allotment would be grazed outside of the migratory bird nesting season and would have little influence on migratory bird nesting outcomes.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

Direct and Indirect Effects: Removal of livestock use from the allotments would allow for the full development of ground cover expression and would provide sustained optimal habitat conditions for migratory bird reproductive functions.

Cumulative Effects: Removing livestock use would stabilize or lead to progressive improvement in the condition and function of reproductive habitats for migratory birds in the allotment and would be expected to provide the greatest benefit to migratory birds. This effect would remain localized, but would contribute incrementally toward the achievement of desirable

habitat and population objectives for affected shrubland species in the WRFO and northwest Colorado.

*Mitigation:* None

## AQUATIC WILDLIFE

*Affected Environment:* The BLM administered lands within the Woodward T and Coal Mine Ind. allotments do not support aquatic habitats. Approximately 7.5 miles of Cow Creek and several small tributaries flow through the Cow Creek allotment. Cow Creek, an intermittent system may support small numbers of speckled dace in hydrologically isolated upper reaches, but due to low and erratic flows, it is unlikely this system supports strong or consistent numbers of fish. The BLM administers a 0.75 mile portion of Piceance Creek located along the northwestern boundary of the Cow Creek allotment within the Long Ridge pasture. Based on fish sampling conducted in August 2008, this upstream reach of Piceance Creek supports higher order vertebrate species including mountain sucker (BLM sensitive) and native speckled dace. A quarter mile stretch of Trapper Creek is located along the southwestern boundary of the Cow Creek allotment within the Trapper pasture. Colorado River cutthroat trout, another BLM sensitive species, occupy Trapper Creek. Aquatic habitat in Trapper Creek is exposed to grazing-related effects on a single 120 meter water gap near the upper distributional limit of the fishery. In response to past corridor fencing and the current grazing regimen (August 1<sup>st</sup> – August 25<sup>th</sup>), vegetation and channel recovery in the Trapper Creek valley have promoted conditions that allows fish passage through the water gap and persistent occupation of the reach above the water gap. It is evident that the current grazing practices pose no important impediment to passage between occupied upstream and downstream reaches.

### *Environmental Consequences of the Proposed Action (Alternative A):*

Direct and Indirect Effects: The only portion of Trapper Creek exposed to direct grazing effects comprises no more than 1.5 percent of its potential fishery. The proposed shift in grazing use in the Trapper pasture from the last 3 weeks of August to the last 3 weeks of July every other year would have little, if any, substantive influence on the condition or character of the vegetation and ground cover in the valley or its contributing slopes. Alternate year shifts to earlier season (July) use would occur late in the growing season and would generally allow a brief period of vegetation recovery prior to dormancy. The present grazing use period (first 3 weeks of August and virtually identical to proposed August use ) has demonstrated compatibility with stream maintenance since there are no indications of excessive sediment deposition (e.g., sediment bars and lateral bank erosion) or active incision of contributing channels in the reach.

Livestock use along Piceance Creek will shift from a 20 day period each September to a five day period every other June. Currently this channel is considered to be functioning properly with no indication of excessive impacts from livestock grazing. Although proposed use will shift from dormant season use to growing season use, alternating years would provide a longer recovery period for riparian vegetation and would be expected to promote a healthier, more diverse community. The proposed grazing system is not expected to have any substantial influence on aquatic wildlife populations within the Piceance Creek system.

**Cumulative Effects:** Trapper Creek and its Colorado River cutthroat trout fishery, as managed through corridor fencing and as influenced by livestock use of contributing uplands, has remained in a constantly improving trend over the past decade. Grazing use, as proposed, would be expected to exert little, if any, noticeable change in current conditions and would not impede continued and proper channel evolution. Continued channel maturation would manifest itself with more diverse channel morphology and a deeper, narrower channel, both of which are advantageous to fish habitat by providing more physical in-stream cover and water temperatures that remain cooler and fluctuate less during the summer months. Proposed grazing management would not be expected to have any cumulative consequence to these current trends.

Similarly, proposed grazing use in the Long Ridge pasture would not be expected to detract from the current conditions of the Piceance Creek channel or negatively influence aquatic wildlife populations.

*Environmental Consequences of Continuation of Current Management (Alternative B):*

**Direct and Indirect Effects:** The consequences of continuing with the current grazing regimen would be the same as that discussed in the Proposed Action. Current livestock use during the first 3 weeks of August has demonstrated compatibility with stream maintenance—prompting no indications of excessive sediment deposition (e.g., sediment bars and lateral bank erosion) or active incision of contributing channels in the reach.

Based on stream assessments (see Riparian section) the current management appears to be compatible with the maintenance of riparian vegetation and channel characteristic that are capable of supporting aquatic wildlife populations within the Piceance Creek system.

**Cumulative Effects:** There would be little, if any, difference in the cumulative aspects of present grazing management than that discussed in the Proposed Action.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

**Direct and Indirect Effects:** It is uncertain, but unlikely that removing livestock from the allotment or Trapper pasture would alter the trend or current pace of stream recovery that had been established from earlier corridor fencing. Because there are no indications of grazing-induced erosion features in contributing uplands or signs of excessive sediment contributions in the channel, it appears that grazing use as presently managed (or proposed) has remained compatible with maintenance and recovery of aquatic habitat in upper Trapper Creek. Although removal of cattle would eliminate the occasional entry of cattle into the enclosure due to fence failure, these events have not been recurrent and have not resulted in noticeable setbacks in channel recovery.

Livestock removal from the Long Ridge pasture would be expected to allow for full riparian vegetation expression along the Piceance Creek channel. However, based on the most recent stream assessment, the Piceance Creek system appears to be in proper functioning condition with little grazing-related influences. Benefits to aquatic wildlife within this system would likely be nominal.

**Cumulative Effects:** Because current grazing use has remained compatible with acceptable watershed conditions in those uplands contributing to Trapper Creek and direct livestock effects

are governed almost entirely by corridor fencing, there would be little, if any, difference in the cumulative aspects of livestock removal than that discussed in the Proposed Action.

Cumulative aspects of livestock removal in the Long Ridge pasture would be similar to those discussed in the Proposed Action.

*Mitigation:* None

*Finding on the Public Land Health Standard #3 for Plant and Animal Communities:* Trapper Creek and its Colorado River cutthroat trout fishery, as managed through corridor fencing and as influenced by current livestock use of contributing uplands, has remained in a constantly improving trend over the past decade and is approaching its full potential as a headwater fishery. These conditions fully essentially satisfy all the Land Health Standards (i.e., 1 through 5). The Proposed and No Grazing alternatives would be expected to exert little, if any, noticeable change in current conditions and both alternatives would, therefore, remain consistent with continued meeting of these Standards.

Similarly, the Piceance Creek channel is currently meeting the land health standards for aquatic communities. Neither the Proposed, Current or No-Action Alternative would be expected to detract from the continued meeting of the land health standards.

## **TERRESTRIAL WILDLIFE**

*Affected Environment:* Elevation within the Coal Mine Ind. and Woodward T. allotments range from ~7,500 to 8,700 feet and is generally comprised of steep, rugged slopes (25 percent or greater) dominated by aspen and pinyon-juniper woodlands with mountain shrub (Gambel oak, serviceberry) and Wyoming sagebrush interspersed throughout. These upper elevational communities are classified by Colorado Parks and Wildlife (CPW) as big game summer range, with most of the use occurring from May through October.

The Cow Creek pasture ranges in elevation from about 7,200 -8,600 feet and is largely comprised of aspen/spruce fir woodlands (higher elevations), pinyon-juniper woodlands, mountain shrub and Wyoming sagebrush communities. With the exception of the northwest corner of the Long Ridge pasture, all of the Cow Creek allotment is classified by CPW as big game summer range. A small portion of the Long Ridge pasture is classified as mule deer severe winter range, a specialized component of winter range which typically supports 90 percent of a herd during the most severe winters (snow depth, temperature). These ranges receive the most concentrated use from December through April.

Aspen/spruce/fir woodlands and mature components of pinyon-juniper woodlands in the Cow Creek and Woodward T allotments may provide nesting substrate for woodland raptors as well as cavity nesting species such as saw-whet and flammulated owl. Scattered aspen and younger-aged pinyon juniper woodlands located in the Coal Mine Ind. allotment would not be expected to support the nesting functions of woodland raptors.

Limited information exists on small mammal use and distribution, however it is suspected that nongame species using the allotment's habitats are typical and widely distributed in extensive like habitats across the Resource Area and northwest Colorado. There are no narrowly endemic or highly specialized species known to inhabit those lands potentially influenced by this action. Roughly 36 percent of these allotments are classified as late seral communities. Typically, these communities have well-developed herbaceous understories which provide optimal forage and cover resources for nongame species.

*Environmental Consequences of the Proposed Action (Alternative A):*

Direct and Indirect Effects:

Coal Mine Ind. and Woodward T allotments: There would be no change in the grazing system from current management for these two allotments. Impacts to terrestrial wildlife would be identical to those discussed below under *Consequences of Continuation of Current Management*.

Cow Creek allotment: Livestock use and intensity would remain relatively the same as current management; however livestock would now rotate throughout the five pastures within the allotment. The BLM administered lands capable of supporting raptor nesting functions are confined mainly to the Bear and Long Ridge pastures. As proposed, use in the Long Ridge pasture would occur for a five-day period during the raptor breeding season (alternating east and west) each year. This short duration use would not be expected to have any conceivable influence on nesting outcomes. Proposed use of the Bear pasture would overlap with the raptor nesting season for a 16-day period in alternate years. It is unlikely that livestock use would have any measurable influence on nesting outcomes. Livestock tend to congregate in areas near water, valley bottoms and areas of more mild terrain, with only incidental use throughout the wooded slopes supporting raptor nesting habitat.

Big game and livestock use would be coincident throughout the allotment during the summer months. While there are likely areas of competition between big game and livestock (e.g., near water sources, valley bottoms), big game tend to utilize areas with more cover, generally along the steeper slopes. While livestock will make some use of these areas, they tend to concentrate in those areas that are more easily accessible. Based on allotment inspections conducted in September 2012, there does not appear to be any prolonged livestock/big game forage competition issues.

Use of the Trapper, Corral, Bear and Long Ridge pastures would change from late or dormant season use to use throughout part of the growing season (see Tables 3 and 4 in Proposed Action). Shifts in period of use would be expected to result in reductions in herbaceous cover and vegetation expression and potential reductions in plant vigor to a certain degree. This would likely have the most noticeable influence on small mammal and nongame species as these species generally require more well-developed herbaceous understories. Although not expected to have a substantial impact overall, small mammal abundance and diversity would likely be reduced to a certain degree in those areas that receive prolonged livestock use.

Cumulative Effects: Seasonal consumption of herbaceous ground cover by livestock and elk are the primary sources of cumulative influences on herbaceous ground cover as a cover and forage base for all wildlife supported in project vicinity. In those pastures (e.g., Bear, Corral,

Trapper) where the period of use shifts, involving more of the growing season, reductions in ground cover and overall plant vigor would be expected to occur however, the proposed schedule would allow time for plant recovery/regrowth opportunities late in the growing season.

*Environmental Consequences of Continuation of Current Management (Alternative B):*

Direct and Indirect Effects:

Woodward T and Coal Mine Ind. allotments: While there would be coincidental use throughout most of the summer months, there does not appear to be any ongoing conflict between livestock and big game. There is likely some competition for grasses and forbs in the valley bottoms, however topographical constraints and lack of water generally limit livestock use on the steeper slopes. In general, big game will utilize rugged landscapes more readily than livestock alleviating some competition of herbaceous ground cover.

Although current livestock use in this allotment takes place throughout the majority of the raptor breeding season, it is unlikely that cattle have any direct influence on raptor nesting activities. Habitats that provide nesting substrate for woodland raptors are generally confined to slopes of 35 percent or greater. Although cattle may make incidental use of these slopes, it is unlikely there would be potential to directly disrupt nesting activities. Annual use throughout the growing season would be expected to result in reductions in perennial grass and forb cover and may lead to shifts in plant composition. In the long term this may lead to a reduction in avian and mammalian prey populations although it would be difficult to determine if this would have a measurable influence on raptor abundance.

Overall, annual growing season use would reduce herbaceous ground cover and would be expected to lead to shifts in plant composition, resulting in a higher prevalence of grazing tolerant grass species. In general, these grasses lack the vertical and horizontal structure that provides optimal cover for small mammal and nongame species. Based on topography within these allotments (majority of BLM lands comprised of slopes > 35 percent), reductions in ground cover would be limited to roughly 100 acres. It is likely that in these areas small mammal abundance and diversity is reduced to a certain degree, however small mammal populations are likely at or near potential throughout the remainder of the allotment.

Cow Creek allotment: Under current management, livestock and big game use would be synchronous during the summer months (June 15<sup>th</sup> – September 30<sup>th</sup>), with most of the use in August and September (see grazing schedule in Proposed Action). In those areas where livestock tend to congregate such as water sources and areas with gentle terrain, there is likely competition on herbaceous resources. Much of the BLM-administered lands in this pasture are extremely rugged, which deters heavy/prolonged livestock use. Based on allotment inspections conducted in September 2012, there does not appear to be any ongoing big game/livestock issues.

Grazing of pastures that contain woodland habitats capable of supporting woodland raptors (Bear and Long Ridge) would avoid the raptor breeding season. Although use of the Cow pasture is coincident with much of the raptor breeding season, it is unlikely that the small, isolated woodlands support a strong number of raptors.

Current livestock use in the Cow Creek pasture would have the most noticeable influence on nongame bird and mammal populations as this pasture is grazed annually during the majority of

the growing season. Annual growing season use would be expected to result in less than optimal forage and cover resources of nongame species. Because most of the BLM administered lands are rugged and generally inaccessible to livestock, reductions in herbaceous vegetation as a source of cover and forage would be limited to less than 100 acres (ridge tops, toe slopes). Reductions in small mammal abundance and diversity would be expected in these areas.

**Cumulative Effects:** Seasonal consumption of herbaceous vegetation by livestock and big game are the primary sources of cumulative influences on herbaceous ground cover. Livestock would continue to graze the Woodward T and Coal Mine Ind. allotments annually throughout the growing season. Because of the steep terrain throughout the majority of both allotments, it is likely that there would be more pronounced impacts on vegetation in localized areas (valley bottoms, water sources). Rotating livestock throughout the Cow Creek allotment would be expected to provide improvements in vegetative condition in the Cow pasture, which currently experiences annual use throughout a large portion of the growing season. The Bear, Trapper and Corral pastures would be grazed during the latter portions of the growing season, so the proposed grazing plan provides for adequate regrowth opportunity.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

**Direct and Indirect Effects:** Livestock removal would eliminate any potential for forage competition among big game and livestock, particularly during the summer months. Removal of livestock from the allotment would allow for full vegetation expression and would be expected to promote the development of optimal habitat conditions for small mammal and nongame bird populations. These improvements would likely be most evident in those pastures where livestock use is concurrent with the growing season.

**Cumulative Effects:** Removing livestock influences from public lands would allow for progressive remediation of certain rangeland attributes that are important in the support of seasonal forage production for big game and other resident wildlife and would provide the greatest benefit to wildlife species as a whole. This effect would be localized and small in scale, but would contribute incrementally toward the development of desirable habitat and population objectives for terrestrial wildlife in the WRFO and northwest Colorado.

*Mitigation:* None

*Finding on the Public Land Health Standard #3 for Plant and Animal Communities:*

Aside from small, degraded inclusions comprising less than one percent of these allotments, vegetative communities are generally meeting Land Health Standard #3. The Proposed Action would not be expected to exert any noticeable change in vegetative conditions on the BLM administered lands and therefore would remain consistent with continued meeting of the land health standards.

## **CULTURAL RESOURCES**

*Affected Environment:* Range permit renewals are undertakings under Section 106 of the National Historic Preservation Act. Range improvements associated with the allotment (e.g.,

fences, spring improvements) are subject to compliance requirements under Section 106 and will undergo standard cultural resources inventory and evaluation procedures. During Section 106 review, a cultural resource assessment (#11-071) was completed on July 2, 2013 for the each of the three allotments, [Cow Creek (06019), Coal Mine Ind (06017), and Woodward T (06835)], analyzed in this document on 7/3/2013 following the procedures and guidance outlined in the 1980 National Programmatic Agreement Regarding the Livestock Grazing and Range Improvement Program, IM-WO-99-039, IM-CO-99-007, IM-CO-99-019, and IM-CO-01-026. The results of the assessment and inventory are summarized in the table below. Copies of the cultural resource assessments and inventories are in the WRFO archaeology files.

**Table 22: Cow Creek Allotment (06019) Literature Review Results**

CULTURAL RESOURCES LITERATURE REVIEW RESULTS				
Allotment Number	Percent of Allotment Previously Inventoried	Number of Sites Known in Allotment	High Potential of Historic Properties	Number of Historic Properties to be Visited
06019	-13.6 %	5 (on private)	No	0
<b>Management Recommendations (Additional inventory required and/or historic properties to be visited)</b>		All recorded sites in the allotment are located on private land. 11 locations (~five acres total) of livestock concentration in this allotment was identified by Range Specialist, Mary Taylor. A Class III cultural resource survey was done of these areas in June of 2011 (Bowen 2011). No cultural properties were found. No further inventory needs to be completed. M. Wolfe 7/02/2013		

The types of cultural resources located in previous inventories include two prehistoric lithic scatters, one historic homestead, one historic cabin, and one historic aspen art site. The sites represent an indeterminate time frame likely ranging from the middle Archaic Era (ca. 2500 BC) through the 1930's. The eligibility status of these cultural resources for listing in the National Register of Historic Places (NRHP) is: 3 Not Eligible and 2 Eligible or potentially eligible. All are located on private land.

Based on available data above, a low potential for historic properties occurs in the Cow Creek allotment. If historic properties are located during any subsequent field inventory or reconnaissance and the BLM determines that grazing activities will adversely impact the properties, mitigation will be identified and implemented in consultation with the Colorado State Historic Preservation Office (SHPO).

**Table 23: Coal Mine Ind. (06017) Literature Review Results**

CULTURAL RESOURCES LITERATURE REVIEW RESULTS				
Allotment Number	Percent of Allotment Previously Inventoried	Number of Sites Known in Allotment	High Potential of Historic Properties	Number of Historic Properties to be Visited
06017	-5 %	1	No	0
<b>Management Recommendations (Additional inventory required and/or historic properties to be visited)</b>		There are no livestock concentration areas in this allotment according to Range Specialist Mary Taylor. In addition, virtually the entire allotment is steep slopes where the probability of cultural sites is virtually non-existent. Michael Wolfe 7/02/2013		

One previous site has been documented within the allotment in 1977. It is a historic ranch building is evaluated as potentially eligible to the NRHP (7/20/1977). The site is located on private land. It's a very old site form, livestock impacts are not noted but nothing really is known.

**Table 24: Woodward T. (06835) Literature Review Results**

CULTURAL RESOURCES LITERATURE REVIEW RESULTS				
Allotment Number	Percent of Allotment Previously Inventoried	Number of Sites Known in Allotment	High Potential of Historic Properties	Number of Historic Properties to be Visited
06835	- 5.7 %	2	No	0
<b>Management Recommendations (Additional inventory required and/or historic properties to be visited)</b>		<p>Explanation why field work is or is not needed: There are no livestock concentration areas in this allotment according to Range Specialist Mary Taylor. The majority of allotment is located on steep brushy slopes where the potential for eligible historic properties that would be vulnerable to impacts from grazing is negligible. A likely historic trail is located in T3S, R94W, Section 36, in the eastern most portion of the allotment. It remains undocumented and un-evaluated. It appears on the Thirteenmile Creek, Colorado 7.5' map as the "Ute Stock Driveway". The "Ute Stock Driveway" trail should be researched, documented, and evaluated when time permits. The trail shown on the map appears to be located entirely on private land. The trail is no longer in use and continued grazing allowed by the renewal of the allotment permit is unlikely to affect the integrity of the site.</p> <p>Michael Wolfe 7/02/2013</p>		

One previous log cabin site has been documented within the allotment. A Native American human burial (5RB3570) is located on private land within the allotment and was investigated in 1993 by the Office of Archaeology and Historic Preservation of the Colorado Historical Society, and the Office of Archaeology and Historic Preservation for the Colorado Commission of Indian Affairs under the provisions of the Unmarked Human Graves (CRS 24-80-1302 and 24-80-1302). The exposed burial was reburied in place. Both sites are evaluated as not eligible to the NRHP. The burial, being located on private land, is not the responsibility of the BLM.

Human remains discovered on state or private lands in Colorado will be treated under the provisions of applicable Colorado state law regarding Unmarked Human Graves (CRS 24-80-1302; 24-80-1303).

A likely historic trail is located in T3S, R94W, Section 36, in the eastern most portion of the allotment. It remains undocumented and un-evaluated. It appears on the Thirteenmile Creek, Colorado 7.5' map as the "Ute Stock Driveway". The trail appears to be almost entirely on private land. The BLM does not have the authority to require survey on private land as a condition of issuing a grazing permit.

If historic properties are located during any subsequent field inventory or reconnaissance and the BLM determines that grazing activities will adversely impact the properties, mitigation will be identified and implemented in consultation with the Colorado State Historic Preservation Office (SHPO).

*Environmental Consequences of the Proposed Action (Alternative A and B):*

Direct and Indirect Effects: The direct impacts that occur where livestock concentrate include trampling, chiseling, and churning of site soils, cultural features, and cultural artifacts, artifact breakage, and impacts from standing, leaning, and rubbing against historic structures, above-ground cultural features, and rock art. Indirect impacts include soil erosion, gullyng, and increased potential for unlawful collection and vandalism.

Cumulative Effects: Continued grazing may cause substantial ground disturbance and cause cumulative, long term, irreversible adverse effects to historic properties.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

Direct and Indirect Effects: Impacts to cultural resources from grazing would lessen under the No Grazing Alternative. Direct impacts from trampling by domestic stock would cease on federally administered lands.

Cumulative Effects: The cumulative effects from over 100 years of grazing would continue to effect cultural resources. Sheet wash erosion, gullyng, and increased erosion rates, which together form a large component of the detrimental impacts from grazing to cultural resources, would continue, but gradually lessen over time on public lands.

*Mitigation:*

1. The permittee is responsible for informing all persons who are associated with the allotment that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts. If archaeological materials are discovered as a result of operations under this authorization, the permittee must immediately contact the appropriate BLM representative.
2. Pursuant to 43 CFR 10.4(g), the permittee must notify the AO, by telephone and 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 permittee must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

## **PALEONTOLOGICAL RESOURCES**

*Affected Environment:* Cow Creek Allotment, 06019: The Cow Creek Allotment is in an area that is generally mapped as including the Uinta Formation (Tweto 1979), a Potential Fossil Yield Classification (PFYC) 5 formation, the Parachute Creek Member of the Green River Formation (*ibid.*) a PFYC 5 formation, and the Douglas Creek Member of the Green River Formation (*ibid.*) also listed as a PFYC 5 formation by the BLM. Formations identified as PFYC 5 formations are formations that are generally known to produce scientifically noteworthy or significant (WO-IM 2009-011 attachments 1 and 2) fossil resources (c.f. Armstrong and Wolny 1989).

Coal Mine Ind. Allotment, 06017: The Coal Mine Ind. Allotment is located in an area generally mapped as the Williams Fork Formation (Tweto 1979) which the BLM has classified as a PFYC

5 formation meaning it is known to produce significant fossil resources (WO-IM-2009-011, c. f. Armstrong and Wolny 1989).

Woodward T Allotment, 06835: The Woodward T Allotment is in areas generally mapped as being located in elements of the Williams Fork Formation (Tweto 1979), a PFYC 5 formation and the Mancos Shale (*ibid.*), a PFYC 3 formation. The importance of the Williams Fork Formation has been discussed above. The Mancos Shale is classified as a PFYC 3 formation in the WRFO generally indicating that there is insufficient data currently available to determine if significant (WO-IM-2009-011 attachments 1 and 2) fossil resources are present. In other areas the Mancos Shale is known to produce a variety of vertebrate marine fossils such as mosasaurs, plesiosaurs, various fish like animals and a number of invertebrates (c. f. Armstrong and Wolny 1989).

*Environmental Consequences of the Proposed Action and Continuation of Current Management (Alternative A and B):*

Direct and Indirect Effects: On all of the identified PFYC 5 formations in all of the identified grazing allotments the direct effects of livestock grazing are related to any trampling on the exposed horizontal elements of the formations. Trampling along trails and in concentrations areas has the potential to displace and crush fossils, especially the smaller and more fragile specimens. Exposed portions of larger fossils can also be crushed and dispersed in areas of concentrated trampling. In areas where livestock concentrate and create an area denuded of vegetation there is an increased potential for accelerated erosion to expose more of the formation to weathering and the resulting loss of fossils.

Vertical exposures of the formations may be exposed to more rubbing and scratching as livestock congregate in those areas as they either seek shade during the heat of the day or even seeking warmth in the cool of the evenings or mornings due to the radiant heat release of the exposed rock. Such rubbing and scratching has the potential to displace smaller fossil from there context in the formations and resultant loss of contextual data as well as the fossils themselves. Larger fossil specimens can be fractured and displaced as a result of scratching and rubbing potentially removing important diagnostic features of the individual bones.

Impacts to fossil resources in PFYC 3 formations is harder to analyze as there is less certainty as to the presence or absence of fossil resources and the scientific importance of any fossil that might be present.

Since the number of AUMs and number of livestock do not change for the Cow Creek allotment or the Woodward T and Coal Mine Ind. allotments compared to the current grazing situation there would be no significant difference in impacts than would occur under the current grazing regime. Differences are strictly related to time of potential impacts and not area grazed or duration of grazing in the area.

Cumulative Effects: Impacts from livestock grazing that include potential increases in erosion or trampling from concentration and trailing areas constitute an irreversible, irretrievable permanent loss the regional paleontological database. There is a greater potential for loss of fossils and scientific data in formations that are classified as PFYC 5. Loss of data from the

PFYC 3 formation has an unknown potential for loss of scientific data from the regional paleontological database.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

Direct and Indirect Effects: There would be no grazing impacts to fossil resources under the No Livestock Grazing Alternative. There would be no potential for livestock concentration on any exposed horizontal outcrops of fossil bearing formations nor would any livestock rubbing and scratching on vertical surfaces.

There would not be an increased potential for erosion where areas are trampled and vegetation is removed on shallow soils or near exposed outcrops of fossiliferous formations.

Cumulative Effects: Under Alternative C grazing would cease on public lands within the grazing allotments, but the natural very slow weathering and erosion process that has taken place for centuries would continue. Smaller fossils would be gradually exposed and washed away as the formation weathers. Larger fossils would be slowly exposed and weathered resulting in eventual fragmentation and loss of exposed portions of the remains.

The above losses are considered irreversible, irretrievable and permanent, but occur as such a slow rate that they are not generally regarded as unacceptable from a scientific perspective.

*Mitigation:*

The permittee/applicant is responsible for informing all persons who are associated with the allotment operations that they will be subject to prosecution for disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands. If any paleontological resources are discovered as a result of operations under this authorization, the permittee/applicant must immediately contact the appropriate BLM representative.

## **NATIVE AMERICAN RELIGIOUS CONCERNS**

*Affected Environment:* There are no known traditional cultural properties of concern to Native American groups located on the BLM administered land within the three allotments, but the various tribes have expressed general concerns with grazing activities. The tribes are concerned with the impacts of undertakings on all archaeological sites and especially cultural sites with definitive Ute affiliation such as standing structures and rock art. Because each tribe has in recent years has expressed concerns for federal undertakings, it is difficult to make blanket statements summarizing their concerns.

On April 9, 2012, the WRFO requested consultation with the Ute Tribe of the Uinta and Ouray Reservation, the Ute Mountain Ute Tribe, the Southern Ute Tribe, the Eastern Shoshone Tribe, and the Shoshone Tribe of the Fort Hall Reservation, identifying all then-proposed FY 2012 Environmental Assessments and providing links to a continuously updated list of WRFO EAs. Tribal comments were requested by 30 days after receipt of the letters. A follow-up call was

made to each tribe on May 22, 2012. (Kristin Bowen 2012)

Alden Naranjo, tribal NAGPRA representative for the Southern Ute Tribe called back May 22, 2012 to speak with Kristen Bowen, WRFO archaeologist. They discussed concerns with grazing among other things; he definitely does not want areas to be overgrazed. Below is the conversation record:

*“His main concern would be with structures, like rock shelters and wickiups. We talked about fencing sites, and if he like this? He said on one hand fences keep out cows, but then invite people to loot the sites. He asked what we were doing to document sites like wickiups, and I told him the usual recording procedures. He asked if we could dismantle a wickiup and reconstruct it elsewhere, like in a museum. I told him we wouldn't be looking to do that. I asked how he would like consultation done for grazing. This time I sent a list of our permit renewals for the year, and asked if he want separate detailed consultations for permit renewals? He said he would like to see more information on what sites are in the allotment. He would like a 500 foot buffer avoidance area on sites for oil and gas development. He said at least a couple hundred yards buffer on sites at the minimum. I asked if this should be for all sites, or just for those with fragile features, like standing wickiups. His response was that “fragile features would be the best to protect”.*

During a face to face consultation with Betsy Chapoose, Native American Grave Protection and Repatriation Act (NAGPRA) representative for the Ute Indian Tribe on May 2, 2012 in the field for the Oil Shale Preliminary Environmental Impact Statement (PEIS), the issue of grazing permits was brought up. A summary of her comments is below:

*She said she wants BLM to send an annual list of the permits, but with more detail on what sites are in the permit. She said they don't like cows, they are not natural to be on archaeological sites. However, when fencing off of sites was brought up she expressed a dislike of that more than cows being on a site. “She does not want attention drawn to archaeological sites, so she does not want them fenced, or signed, or datums put in them.*

As of June 11, 2012 no replies have been received from the Eastern Shoshone Tribe.

As of June 12, 2012 no replies have been received from the Ute Mountain Indian Tribe.

*Environmental Consequences of the Proposed Action and Continuation of Current Management (Alternative A & B):*

Direct and Indirect Effects: The direct impacts that occur where livestock concentrate include trampling, chiseling, and churning of site soils, cultural features, cultural artifacts, artifact breakage, and impacts from standing, leaning, and rubbing against historic structures, above-ground cultural features, and rock art. Indirect impacts include soil erosion, gullyng, and increased potential for unlawful collection and vandalism.

In addition to the above described direct and indirect effects which are the same as for cultural resources in general, Native Americans generally view the landscape for additional values of

integrity such as landscape, setting, feeling, and association. To them the landscape itself is often viewed as a sacred, a whole entity in itself. This is in conflict with the general Euro-American view and use of the land. Archaeological sites have great value and meaning to Native Americans, and any on-going use that affects the "natural" processes and passage of time is contrary to traditional Native American values. Continued grazing by livestock will have negative direct and indirect effects to archaeological sites and the general landscape that has importance to Native Americans.

**Cumulative Effects:** Continued grazing may cause substantial ground disturbance and cause cumulative, long term, irreversible adverse effects to historic properties.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

**Direct and Indirect Effects:** Substantial direct and indirect impacts from grazing (mentioned above in Alternative A and B) will lessen and therefore lessen the potential adverse effects to historic properties.

**Cumulative Effects:** The condition of the land will continue to gradually improve in some ways benefiting the general integrity of archaeological sites and the general setting, landscape and feeling of the area, but increased foliage resulting from a no grazing on public lands could lead to an increased danger of wildland fire which can have detrimental effects to the natural landscape. Because grazing has been a part of the landscape for well over 100 years, it is unclear what the effects would be to the landscape in general if grazing of domestic animals was suddenly stopped.

## **FOREST MANAGEMENT**

*Affected Environment:* Three forest types occur within the Cow Creek, Coal Mine Ind. and Woodward T allotments they are; pinyon/juniper, aspen and Douglas-fir. Within all three allotments, pinyon/juniper woodlands are located on both productive and dry exposure stand classes of pinyon/juniper as defined by a survey performed by WRFO personnel from 2003-2005. Productive exposure types occur on primarily lower gradient slopes on north and east aspects. Growth rates are higher in these areas due to soil features which allow for effective use of precipitation. Dry exposure types occur when slopes and soil features do not allow for the retention of precipitation. The growth rates within these areas are low and most generally the trees present are mature. These habitat types are further broken down based on the age class of the stand. In this case on the Cow Creek allotment tree stands are typically mature. On Woodward T the stands of trees are young and on Coal Mine Ind. the stands of trees are mature and young. Mature pinyon/juniper trees on productive exposure establish themselves as the dominant plant community on the site. Young pinyon/juniper trees are a component of the plant community or encroach into sagebrush and mountain shrub communities in the absence of reproduction through time and will eventually establish as the dominant plant community. Mature stands are valuable locally as a source of firewood. Encroachment sites of young pinyon trees are valuable for posts for fence construction. Some personal use of pinyon/juniper in the form of firewood and posts does occur, but this is insignificant for the permit renewal.

Aspen generally occur in pockets at higher elevations on north and east exposures. In general aspen provides significant forage resources in the under story. Aspens typically grow in large clonal colonies and are fast growing. Aspens are well known for their ability to regenerate from sprouts easily after fire or tree harvest. Douglas-fir occurs on steep north and east slopes with sparse under stories.

*Environmental Consequences of the Proposed Action and Continuation of Current Management (Alternative A &B):*

Direct and Indirect Effects: The pinyon/juniper woodland does provide wood products, primarily firewood and fence posts. The woodland type is also important shelter for wildlife and livestock. Livestock grazing in general has not been shown to directly impact existing pinyon/juniper woodlands. Generally the pinyon/juniper type provides little forage for livestock, unless the over story is removed mechanically or by fire. 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. Most classes of domestic livestock utilize young quaking aspen. Domestic cattle browse on the leaves and twigs of young trees that are within their browse level. Heavy livestock and wildlife browsing can adversely impact aspen growth and regeneration. However, after six to eight years aspens can grow out of reach to large ungulates so browsing effects on tree foliage decreases.

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

Cumulative Effects: Grazing decreases fine fuel loading decreasing the intensity and frequency of fires which would kill seedling and sapling trees in all three stand types. Removing trees in pinyon/juniper and aspen areas increases the likelihood of open areas, which are preferred as foraging areas by wildlife and livestock. However, removing seedlings and saplings will decrease the pinyon/juniper, Douglas-fir and aspen stands viability to continue to persist in the grazing area.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

Direct and Indirect Effects: Under this alternative grazing management would have no effect on pinyon/juniper, aspen or Douglas-fir stands. This alternative provides for total rest of the area, which would allow for aspen to vegetatively reproduce and pinyon/junipers to encroach into the sagebrush communities.

Cumulative Effects: Under this alternative pinyon/juniper, Douglas-fir and aspen seedlings would not be grazed by livestock, but wildlife would continue to browse on the young trees. There would be an increase in the cover and composition of desired forage species that would compete with juniper and aspen seedlings. The current aspen stand will continue to age eventually becoming decadent enough to cause the stand to die out. The pinyon/juniper and Douglas-fir stands will continue to mature into old growth stands.

*Mitigation:* None.

## RANGELAND MANAGEMENT

*Affected Environment:* Aaron C Woodward (0501418 and 0501535) is the authorized grazing permit holder for the Cow Creek, Coal Mine Independent, and Woodward T allotments. The Woodward T and Coal Mine Independent allotments are classified as custodial allotment in the 1997 White River ROD/RMP and the Cow Creek allotment is classified as an improve category allotment. The 1997 White River ROD/RMP outlines a minimum rest requirement on the Cow Creek allotment from April 28<sup>th</sup> to July 25<sup>th</sup> 1 in 2 years.

Tables 25-31 (Acres & AUM Breakdown) are a summarization of the individual livestock grazing capacity tables, which are broken down by surface ownership (BLM, private, State of Colorado), ecological site and Acres/AUM for each allotment and pasture within the Cow Creek allotment. As stated earlier, an AUM is the amount of forage necessary for the sustenance of 1 cow/calf pair for a period of 1 month. The acres & AUM tables show an estimated carrying capacity (AUMs) of livestock for land ownership of all allotments and pastures associated with the Proposed Action. The Percent Public Land (% PL), which is the percentage of the BLM AUMs in relation to total AUMs, was determined for each of the allotments. The grazing permittees submitted a *Grazing Application for Permit Renewal* developed with the BLM, and the livestock grazing capacity analysis of forage production were used to determine the rangeland's available forage contribution (AUMs), even though in certain instances the estimated grazing capacity exceeds that within the *Grazing Application for Permit Renewal* and Proposed Action. Reasons for the higher livestock carrying capacity AUMs are that the application and Proposed Action take into consideration such factors as available water, distance from water to foraging areas, cattle distribution, and herding practices.

The tables are also based upon a moderate stocking level that is generally less than the stocking rates recommended by the Natural Resources Conservation Service (NRCS) for the specific ecological sites. The reason for this is in consideration of a moderate stocking level that meets Public Land Health Standards in relation to the rangeland's carrying capacity and current rangeland conditions.

**Table 25: AUM Calculations for the Coal Mine Independent Allotment**

AUM Calculation within the Coal Mine Independent Allotment							
Ecological Site	BLM Acres	Private Acres	Estimated Acre/AUM BLM	Estimated Acre/AUM Private	Estimated AUMs BLM	Estimated AUMs Private	Total AUMs
Brushy Loam	43	0	4	N/A	11	0	11
Deep Loam	10	0	4	N/A	3	0	3
None	150	0	0	N/A	0	0	0
<b>Total AUMs</b>					<b>14</b>		<b>14</b>

**Table 26: AUM Calculations for the Woodward T Allotment**

AUM Calculation within the Woodward T Allotment							
Ecological Site	BLM Acres	Private Acres	Estimated Acre/AUM BLM	Estimated Acre/AUM Private	Estimated AUMs BLM	Estimated AUMs Private	Total AUMs
Brushy Loam	590	183	6	7	98	26	124
Deep Clay Loam	1	14	10	9	0	2	2
Deep Loam	0	24	N/A	8	0	3	3
Loamy Slopes	35	0	8	N/A	4	0	4
Mountain Loam	5	1	7	7	1	0	1
Mountain Shale	0	17	N/A	5	0	3	3
Mountain Swale	30	10	4	5	8	2	10
None	295	42	0	0	0	0	0
Stony Foothills	3	28	8	8	0	4	4
<b>Total AUMs</b>					<b>111</b>	<b>40</b>	<b>151</b>

**Table 27: AUM Calculations for the Bear Pasture of the Cow Creek Allotment**

AUM Calculation in the Bear Pasture of the Cow Creek Allotment							
Ecological Site	BLM Acres	Private Acres	Estimated Acre/AUM BLM	Estimated Acre/AUM Private	Estimated AUMs BLM	Estimated AUMs Private	Total AUMs
Brushy Loam	246	0	7	0	35	0	35
Dry Exposure	15	1	15	1	1	0	1
Loamy Slopes	1080	12	8	12	135	1	136
Mountain Loam	918	0	7	0	131	0	131
Mountain Swale	12	0	5	0	2	0	2
None	139	0	0	0	0	0	0
Rolling Loam	3	0	8	0	0	0	0
Stony Foothills	60	0	8	0	8	0	8
<b>Total AUMs</b>					<b>313</b>	<b>1</b>	<b>314</b>

**Table 28: AUM Calculations for the Corral Pasture of the Cow Creek Allotment**

AUM Calculation within the Corral Pasture of the Cow Creek Allotment							
Ecological Site	BLM Acres	Private Acres	Estimated Acre/AUM BLM	Estimated Acre/AUM Private	Estimated AUMs BLM	Estimated AUMs Private	Total AUMs
Brushy Loam	0	19	0	5	0	4	4
Loamy Slopes	4	203	6	6	0	34	34
Mountain Loam	149	456	4	4	37	114	151
None	17	240	0	0	0	0	0
Rolling Loam	0	57	0	6	0	10	10
<b>Total AUMs</b>					<b>37</b>	<b>162</b>	<b>199</b>

**Table 29: AUM Calculations for the Cow Pasture of the Cow Creek Allotment**

AUM Calculation within the Cow Pasture of the Cow Creek Allotment							
Ecological Site	BLM Acres	Private Acres	Estimated Acre/AUM BLM	Estimated Acre/AUM Private	Estimated AUMs BLM	Estimated AUMs Private	Total AUMs
Brushy Loam	231	854	7	7	33	122	155
Dry Exposure	5	0	15	0	0	0	0
Loamy Slopes	508	345	8	8	64	43	107
Mountain Loam	664	1481	7	7	95	212	307
Mountain Swale	16	128	5	5	3	26	29
None	273	223	0	0	0	0	0
<b>Total AUMs</b>					<b>195</b>	<b>403</b>	<b>598</b>

**Table 30: AUM Calculations for the Long Ridge Pasture of the Cow Creek Allotment**

AUM Calculation within the Long Ridge Pasture of the Cow Creek Allotment							
Ecological Site	BLM Acres	Private Acres	Estimated Acre/AUM BLM	Estimated Acre/AUM Private	Estimated AUMs BLM	Estimated AUMs Private	Total AUMs
Brushy Loam	647	79	7	7	92	11	103
Foothill Swale	47	23	7	7	7	3	10
Loamy Slopes	551	12	8	8	69	2	70
Mountain Loam	659	0	7	0	94	0	94
Mountain Swale	67	0	5	0	13	0	13
None	254	97	0	0	0	0	0

Stony Foothills	481	27	8	8	60	3	64
<b>Total AUMs</b>					<b>335</b>	<b>19</b>	<b>354</b>

**Table 31: AUM Calculations for the Trapper Pasture of the Cow Creek Allotment**

AUM Calculation within the Trapper Pasture of the Cow Creek Allotment							
Ecological Site	BLM Acres	Private Acres	Estimated Acre/AUM BLM	Estimated Acre/AUM Private	Estimated AUMs BLM	Estimated AUMs Private	Total AUMs
Brushy Loam	118	0	7	0	17	0	17
Loamy Slopes	210	0	7	0	30	0	30
Mountain Loam	313	0	6	0	52	0	52
None	18	0	0	0	0	0	0
<b>Total AUMs</b>					<b>99</b>	<b>0</b>	<b>99</b>

*Environmental Consequences of the Proposed Action (Alternative A):*

Direct and Indirect Effects:

Cow Creek: The Cow Creek (06019) allotment is classified as an Improve category allotment, and the proposed management on the Cow Creek allotment implements a rotation between the five pastures in order to meet the minimum rest requirements in the 1997 White River ROD/RMP. The minimum rest requirement for this allotment is from 4/28 to 7/25 one in two years. The Proposed Action will fully accomplish this requirement for livestock management by splitting the Long-Ridge pasture into two sub-pastures, and rotating the other four. This management strategy will also provide adequate recovery and regrowth periods for vegetation as well as allow opportunity for seed production, dissemination, and germination in order to maintain rangeland health.

Impacts will still occur to vegetation from trampling and utilization as outlined in the vegetation section, but use will be managed in a manner to maintain rangeland health in the long-term. Areas of common congregation such as those around water and in areas where supplements are put out will experience higher levels of use. However any supplemental mineral placed on the allotment will not be within 0.25 miles of water sources as outlined in the 1997 White River ROD/RMP, and will be placed in a manner to aid in livestock distribution throughout the allotment.

Woodward T and Coal Mine Independent: Direct and Indirect Effects for the Proposed Action and Continuation of Current Management (Alternatives A & B)

The Proposed Action and continuation of current management alternatives for the Woodward T and Coal Mine Independent allotments are the same. These allotments are both as classified as custodial allotments with all acres meeting Public Land Health Standards. The Woodward T allotment has a rest requirement in the RMP from 3/1 to 6/1 yearly. This alternative will allow livestock on the allotment 15 days prior to the rest requirement date, but use rates are light and the allotment is currently meeting standards and it is believed this allotment will continue to meet standards into

the future. As outlined in the Proposed Action, annual use plans will be submitted by the permittee 30 days prior to turnout, and if the range is not ready for turnout by 5/15, turnout can be delayed until range readiness surveys indicate it is okay to put livestock on the allotment.

The Coal Mine Independent allotment has a rest requirement of April 20<sup>th</sup> to July 20<sup>th</sup> two in three years. This alternative will again not meet the requirement outlined in the RMP, but light use by 3 cows is not expected to impact rangeland health, and it is believed this allotment will continue to meet Public Land Health Standards.

Impacts from livestock grazing are expected to be the same as those analyzed on the Cow Creek allotment, and all supplemental minerals will be used in the same way as described in the Cow Creek allotment. Overall rangeland health is anticipated to be maintained under this alternative for both allotments.

Cumulative Effects: Past and present livestock use within the three grazing allotments has resulted in some areas not meeting Land Health Standards in the Cow Creek allotment due to the construction of range improvements, and congregation of livestock in certain areas. Livestock use into the future using the management described in the Proposed Action is not anticipated to create any more cumulative impacts to vegetation or rangelands.

*Environmental Consequences of Continuation of Current Management (Alternative B):*

Direct and Indirect Effects:

Cow Creek: The continuation of current management alternative on the Cow Creek allotment does not have any type of grazing rotation. The Cow pasture of the allotment will experience the primary impacts since use will occur every year from June 15<sup>th</sup> to July 31<sup>st</sup> which will not meet the requirements of the 1997 White River ROD/RMP on an allotment categorized as an improve allotment. Use by livestock on this allotment every year during the growing season will limit opportunity for vegetation regrowth, and seed production and dissemination. Use on the remaining four pastures of the allotment would be outside of the growing season and would provide ample opportunity for vegetative growth and seed production/dissemination.

Cumulative Effects: Past and present livestock use within the three grazing allotments has resulted in some areas not meeting Land Health Standards in the Cow Creek allotment due to the construction of range improvements, and congregation of livestock in certain areas. Livestock use into the future using the management described in the Proposed Action is not anticipated to create any more cumulative impacts to vegetation or rangelands.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

Direct and Indirect Effects: The no grazing alternative would give the greatest benefit to rangelands due to no use from livestock. The no grazing alternative provides the greatest opportunity for plant growth, increased plant vigor, and seed head production. This alternative does violate the Taylor Grazing Act and 1997 White River ROD/RMP which identifies these areas as leasing areas for livestock grazing, and describes grazing as an acceptable use on public lands.

**Cumulative Effects:** Past and present grazing has occurred on the allotments and is expected to continue into the future. The no grazing alternative would provide the greatest benefit to rangelands, and would not be expected to result in any cumulative effects detrimental to long-term rangeland health. The grazing permittee could continue to graze on private lands within the allotment, however fences would have to be constructed on private/BLM land boundaries to keep livestock on private lands which would further fragment the landscape, and create potential impacts on areas of BLM lands adjacent to private lands.

*Mitigation:* None.

## RECREATION

*Affected Environment:* The proposed project area is located within the White River Extensive Recreation Management Area (ERMA) on BLM lands administered by the WRFO. The WRFO manages the ERMA to provide for unstructured recreation activities, and a diversity of outdoor recreation opportunities, including hunting, dispersed camping, hiking, horseback riding, wildlife viewing, and off-highway vehicle (OHV) use are to be maintained and protected.

The primary recreational activity occurring in the proposed project area is big game hunting from late August through November each year. Other recreational activities in this area include a low amount of recreational Off-Highway Vehicle use, a low amount of mountain lion hunting, and dispersed camping associated with big game hunting. There is one Special Recreation Permit (SRP) for commercial guiding for big game hunting and 12 SRPS for commercial guiding of mountain lion hunting that overlap with portion of the Proposed Action. The Proposed Action is located within Colorado Parks and Wildlife's Game Management Unit (GMU) 22. Elk and Deer licenses for this GMU are generally combined with several other GMUs offering hunting in a large geographic area.

A large portion of the Cow Creek allotment is located in a limited travel designation area. The 1997 WRFO Resource Management Plan states that the Cow Creek area will be closed to motorized vehicle use from August 15 through November 30 each year in order to establish non-motorized quality hunting areas.

### *Environmental Consequences of the Proposed Action (Alternative A):*

**Direct and Indirect Effects:** The proposed grazing schedule includes the grazing of cattle that largely occurs outside the dates of big game hunting seasons which are the primary recreational activity in this area. The proposed grazing schedule and big game hunting does overlap from late August through September of each year when there are two big game hunting seasons. Big game archery season in GMU 22 is typically from late August through September of each year. Big game muzzleloader season is typically the third week in September. For 2013 the dates are September 14-22. Therefore, there is some potential for grazing activities, such as presence of cattle or motorized administration of the permit by the permittee, to conflict with desired big game hunting experiences and indirect benefits from late August through September. The overall extent is a relatively small portion of public lands with approximately 350 cattle on

2-3,000 acres of public lands of GMU 22's approximately total 650,000 acres. The existing grazing schedule includes the same overlap as the proposed grazing schedule with slightly differing allotments and dates. There have been no known conflicts reported to the WRFO as a result of the grazing and big game hunting overlap in this overall grazing area.

Authorized administrative motorized vehicle use by the permittee is proposed within the limited travel designation area on existing routes from August 15 to September 30 to administer the grazing permit only (see Figure 2 in the Transportation and Access section). Administrative use on roads that are closed to the general public during hunting season could create potential misunderstandings and negatively impact recreational experiences, which would indirectly impact recreational benefits that the users take home with them when they leave public lands. The overall extent of this impact is relatively small and includes five un-numbered native surface BLM roads within the limited travel designation area for a total of approximately 12.5 miles of routes, of which it is anticipated that 4-5 miles of these routes may be traveled with motorized vehicles for six weeks during big game hunting seasons in a few drainages.

Cumulative Effects: Combined with other cattle grazing in GMU 22 and other adjacent GMUs during big game archery and muzzleloader seasons, the Proposed Action could incrementally impact hunting experiences and desired benefits.

*Environmental Consequences of Continuation of Current Management (Alternative B):*  
Direct and Indirect Effects: The continuation of the current grazing schedule includes the grazing of cattle that largely occurs outside the dates of big game hunting seasons which are the primary recreational activity in this area. The existing grazing schedule and big game hunting does overlap from late August through September of each year when there are two big game hunting seasons. Big game archery season in GMU 22 is typically from late August through September of each year. Big game muzzleloader season is typically the third week in September. For 2013, the dates are September 14-22. Therefore, there is some potential for grazing activities, such as presence of cattle or motorized administration of the permit by the permittee, to conflict with desired big game hunting experiences and indirect benefits from late August through September. The overall extent is a relatively small portion of public lands with approximately 350 cattle on 2,000-3,000 acres of public lands of GMU 22's approximately total 650,000 acres. There have been no known conflicts reported to the WRFO as a result of the grazing and big game hunting overlap in this overall grazing area.

Cumulative Effects: Combined with other cattle grazing in GMU 22 and other adjacent GMUs during big game archery and muzzleloader seasons, the Proposed Action could incrementally impact hunting experiences and desired benefits.

*Environmental Consequences of No Livestock Grazing (Alternative C):*  
Direct and Indirect Effects: By not grazing livestock in this area, there would be not be any overlap or potential conflict with big game hunting. There would be a change in the vegetation community which may affect big game distribution. These changes are discussed in further detail in the vegetation and wildlife sections.

Cumulative Effects: None identified to recreational or experiences as a result of this alternative.

*Mitigation: None.*

## **ACCESS AND TRANSPORTATION**

*Affected Environment:* The Cow Creek allotment is bounded by paved Rio Blanco Road 5 (Piceance Creek) on the north, graveled BLM Road 1002 (Cow Creek) and Garfield County Road 249 (Roan Cliffs Road) on the west, native surfaced BLM Road 1000 on the south, and native surfaced BLM Road 1253 on the east. There are five un-numbered native surface BLM roads within this allotment as well. A large portion of the Cow Creek allotment is located in a limited travel designation area. The 1997 WRFO RMP/ROD states that the Cow Creek area will be closed to motorized vehicle use from August 15 through November 30 each year in order to establish non-motorized quality hunting areas and limited to existing routes from December 1 to August 14 (see Figure 2). In Figure 2 this is labeled as CLSD\_8/15-11/30, EXTG\_12/1-8/14.

The Woodward T and Coal Mine allotments only include small portions Garfield County Road 253 and 252. These two allotments are located in a limited travel designation area that limits Off-Highway Vehicle use to existing roads and trails from October 1 through April 30 each year. In Figure 2 this is labeled as Existing\_R&T,10/1-4/30.

### *Environmental Consequences of the Proposed Action and Continuation of Current Management (Alternative A & B):*

Direct and Indirect Effects: Authorized administrative motorized vehicle use by the permittee is proposed within the limited travel designation area on existing routes from August 15 to September 30 to administer the grazing permit only. Administrative use on roads that are closed to the general public during hunting season could create potential misunderstandings and negatively impact recreational experiences, which would indirectly impact recreational benefits that the users take home with them when they leave public lands. The overall extent of this impact is relatively small and includes 12.5 miles of routes, of which it is anticipated that 4-5 miles of these routes may be traveled with motorized vehicles for six weeks during big game hunting seasons in a few drainages. Because there is a relatively low potential for the extent or intensity of the proposed motorized use to negatively impact big game hunting experiences and opportunities in the small geographic area requested, and authorizing administrative motorized use for six weeks to the permittee for administering the grazing permit provide substantial benefits to the efficiency of administering this permit, it is recommended that this use be authorized by the Authorized Officer. Traffic volume is expected to be very low, unnoticeable overall, and intermittent throughout the duration of the proposed grazing with no additional impacts to travel times in the area. There are no other anticipated impacts to transportation or access to public lands.

Cumulative Effects: None identified as a result of the Proposed Action.

### *Environmental Consequences of No Livestock Grazing (Alternative C):*

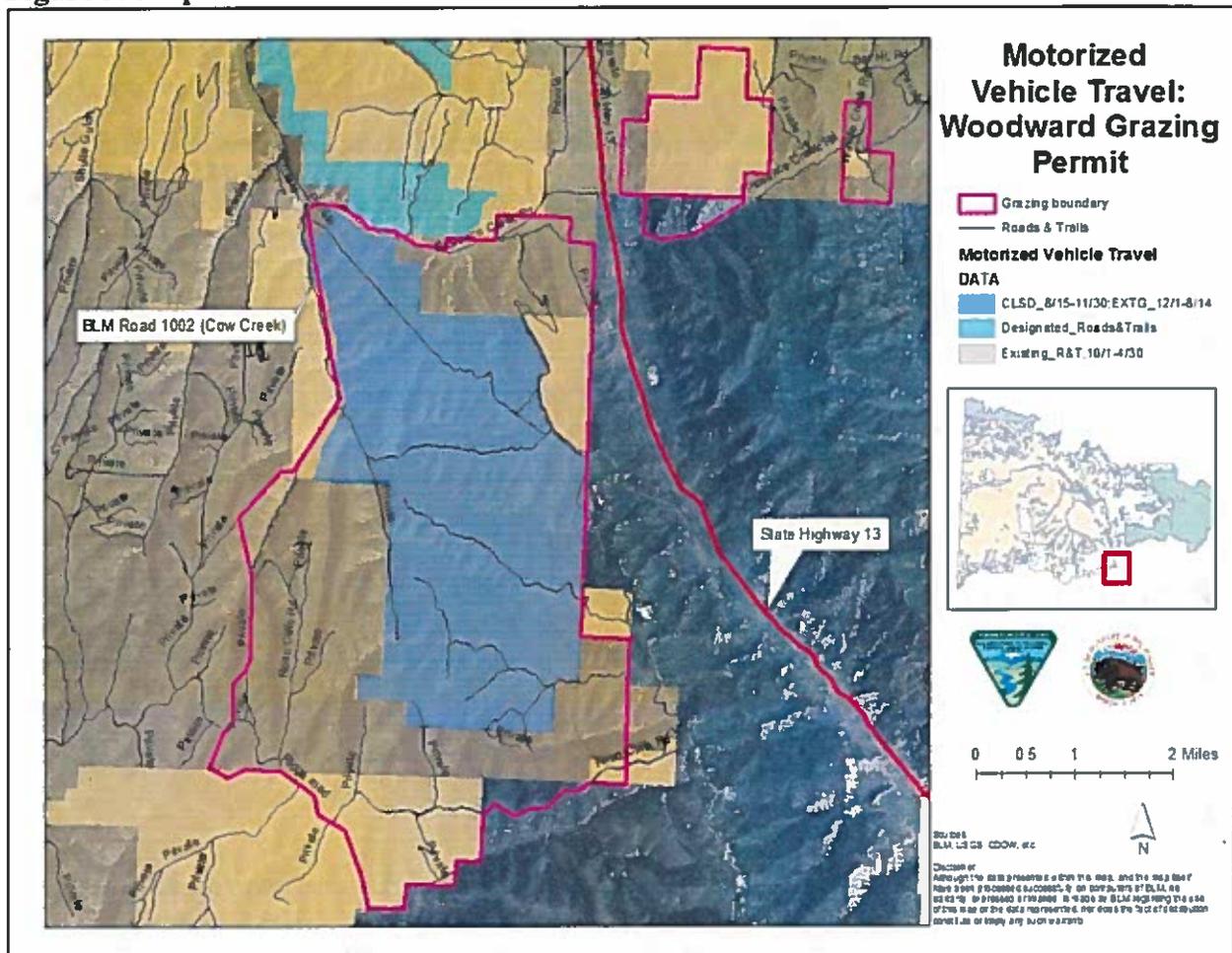
Direct and Indirect Effects: By not grazing cattle in these allotments there would be a very small and unnoticeable reduction in traffic volume to the above described roads. There would also be no potential conflict between authorized administrative use on roads that are

closed to the general public during hunting season which could create potential misunderstandings and negatively impact recreational experiences.

**Cumulative Effects:** None identified as a result of the Proposed Action.

**Mitigation:** None.

**Figure 2: Map of Motorized Vehicle Travel on the Cow Creek Allotment**



## AREAS OF CRITICAL ENVIRONMENTAL CONCERN

**Affected Environment:** The Trapper/Northwater Creek Area of Critical Environmental Concern (ACEC) lies within the Cow Creek allotment, and includes 440 acres administered by BLM. This ACEC was designated in the 2008 “Glenwood Springs Field Office (GSFO) ROD for the Designation of Areas of Critical Environmental Concern for the Roan Plateau RMPA and EIS” to protect “important trout fisheries, sensitive plant species and communities, and remnant vegetation.” There are 438 acres of the ACEC located in the Trapper pasture with the other 2 acres in the Corral pasture of the Cow Creek allotment. Of the 440 acre ACEC a total of 430

acres were rated as not meeting the Standards for upland soils and vegetation as a result of livestock grazing related influences.

*Environmental Consequences of the Proposed Action (Alternative A):*

Direct and Indirect Effects: See Aquatic Wildlife and Vegetation sections for detailed analysis.

Cumulative Effects: See Aquatic Wildlife and Vegetation sections for detailed analysis.

*Environmental Consequences of Continuation of Current Management (Alternative B):*

Direct and Indirect Effects: See Aquatic Wildlife and Vegetation sections for detailed analysis.

Cumulative Effects: See Aquatic Wildlife and Vegetation sections for detailed analysis.

*Environmental Consequences of No Livestock Grazing (Alternative C):*

Direct and Indirect Effects: See Aquatic Wildlife and Vegetation sections for detailed analysis.

Cumulative Effects: See Aquatic Wildlife and Vegetation sections for detailed analysis.

*Mitigation:* None.

**REFERENCES CITED:**

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### **TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED:**

Certified letters requesting consultation for WRFO FY-2012 undertakings were sent April 9,  
2012 to the Ute Indian Tribe, Ute Mountain Indian Tribe, Southern Ute Indian Tribe, and the  
Eastern Shoshone Indian Tribe (see Native American Religious Concerns section above).

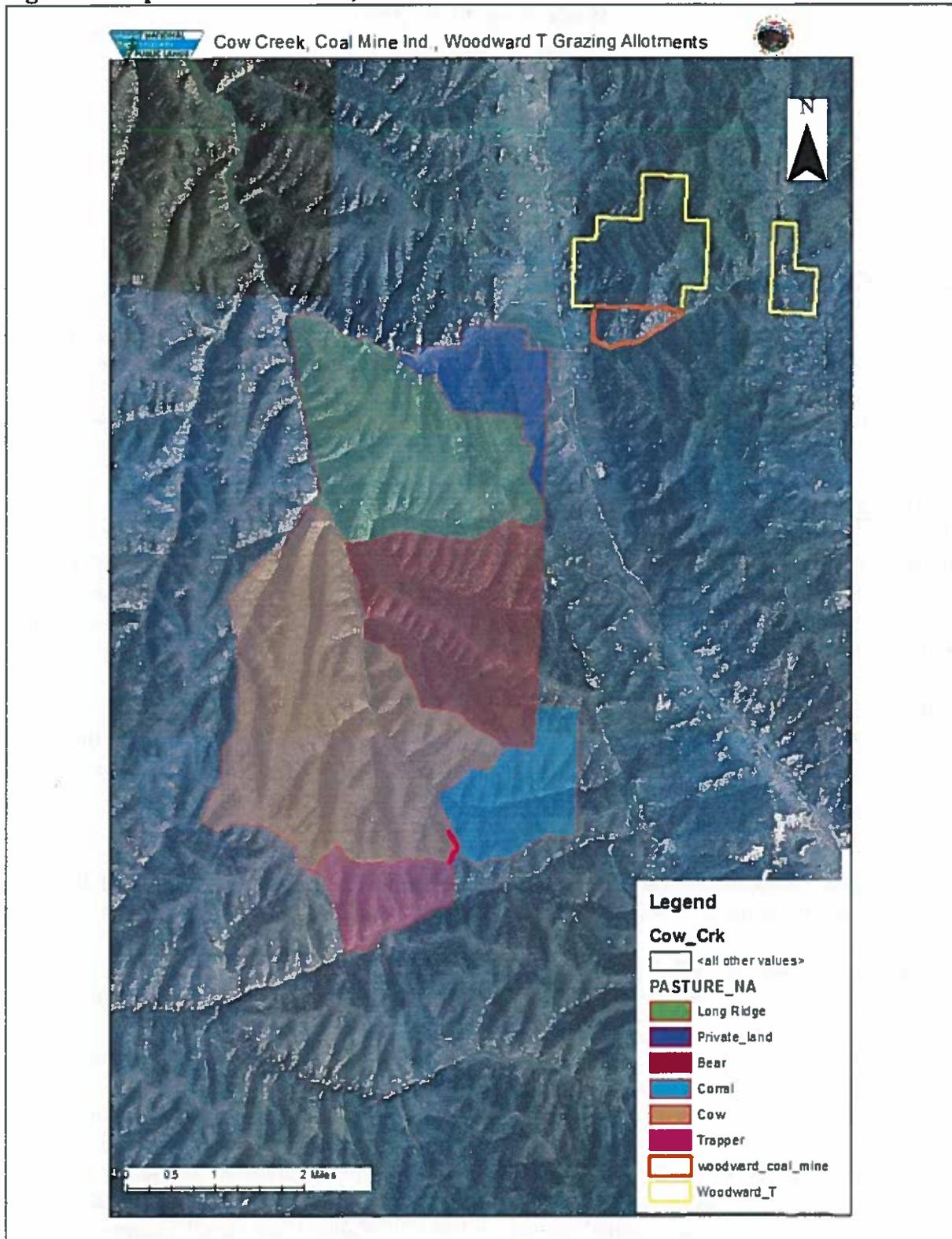
Aaron Woodward, permittee, was consulted on grazing alternatives.

**INTERDISCIPLINARY REVIEW:**

<b>Name</b>	<b>Title</b>	<b>Area of Responsibility</b>	<b>Date Signed</b>
Bob Lange	Hydrologist	Air Quality; Surface and Ground Water Quality; Floodplains, Hydrology, Soils and Water Rights	8/2/2013
Heather Woodruff	Rangeland Management Specialist	Areas of Critical Environmental Concern; Special Status Plant Species	7/10/2013
Heather Woodruff	Rangeland Management Specialist	Forest Management	6/21/2013
Michael Wolfe	Archaeologist	Cultural Resources; Native American Religious Concerns	7/8/2013
Michael Selle	Archaeologist	Paleontological Resources	5/30/2013
Matthew Dupire	Rangeland Management Specialist	Invasive, Non-Native Species; Vegetation; Rangeland Management; Wetlands and Riparian Zones; Soils	1/9/2013
Lisa Belmonte	Wildlife Biologist	Migratory Birds; Special Status Animal Species; Terrestrial and Aquatic Wildlife Wetlands and Riparian Zones	9/3/2013
Matthew Dupire	Rangeland Management Specialist	Hazardous or Solid Wastes	1/9/2013
Aaron Grimes	Outdoor Recreation Planner	Wilderness; Visual Resources; Access and Transportation; Recreation,	7/11/2013
Kyle Frary	Fuels Specialist	Fire Management	7/11/2013
Paul Daggett	Mining Engineer	Geology and Minerals	7/15/2013
Stacey Burke	Realty Specialist	Realty	7/16/2013
Melissa J. Kindall	Range Technician	Wild Horse Management	7/31/2013
Matthew Dupire	Rangeland Management Specialist	Project Lead – Document Preparer	2/6/2014
Heather Sauls	Planning & Environmental Coordinator	NEPA Compliance	2/10/2014

**ATTACHMENTS:**

**Figure 3: Map of the Cow Creek, Coal Min Ind. and Woodward T allotments.**



**U.S. Department of the Interior  
Bureau of Land Management  
White River Field Office  
220 E Market St  
Meeker, CO 81641**

**Finding of No Significant Impact (FONSI)  
DOI-BLM-CO-110-2011-0071-EA**

**BACKGROUND**

Aaron Woodward (0501418 and 0501535) is the authorized grazing permittee on the Cow Creek (06019), Coal Mine Independent (06017), and Woodward T (06835) grazing allotments. On February 24, 2011, The Bureau of Land Management (BLM) White River Field Office (WRFO) received and application for the renewal of his grazing permits. The Proposed Action is for the renewal of the permittees grazing permits for a 10 year period. This EA serves as the AMP for the Cow Creek allotment.

**FINDING OF NO SIGNIFICANT IMPACT**

Based on the analysis of potential environmental impacts contained in the attached environmental assessment (EA), and considering the significance criteria in 40 CFR 1508.27, I have determined that the Proposed Action will not have a significant effect on the human environment. An environmental impact statement is therefore not required. This finding is based on the context and intensity of the project as described below.

**Context**

The project is a site-specific action directly involving BLM administered public lands that do not in and of itself have international, national, regional, or state-wide importance. The applicant does own unfenced private land within the allotments and is the current permit holder.

**Intensity**

The following discussion is organized around the 10 Significance Criteria described at 40 CFR 1508.27. The following have been considered in evaluating intensity for this Proposed Action:

**1. Impacts that may be both beneficial and adverse.**

The beneficial effects of the Proposed Action include support of the local livestock industry and increased stewardship of public lands. The authorized livestock operator has mandatory terms and conditions that must be met to maintain their grazing preference. This provides a certain level of stewardship of public lands in that if these lands were to become degraded by any activity or event, natural or human in origin, grazing and or other authorized uses would be terminated. This stewardship role of the livestock operator not only mandates proper livestock and forage management but also provides communication with the BLM as to other activities or events that could cause degradation to public lands. This grazing management plan is designed to make an effort to bring environmental impacts in line with Public Land Health Standards on the grazing allotments involved with this permit renewal, in particular on the Cow Creek allotment

which is classified as an improve category allotment. Adverse effects include minor impacts to soils and vegetation that will be limited in scope and are expected to be insignificant.

**2. The degree to which the Proposed Action affects public health or safety.**

There would be no impact to public health and safety.

**3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.**

There are no park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas in the area of Proposed Action. The Cow Creek allotment does contain the Trapper/Northwater Creek Area of Critical Environmental Concern (ACEC). This ACEC was designated for protection of “important trout fisheries, sensitive plant species and communities, and remnant vegetation.” With previous management actions that include fencing and implementation of the proposed grazing schedule, impacts to the ACEC are expected to be limited in scope.

**4. Degree to which the possible effects on the quality of the human environment are likely to be highly controversial.**

Livestock grazing has occurred for many years on the Cow Creek, Coal Mine Independent and Woodward T allotments and surrounding areas. The White River ROD/RMP recommends a minimum rotation for the Cow Creek allotment from April 28<sup>th</sup> through July 25<sup>th</sup> every other year. The Proposed Action will meet this requirement with the rotation that has been developed on this improve category allotment. The Coal Mine Independent allotment recommends a rest from April 20<sup>th</sup> to July 20<sup>th</sup> 2 in 3 years, and Woodward T allotment recommends a rest from March 1<sup>st</sup> to June 1<sup>st</sup> yearly. The proposed grazing schedule will not meet the recommendations for these two allotments; however these two allotments are categorized as custodial allotments and currently all acres are meeting Public Land Health Standards within these two allotments. Thus it is anticipated the continuation of current management will result in continuing to meet Public Land Health Standards in the future.

**5. Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risk.**

No highly uncertain or unknown risks to the human environment were identified during analysis of the Proposed Action.

**6. Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.**

The Proposed Action neither establishes a precedent for future BLM actions with significant effects nor represents a decision in principle about a future consideration. Livestock grazing of the proposed allotment has been evaluated since at least the 1981 Grazing Management EIS.

**7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.**

No individually or cumulatively significant impacts were identified for the Proposed Action. Any adverse impacts identified for the Proposed Action, in conjunction with any adverse impacts

of other past, present, or reasonably foreseeable future actions will result in negligible impacts to natural and cultural resources.

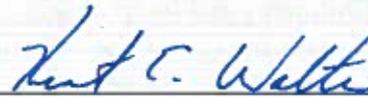
**8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.** Mitigation has been provided to protect cultural resources eligible for listing in the NRHP. Any potential adverse effects have been mitigated.

**9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973.** There are no listed or candidate species which inhabit or make substantial use of habitat within the project area. The Proposed Action should not adversely impact any endangered or threatened species.

**10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.**

Neither the Proposed Action nor impacts associated with it violate any laws or requirements imposed for the protection of the environment.

**SIGNATURE OF AUTHORIZED OFFICIAL:**



Field Manager

**DATE SIGNED:**

02/27/2014