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

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2005-124-EA (Coal Oil Basin)

CASEFILE/PROJECT NUMBER (optional):

PROJECT NAME:

- Grazing Permit Renewal for Wesley and Ila Sturgeon, (0501433), Coal Oil Allotment

LEGAL DESCRIPTION:

Legal Description					
Allotment		BLM			
Name	No.	Acres	Twp.	Range	Section(s)/Lots or Portions Of
Coal Oil	06313	4379	2N	103W	25, 26, 27, 34, 35, 36
			1N	103W	1, 2, 3, 11, 12
			2N	102W	30, 31, 32, 33, 34
			1N	102W	3, 4, 5, 6, 7, 8

APPLICANT: Wesley and Ila Sturgeon (0501433)

ISSUES AND CONCERNS: Within the Coal Oil allotment, Coal Oil Basin forms the eastern portion of allotment and is primarily private lands (2189 controlled private acres, 1630 uncontrolled private acres) with limited BLM lands (840 acres) in the basin. Coal Oil Basin has been heavily impacted from past and current oil/gas development, with over 600 oil and gas wells drilled in the last 70 years within a confined area (4659 acres) on the both private and BLM administrated lands on the allotment (see figure 3: Oil/Gas Wells on the Coal Oil Allotment). Associated with these 600+ wells is a network of access roads, water/gas/oil/CO2 pipelines, well pads, powerlines, compressor stations, etc. on the allotment. A portion of these oil and gas developments have been abandoned/rehabilitated with vegetative cover to provide foraging and soil protection requirements. Overall, the productivity of the rangelands in Coal Oil Basin has been impacted from oil/gas development with a reduction and fragmentation of available forage and habitat.

The grazing permit held by Wesley and Ila Sturgeon expired on 02/28/06 and was reissued in accordance with Sec. 325, Title III, H.R. 2691, Department of Interior Appropriations Act, 2004. Therefore, this document (CO-110-2005-124-EA) will serve in meeting such applicable laws and

regulations outlined in the National Environmental Policy Act (NEPA) and a new grazing permit will be issued under a proposed decision based upon the findings of this EA.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

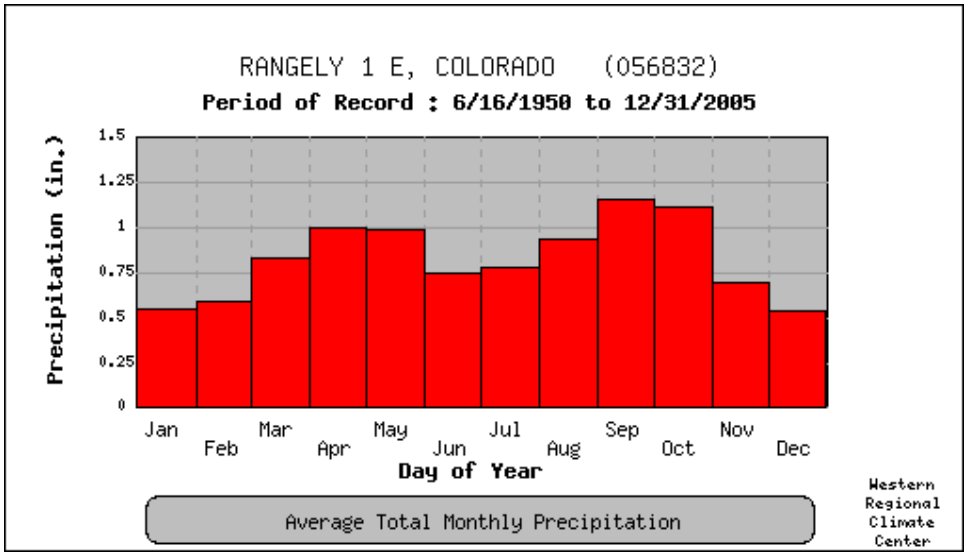
Background/Introduction: The Coal Oil allotment is located approximately 2 mile northwest of the Rangely, Colorado in western Rio Blanco County. Within the Coal Oil allotment, Highway 64 forms the eastern boundary in Coal Oil Basin, a fenceline running Raven Ridge creates the western boundary, Rio Blanco County Road 102 and the White River forms the southern boundary. The north boundary of the allotment is formed by a combination of fences and natural drainages within Coal Oil Basin (see attached allotment map).

The majority of Bureau of Land Management (BLM) administrated acres are located within the ridges located in the western part of the allotment, with private lands mostly located in Coal Oil Basin. The Sturgeons hold a grazing lease with Emerald Oil Advisory Group for 2189 private acres in the allotment within Coal Oil Basin. The table below is an acre breakdown by land status within the Coal Oil allotment.

Breakdown of Acres Controlled by Wesley & Ila Sturgeon (0501433)

Allotment		BLM Acres	State Acres	Private Acres Controlled	Total Acres Controlled	Uncontrolled Private Acres
Name	No.					
Coal Oil	06313	4379	0	2189	6568	1630

Annual precipitation in nearby Rangely, Colorado is 9.88 inches, with the wettest months being September and October (see table below). Precipitation has been below average in the years 2000, 2002-2004, and the spring of 2006. Therefore, below average precipitation levels create a drought situation of lowered vegetative growth. In 2005, the area received favorable moisture levels and timing that bolstered plant production. The spring of 2006 (April, May, June) has been dry which has limited vegetative growth.



Ridgelines in the allotment contour in a northwest to southeast direction with drainages descending through Coal Gulch and Coal Oil Basin drains through Stinking Water Creek and other unnamed drainages. All drainages empty directly into the White River. The elevation ranges from 5160 feet along the White River to 6235 feet at Raven Ridge. Three distinct vegetation communities are located within the allotment: 1) big sagebrush, 2) pinion-juniper, 3) salt-desert shrub.

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.

Allotment Categorization for allotments analyzed in this permit renewal:

- Coal Oil – Custodial, no significant problems, issues, and/or resource conflicts have been identified. Management of the allotment is satisfactory.

Wesley and Ila Sturgeon acquired the grazing preference from J. Rex Robinson in 1986 with no changes to the grazing permit.

A. Proposed Action: Renewal of Wesley and Ila Sturgeon's grazing permit (0501433) for a 10 year period as outlined in the proposed grazing permit table below. Active Animal Unit Months (AUMs), which is the amount of forage necessary for the sustenance of 5 sheep (1 cow) for a period of 1 month, have been adjusted to reflect the carrying capacity of the rangelands as developed in conjunction with the BLM and grazing permittee and submitted by the ranch's *Grazing Application for Permit Renewal* signed on 06/19/06.

Proposed Grazing Permit (0501433) for Wesley & Ila Sturgeon										
Allotment		Livestock		Date		%	BLM	Active	Susp.	Total
Name	No.	Number	Kind	On	Off	PL	AUMs	AUMs	AUMs	AUMs
Coal Oil	06313	615	S	12/16	02/28	63%	**191**	**295**	**0**	**295**
		615	S	03/01	04/10	63%	**104**			

Rangeland Improvements Necessary to Implement the Grazing System:
No rangeland improvements (RI) are proposed to implement the grazing system. Future evaluations of allotment conditions may identify improvements that would aid in achieving objectives. In which case, a separate Environmental Assessment (EA) would be compiled to approve any such new RI on a site specific basis.

Monitoring and Evaluation:
There is one trend site located in the Coal Oil allotment that was established in 1981 and last read in 2005. This trend site includes a permanent, repeatable photo plot and a permanent, repeatable Daubenmire transect line to measure ground cover and frequency. The study site was established in key areas to monitor livestock grazing use. The study site was established under protocol developed in the *Grazing Allotment Monitoring Plan for the White River Resource*

Area. The next cycle for reading the trend study will be in 4-5 years (2009, 2010) and then read again in 9-10 years from now (2014, 2015). Future readings of trend studies by BLM staff are partially dependent upon future workload capabilities and priorities.

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. 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).

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

3. No grazing use can be authorized under this grazing permit/lease during any period of delinquency in the payment of amounts due in settlement for unauthorized grazing use.

4. Grazing use authorized under this grazing permit/lessee may be suspended, in whole or in part, for violation by the permittee/lessee of any of the provisions of the rules or regulations now or hereafter approved by the Secretary of the Interior.

5. This grazing permit/lease is subject to cancellation, in whole or in part, at any time because of:
    a. Noncompliance by the permittee/lessee with rules and regulations now or hereafter approved by the Secretary of the Interior.
    b. Loss of control by the permittee/lessee of all or a part of the property upon which it is based.
    c. A transfer of grazing preference by the permittee/lessee to another party.
    d. A decrease in the lands administered by the Bureau of Land Management within the allotment(s) described herein.
    e. Repeated willful unauthorized grazing use

6. This grazing permit/lease is subject to the provisions of executive Order NO. 11246 of September 24, 1965, as amended, which sets forth nondiscrimination clauses. A copy of this order may be obtained from the authorized officer.

7. The permittee/lessee must own or control and be responsible for the management of the livestock authorized to graze under this grazing permit/lease.

8. The authorized officer may require counting and/or additional/special marking or tagging of the livestock authorized to graze under this grazing permit/lease.

9. The permittee's/lessee's grazing case file is available for public inspection as required by the Freedom of Information Act.

10. In order to improve livestock distribution on the public lands, all salt blocks and/or mineral supplements will not be placed within a 1/4 mile of any riparian area, wet meadow, or watering facility (either permanent or temporary) unless stipulated though a written agreement or decision in accordance with 43 CFR 4130.3-2(c).

11. In accordance with 43 CFR 4130.8-1(F): Failure to pay grazing bills within 15 days of the due date specified in the bill shall result in a late fee assessment. Payment made later than 15 days after the due date, shall include the appropriate late fee assessment. Failure to make payment within 30 days may be a violation of 43 CFR Sec. 4140.1(b) (1) and shall result in action by the authorized officer under 43 CFR Secs. 4150.1 and 4160.1-2 (Trespass).

B. Continuation of Current Management Alternative: Re-issuance of Wesley and Ila Sturgeon's current grazing permit (no changes) for a 10 year period as outlined below.

Current Grazing Permit (0501433) for Wesley & Ila Sturgeon										
Allotment		Livestock		Date		% PL	BLM AUMs	Active AUMs	Susp. AUMs	Total AUMs
Name	No.	Number	Kind	On	Off					
Coal Oil	06313	700	S	12/16	02/28	56%	**193**	**315**	**0**	**315**
		700	S	03/01	04/15	56%	**119**			

Actual use made by livestock since 1993 typically includes spring use until 05/20, with lambing in Coal Oil Basin on mostly private lands (Emerald Oil lease). Since 2000, winter use has been in non-use with livestock grazing during the spring period (until 05/20) making the greatest use on private lands (Emerald Oil Lease). Previous to 1993, grazing was typically made as outlined on the above grazing permit schedule.

C. No Grazing Alternative: No livestock will be authorized on the current permitted Coal Oil allotment. Therefore, the grazing permit held by Wesley and Ila Sturgeon (0501433) will not be renewed.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None

NEED FOR THE ACTION: The grazing permit (0501433) for the Coal Oil allotment (06313) will expire on 02/28/06. These permits are subject to renewal or transfer at the discretion of the Secretary of the Interior for a period of up to 10 years. The BLM has the authority to renew the livestock grazing permit/lease consistent with the provision of the *Taylor Grazing Act, Public Rangelands Improvement Act, Federal Land Policy and Management Act, and the White River Resource Area Resource Management Plan* (RMP*)*. This Plan has been amended by the *Standards for Public Land Health in Colorado*.

In order to graze livestock on public land, the livestock permittee must hold a valid grazing permit. The grazing permittee has a preference right to receive the permit, if grazing is to continue. The RMP allows for grazing to continue on this allotment.

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

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

Date Approved: July 1, 1997

Decision Number/Page: 2-10, 2-22 through 2-26

Decision Language: "Sustain a landscape composed of plant community mosaics that represent successional stages and distribution patterns that are consistent with natural and regeneration regimes, and compatible with the goals identified in Standard Three of the Standards for Public Land Health" (2-10). Also, as stated on page 2-10, the objective of the livestock management program is to improve the rangeland forage resources by managing toward or at a desired plant community (potential natural plant community).

"Maintain or enhance a healthy rangeland vegetative composition and species diversity, capable of supplying forage at a sustained yield to meet the demand for livestock grazing. Provide for adequate forage plant growth and/or regrowth opportunity necessary to : 1) replenish the plants food reserves; and 2) produce sufficient seed to meet the reproduction needs necessary to maintain an ecological presence in the plant community " (2-22 through 2-23).

COMPLIANCE WITH SECTION 302 OF FLPMA RELATIVE TO THE COMB WASH GRAZING DECISION: A review of applicable planning documents and a thoughtful consideration of the new issues and new demands for the use of the public lands involved with these allotments have been made. This analysis concludes that the current multiple use allocation of resources is appropriate.

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

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

STANDARDS FOR PUBLIC LAND HEALTH							
	Current Situation			With Proposed Action		With No Grazing	
Standard	**Acres Achieving or Moving Towards Achieving**	**Acres Not Achiev-ing**	**Causative Factors**	**Acres Achieving or Moving Towards Achieving**	**Acres Not Achiev-ing**	**Acres Achieving or Moving Towards Achieving**	**Acres Not Achiev-ing**
#1-Upland Soils							
Coal Oil Basin	3129	1250	Historical grazing practices, drought	3229	1150	3379	1000
#2-Riparian Systems							
Coal Oil Basin	2.5 miles	0	Concern of cottonwood regeneration resulting from upstream dam (i.e. influencing flooding)	2.5 miles	0	2.5 miles	0
#3-Plant Communities							
Coal Oil Basin	3129	1250	Historical grazing practices, drought	3229	1150	3379	1000
#3-Animal Communities							
Coal Oil Basin	3129	1250	Historical grazing practices, drought	3129	1250	3379	1000
#4-Special Status, T&E Species							
Coal Oil Basin	3129	1250	Historical grazing practices, drought	3129	1250	3379	1000
#5-Water Quality (stream miles)							
Coal Oil Basin	12	5.3	Historical grazing practices, drought	12	5.3	12	5.3

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: The entire White River Resource area has been classified as either attainment or unclassified for all pollutants, and most of the area has been designated prevention of significant deterioration (PSD) class II. The proposed action is located approximately nine miles south of Dinosaur National Monument Visitors Center which is a Class II Airshed with special designations regarding visibility. The air quality criteria pollutant likely to be most affected by the proposed actions is the level of inhalable particulate matter, specifically particles ten microns or less in diameter (PM_{10}) associated with fugitive dust. However, it is apparent that current air quality near the proposed location is good because only one location on the western slope (Grand Junction, CO) is monitoring for criteria pollutants other than PM_{10}. Furthermore,

the Colorado Air Pollution Control Division (APCD) estimates the maximum PM_{10} levels (24-hour average) in rural portions of western Colorado to be near 50 micrograms per cubic meter ($\mu g/m^3$). This estimate is well below the National Ambient Air Quality Standard (NAAQS) for PM_{10} (24-hour average) of 150 $\mu g/m^3$.

Environmental Consequences of the Proposed Action: Potential environmental consequences of the proposed action would be similar to potential consequences of the current grazing operation (Alternative B). However, under the proposed action, active AUMs will be reduced from 315 to 295 which would slightly reduce impacts from current grazing operations. Theoretically, reducing AUMs would leave more ground cover to protect soils from eolian processes minimizing potential production of fugitive dust. However, local climatic conditions will have the strongest hand in determining vegetative health and effective ground cover within the allotment. The proposed grazing management plan should have minimal impacts to air quality.

Environmental Consequences of the Continuation of Current Management Alternative: Under the current grazing system a total of 315 active AUMs will be permitted. Continuation of the current grazing plan combined with recent drought conditions my result in decreased ground cover. Reductions in effective ground cover would leave soils exposed to eolian processes and potentially elevate fugitive dust production.

Environmental Consequences of the No Grazing Alternative: Impacts are not anticipated as a result of the no-grazing alternative

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Mitigation: Implement the proposed grazing management plan.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: The western, north western edge of this allotment touches a very small piece of Raven Ridge ACEC. This western, north western boundary is fenced so that no grazing can occur within the Raven Ridge ACEC.

Environmental Consequences of the Proposed Action: Impacts to the Raven Ridge ACEC from the proposed action are not anticipated provided the boundary fence is maintained; this boundary fence has a cooperative agreement in place.

Environmental Consequences of the Continuation of Current Management Alternative: Impacts from the continuation of current management would be the same as the proposed action.

Environmental Consequences of the No Grazing Alternative: Impacts are not anticipated as a result of the no-grazing alternative.

Mitigation: None

CULTURAL RESOURCES

Affected Environment: The BLM/Colorado SHPO Protocol agreement requires the BLM to identify all historic properties and sacred sites on all lands within Colorado that are within the APE of a BLM undertaking (1998 Protocol VII (A) p. 4), which is defined as the geographic area(s) within which an undertaking may cause changes in the character or use of historic properties (36 CFR 800.2). During Section 106 review, a cultural resource assessment was completed for this allotment on September 5, 2005 following the procedures outlined in IM-WO-99-039, IM-CO-99-007 and IM-CO-99-019. Copies of the cultural resource assessment are available in the White River Field Office archaeology files and the summary report is attached to the range allotment lease file.

One cultural resource inventory has been conducted within the allotment by a White River Field Office Archaeologist and no National Register or otherwise eligible cultural properties are known to be situated in this allotment. There are no known historic or prehistoric properties considered to be potentially 'at risk' from damage due to grazing allotment operations. Based on available data, a low potential exists for historic or prehistoric properties in this Allotment. Subsequent cultural resource inventories may be conducted in areas where livestock concentrations coincide with high potential for discovering vulnerable historic or prehistoric properties.

Environmental Consequences of the Proposed Action: Direct impacts that may occur where livestock concentrate include trampling, chiseling and churning of site soils, cultural features and artifacts, artifact breakage and impacts from standing, leaning and rubbing against above ground features and rock art. Indirect impacts may include soil erosion, gullying and increased potential for unlawful collection and vandalism. In areas where cultural site presence coincides with areas of livestock concentration, continued grazing may contribute to substantial ground disturbance and cause cumulative, long term, irreversible adverse effects to historic properties. Alteration of grazing patterns by rotating pastures should have the effect of decreasing any potential damage to existing cultural resources by decreasing the time frame for impacts on any given site. No increased impacts are anticipated and no impacts to any known historic or prehistoric properties are anticipated.

Environmental Consequences of the No Grazing Alternative: Under this alternative, the grazing lease would not be renewed. This alternative would result in no continuing impacts to historic properties.

Mitigation: Appropriate mitigation measures may be identified in consultation with Colorado SHPO within the ten-year period of this lease. It is recommended that a renewal be issued for this lease subject to the allotment specific stipulations. If historic or prehistoric materials are uncovered by the permittee, the permittee shall immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the BLM.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: Cheatgrass is an invasive, non-native, annual, highly competitive plant species that is the dominant understory within much of Coal Oil Basin and Coal Gulch. This grass can account for approximately 75-80% of the species composition or 30-35% of the canopy cover in these area. Ecological site acres not meeting Public Land Health Standards can mostly be attributed to the prevalence of cheatgrass within the natural plant community (Coal Oil Allotment – 1250 acres). Thus, these plant communities have sufficient cheatgrass in the plant composition and insufficient desirable perennial species to maintain a healthy, viable plant community that meets Public Land Health Standards (see vegetation section for greater analysis).

Halogeton is an invasive, non-native plant species that is also common within the allotment, particularly within disturbed areas (pipelines, roads, pads, etc.) in Coal Oil Basin. It favors dry deserts, barren areas, overgrazed rangelands, roadsides, and other disturbed areas where native vegetation has been removed. Halogeton is especially abundant in alkaline or saline soils and cannot compete effectively with healthy rangeland plants. Therefore, control involves keeping a robust cover of desirable plant communities. Coal Oil Basin has been particularly impacted from previous drought conditions, thus lowering rehabilitation efforts of seeded species along newly disturbed oil and gas developments that enables halogeton to become established within the plant community.

Russian olives and tamarisks are invasive, non-native species that form a robust community along the White River corridor (2 ¼ BLM miles). Tamarisks are also scattered across the allotment to a slight degree in areas with increase water saturation, such as seeps and earthen reservoirs (see vegetation and/or wetland and riparian zones sections for greater analysis).

Hoary Cress (Whitetop), a Colorado listed noxious weed, is found along the White River Corridor and associated floodplains. It is a creeping perennial capable of vigorous growth on alkaline soils such as found in the Coal Oil allotment.

The White River Field Office (WRFO) policy is to actively control initial outbreaks of noxious weeds, thus preventing spread and lowering long-term const. In areas with a greater infestation of noxious weeds, policy is to control these plants into a maintenance phase. Overall, noxious weeds are minimal with limited treatment needs in the Coal Oil allotment on BLM administered lands.

Environmental Consequences of the Proposed Action: The proposed action will enable native plant communities a greater competitive interaction with invasive plants through reduced use by livestock and shortened season of use. Thereby, the proposal will provide a greater opportunity for the replenishment of root reserves, biomass accumulation, and plant propagation of native species; which will aid in the rangeland's ability to naturally compete with invasive, non-native species. This affect would be slight in nature due to the threshold that has been crossed by cheatgrass domination and lack of known noxious weeds (for further analysis, refer to the Vegetation section).

The greatest net benefit would occur in mid and late seral ecological areas that have native vegetation mixed with cheatgrass and/or halogeton, such as Coal Gulch. A healthy rangeland

plant community has the ability to out compete halogeton, thereby limiting its extent to high impact locations and disturbed areas.

On early seral ecological sites, such as the mono-culture of cheatgrass with non-measurable native populations, the majority of areas are not expected to change in perennial cover because they have crossed a threshold of annual plant domination. A human induced disturbance (seeding, mechanical, chemical, etc) would be required to reverse this situation and enable perennial vegetation to become established.

The proposal will have little to no influence on the hoary cress, tamarisks and/or Russian olive populations along the White River Corridor, as these populations are generally not related to livestock grazing. The establishment and dominance of hoary cress, tamarisks, and/or Russian olives are related to moisture availability and abundant upstream seed sources.

Grazing permittees are important to the discovery and control of noxious weeds due the permittees on the ground affiliation and knowledge on assigned allotments.

Environmental Consequences of the Continuation of Current Management Alternative: Mid and late seral ecological potentially affected by grazing would be relatively less resistant to the invasion and proliferation of noxious weeds and/or invasive plants. 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.

On the majority of early seral ecological sites, such as the mono-culture of cheatgrass lacking perennial understory cover, the majority of areas are not expected to change in perennial ground cover because they have crossed a threshold of annual plant domination.

Continuation of current grazing will have little to no influence on the hoary cress, tamarisks, and/or Russian olive populations along the White River Corridor, as these populations are generally not related to livestock grazing. The establishment and dominance of hoary cress, tamarisks, and/or Russian olives are related to moisture availability and abundant upstream seed sources.

Grazing permittees are important to the discovery and control of noxious weeds due the permittees on the ground affiliation and knowledge on assigned allotments.

Environmental Consequences of the No Grazing Alternative: The impact of adopting this alternative would generally be similar to that of the proposed action with respect to the occurrence and proliferation of noxious weeds. The causal factor for the occurrence of noxious weeds is related to the seed source along the White River, with grazing by sheep having little discernable influence on the community of noxious weeds within the Coal Oil allotment.

The proliferation of cheatgrass 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, particularly within the critical growing season. Therefore, the native community would have a greater ability to compete with cheatgrass. Such an effect would occur principally

within the mid seral plant communities that have not fully crossed a threshold of annual plant domination (see vegetation section). 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.

Mitigation: If noxious weeds are identified within the Coal Oil allotment and occur on BLM administrated lands, they will be treated by a certified pesticide applicator either by the BLM or permittee. If livestock grazing practices have resulted in the establishment and/or increased spread of noxious weeds, the permittee will be responsible for the eradication of these weeds as directed by the BLM.

MIGRATORY BIRDS

Affected Environment: The permit area is largely represented by salt desert communities consisting principally of shadscale, matt and Gardner saltbush, rabbitbrush, snakeweed, winterfat, greasewood and Wyoming and basin big sagebrush. Herbaceous groundcover is comprised mainly of invasive annuals such as cheatgrass and halogeton, with introduced and native perennial grasses scattered throughout at low densities. These salt desert communities typically support several migratory bird species which fulfill nesting functions between late-May through mid-July such as vespers sparrow, western meadowlark and sage thrasher. Birds of higher conservation interest (i.e., Partners in Flight program) associated with these habitats and well represented in the permit area include: Brewer's sparrow, sage sparrow, horned lark, and loggerhead shrike. Loggerhead shrike are a regular but low density breeding species that nest in greasewood and basin big sagebrush stands in addition to the juniper woodlands near the base and toeslopes of Raven Ridge.

Nearly 2500 acres of juniper dominated woodlands - confined mainly to Raven Ridge – are located along the western boundary of the permit area. Due to site characteristics, these woodlands are generally stunted, possess poorly developed understories and typically support a full complement of woodland associates only at lower densities. Birds of higher conservation interest include juniper titmouse, gray flycatcher, gray vireo and black-throated gray warbler.

Environmental Consequences of the Proposed Action: The proposed period of use within this allotment would not coincide with the migratory bird breeding season and therefore would have no direct influence (mortality, disruption/displacement of birds) on nesting activities. Reductions in livestock numbers and days of use will result in a 12% decrease in dormant season use (12/16 – 02/28) and a 23% decrease during the early portions of the growing season (03/01 - 04/10). These reductions would likely result in an incremental increase in the amount of herbaceous forage and enhanced groundcover for migratory bird nesting – most evident in the 535 acres of mid-seral communities that have yet to cross the threshold of domination by annual plants (e.g., cheatgrass). Proposed grazing use is likely to have little impacts on those bird species associated with the nearly 2500 acres of pinyon-juniper/juniper dominated woodlands due mainly to limited forage availability and inaccessible (steep, rocky) terrain. In general, the proposed action is not expected to reduce the extent or quality of habitat available for migratory bird breeding functions.

Environmental Consequences of the Continuation of Current Management Alternative: Continuation of the current management alternative is not likely to have any measurable affect on the extent or quality of habitat available for migratory bird breeding functions, particularly in the 1250 acres of early-seral communities that have crossed the threshold to domination by annual plants. The most prominent difference would likely involve minor decreases in the amount of herbaceous forage and groundcover available for migratory bird nesting purposes within those mid-seral and to a lesser extent, late-seral communities. Continued grazing practices may potentially convert those mid-seral communities to early-seral, reducing the amount and diversity of forage and effective ground cover for nesting birds.

Environmental Consequences of the No Grazing Alternative: Under a no grazing alternative the majority of the allotment would experience an increase in perennial ground cover – most evident in the 535 acres of mid-seral communities that have not crossed a threshold in respect to domination by invasive, annuals (e.g., cheatgrass) and to a lesser extent, late-seral and PNC communities. The early-seral communities (~ 1250 ac) are not expected to markedly differ (at least during the life of the permit) should livestock be removed due to degraded rangeland conditions (e.g., domination by annuals), most likely attributable to historic grazing practices. Expansion of native perennial grass communities would be expected, albeit limited, resulting in minor increase in herbaceous forage and ground cover available for migratory birds.

Mitigation: None

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

Affected Environment: White-tailed prairie dogs and associates: White-tailed prairie dogs, a BLM sensitive species, are distributed widely across lower elevation salt desert ranges that make up much of the permit area. Prairie dogs occupy valleys and basins with low or sparse woody cover in greatest abundance, and are typically associated with vegetation types and range sites that are heavily represented by annual grasses (e.g., cheatgrass) and forbs. Prairie dog abundance is strongly influenced by disease (e.g., sylvatic plague, tularemia) and populations tend to fluctuate dramatically. Approximately 16% (~ 4% on public lands) of the permit's low elevation shrubland types are occupied by prairie dogs, with the heaviest concentrations located in early-seral communities. Although prairie dogs can appear above ground sparingly during the winter months, most begin to emerge from hibernation by early March, with young appearing above ground by late May. Although intuitive that availability of higher quality and increased quantities of vegetation as forage would figure prominently in the ultimate survival and/or reproductive ability of white-tailed prairie dogs, there is little to suggest that the current forage base or the prevailing use of that forage by potential competitors is suppressing prairie dog abundance or reproductive capacity in Coal Oil Basin.

Prairie dogs and their burrow systems are important habitat components of burrowing owl (a State threatened species), ferruginous hawks (BLM sensitive species) and reintroduced populations of black-footed ferret. Herbaceous growth and residuals (that herbaceous material

remaining after the grazing period) serve as forage and/or a cover base for all breeding non-game and small game animals, non-hibernating small mammals (e.g., voles) and ground nesting birds (e.g., horned larks), all of which may serve as prey to special status populations of raptors. Under the auspices of a non-essential, experimental population rule, black-footed ferrets have been released annually in Coyote Basin (eight miles southwest) and Wolf Creek (13 miles northeast) of Coal Oil Basin since 1999 and 2001, respectively. This rule applies to any ferrets that may occupy or eventually be released in northwest Colorado and northeast Utah. Although there is no direct continuity between Coyote Basin or Wolf Creek and the allotment, there is a strong likelihood that ferrets have colonized and successfully breed in Coal Oil Basin. Ferrets are wholly reliant on prairie dogs for food and shelter. Ferret breeding activities begin in early March, with birthing beginning in early May. Young ferrets generally begin to emerge by mid-July. There have been no verified sightings of ferrets, nor any known reproduction occurring in Coal Oil Basin

Burrowing owls are uncommon in this Resource Area. These birds return to occupy a prairie dog burrow system in early April and begin nesting soon afterward. Young birds are normally fledged by late July with family groups remaining together through September, when the birds leave for southern wintering grounds. While burrowing owls have been documented in Coal Oil Basin, no burrowing owl nesting activity has been recorded south of Highway 64.

Ferruginous hawks are uncommon breeding species and are closely associated with prairie dog distribution in this Resource Area. These hawks return to these ranges in late February and begin nesting (egg-laying) by early to mid April. Incubation continues through late May with fledging of young by late July. Breeding populations of these hawks vary in direct relation to the prairie dog, cottontail, and jackrabbit prey base. There are no known ferruginous hawk nests within the allotment.

Bald eagle: The White River corridor serves as an activity hub for nesting and wintering populations of threatened bald eagles. There are a number of identified nest and winter roost sites associated with the lower White River's mature cottonwood galleries. A known winter roost is located approximately 250 meters south of the allotment boundary on private land. No known nests are located within a minimum of five miles of the allotment.

Colorado pikeminnow and associated warm water fish: The White River between Rio Blanco Lake and the Utah state line is formally designated critical habitat for the endangered Colorado pikeminnow. Maintenance of proper bank, channel, and floodplain function is specifically identified as essential to the continued existence of this fishery. Potential for direct involvement of occupied habitat is limited to the White River below Taylor Draw Dam, a reach adult and larger sub-adult Colorado pikeminnow use as post-spawning and over-winter habitat. No reproductive or rearing habitats are associated with the White River in Colorado.

Environmental Consequences of the Proposed Action: White-tailed prairie dogs and associates**:** Only a small portion of prairie dog colonies occur on public lands (~ 4%) however, the proposed grazing plan would be expected to benefit understory conditions (i.e., increased availability and diversity of perennial herbaceous forage) in valleys and basins inhabited by prairie dogs and their associates throughout the allotment. Reductions in duration and intensity

of use would be expected to improve the vigor and, ultimately, the diversity and density of native bunchgrass and forbs in the understory and would build on the allotment's long-term forage capacity, particularly in those mid and late-seral communities. Although adjustments in grazing use would not rapidly alter the preponderance of annuals in early-seral communities, having a grazing system in place that is increasingly compatible with the development of perennial ground cover would be beneficial in ensuring that long-term gains in habitat utility and quality for herbivores and those relying on them as a prey and cover source are established. Long-term incremental improvements in the availability and diversity of herbaceous foodstuffs would enhance the nutrition base for white-tailed prairie dogs and other herbivores (e.g., cottontail rabbit, small mammals), which would translate to a more consistent and abundant prey source for species reliant on prairie dogs and their burrow systems (i.e., burrowing owl, ferruginous hawk, and potentially ferret). The proposed action would have no physically disruptive influence on the reproductive activities of prairie dog, burrowing owl, ferruginous hawk, or (potentially) ferret in the permit area. Although grazing use coincides with the early portions of the breeding season, livestock are off the allotment by the time young emerge.

Bald eagle: Livestock use along the White River is incidental (~ 5 days, as most water is hauled) and confined to a livestock corral adjacent to the river along an abandoned terrace. There is no potential for livestock grazing to adversely influence cottonwood and willow regeneration or herbaceous understory conditions, as livestock are unable to access the floodplain.

Colorado pikeminnow and associated warm water fish: Proposed livestock use is not expected to adversely influence maintenance of proper bank, channel, and floodplain function, nor impact cottonwood and willow regeneration or herbaceous understory conditions, as livestock are unable to access the floodplain.

Environmental Consequences of the Continuation of Current Management Alternative: White-tailed prairie dogs and associates: There are no indications that current management has any deleterious effect on white-tailed prairie dogs populations, including their associates or the utility or suitability of their habitats. Light annual use in March and April of each year is not thought to have any substantive influence on the availability or composition of herbaceous forage for prairie dog use. Herbaceous regrowth opportunities are ample once young prairie dogs emerge in late May. Continuation of the current grazing schedule will likely reduce the abundance and variety of perennial groundcover in the long-term – particularly in those mid-seral and to some extent late-seral communities – which may reduce the quantity and quality of forage for prairie dogs. However, prairie dog population trends and habitat occupancy appear to be following similar trajectories in habitats within and outside of the allotment, so there is no clear indication that livestock grazing is suppressing prairie dog populations.

Bald eagle: Same as Proposed Action.

Colorado pikeminnow and associated warm water fish: Same as Proposed Action.

Environmental Consequences of the No Grazing Alternative: White-tailed prairie dogs and associates**:** Because there is no clear indication that livestock grazing as practiced or proposed would cause direct or indirect competition for the prairie dog forage base, it is difficult

to forecast how removing livestock would influence populations of prairie dogs and other special status species that depend on them. However, it is reasonable to presume that removal of livestock would have increased nutritional effects on prairie dogs, which would presumably bolster reproductive performance and recruitment, eventually leading to increased prairie dog abundance and subsequent incremental increases in populations of burrowing owl, ferruginous hawk, and potentially black-footed ferret.

Bald eagle: Same as Proposed Action.

Colorado pikeminnow and associated warm water fish: Same as Proposed Action.

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species:
White-tailed prairie dogs and associates**:** Public Land Health Standards for those special status species associated with white-tailed prairie dogs in the permit area, including black-footed ferret, ferruginous hawk, and burrowing owl, are currently being met. There is no evidence to suggest that proposed or current grazing practices would or are having an adverse influence on populations, available extent of suitable habitat, or the reproductive activities of these four species and would, therefore, have no influence on continued meeting of the land health standard. Small incremental gains in perennial grass cover and forage associated with the proposed and no action alternatives would be expected to bolster (on a diminutive scale) local populations of prairie dogs and cottontail rabbit and potentially benefit (directly or indirectly) individual burrowing owl, ferruginous hawk, and black-footed ferret.

Bald eagle**:** None of the alternatives would have any influence on continued meeting of the Public Land Health standards for bald eagle.

Colorado pikeminnow and warm water fish: None of the alternatives would have any influence on continued meeting of the Public Land Health standards for Colorado pikeminnow and warm water fishes.

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

Affected Environment: The western, north western edge of this allotment touches a very small piece of Raven Ridge ACEC. This western, north western boundary is fenced so that no grazing can occur within the Raven Ridge ACEC. There is several rare plant species listed below that have been identified within this ACEC. Typically grazing does not heavily impact rare plant species because of the barren Green River Shale landscape that they occur. It does not offer much forage and most plants are not palatable to the sheep.

Federally-listed Threatened Plant Species

Lesquerella congesta (Dudley Bluff's bladderpod)
Physaria obcordata (Piceance twinpod)
Spiranthes diluvialis (Ute ladies'-tresses orchid)

Federal Candidate Species

Penstemon grahamii (Graham beardtonque)-Proposed for listing
Penstemon scariosus var. *albifluvis* (White River beardtongue penstemon)

BLM Sensitive Species

Boechera fernaldiana (park rockcress)
Astragalus detritalis (debris milkvetch)
Eriogonum ephedroides (ephedra buckwheat)
Gentianella tortuosa (Utah genetian)
Gilia stenothyrsa (narrow-stem gilia)
Lesquerella parviflora (Piceance bladderpod)
Oenothera aacutissima (narrow-leaf evening primerose)-Proposed for listing
Oreocarya (Cryptantha) rollinsii (Rollins cryptanth)

Environmental Consequences of the Proposed Action: None because the sheep will be off the land during the critical growing seasons associated with Threatened and BLM Sensitive plant species that may occur inside the allotment.

Environmental Consequences of the Continuation of Current Management Alternative: This alternative is not favored because the time the livestock is taken off the land could be as late as May which could affect plant species during the critical growing season. Most of the identified important plant species occur within the Ryan Gulch ACEC; however some satellite populations could occur within the western edge of this allotment.

Environmental Consequences of the No Grazing Alternative: None

Mitigation: If in the future any Threatened or BLM sensitive plant species are found within the allotment and are being adversely impacted then additional mitigation may have to be developed.

Finding on the Public Land Health Standard for Threatened & Endangered species: There is no reasonable likelihood that the proposed action or no action alternative would have an influence on the condition or function of Threatened, Endangered, or Sensitive plant species provided that the mitigation is followed. Thus there would be no effect on achieving the land health standard.

WASTES, HAZARDOUS OR SOLID

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

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

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

Environmental Consequences of the No Grazing Alternative: None

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

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

Affected Environment: Surface Water: The Coal Oil Allotment encompasses approximately 5,400 acres of the White River (near Rangely, CO) 5th level watershed and approximately 2,780 acres of the Cottonwood Gulch 5th level watershed. 6th and 7th level watersheds directly affected by land management decisions on the Coal Oil Allotment are Dripping Rock Creek, Stinking Water Creek, Coal Gulch, Hard Away Draw, and the White River below Rangely, CO. All of the affected watersheds drain to the White River which is a tributary to the Green River in Utah. The Green River is a tributary to the Colorado River. The White River contains the only perennial surface water on the allotment. It should be noted that much of the allotment is dominated by cheat grass which lacks sufficient rooting depth and density needed to stabilize soils and protect water quality (sediment and salt loading) in nearby surface waters.

The "Status of Water Quality in Colorado –2006" (CDPHE 2006b) and Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin (CDPHE 2005a) were reviewed for information relating to drainages within the project area. Table 1 identifies the affected water quality stream segments and their associated 6th and 7th level watersheds. Table 1 also identifies beneficial uses for impacted stream segments and whether or not specified portions of identified stream segments have been listed on the State's 303(d) or M&E List.

Table 1:

Watershed	Stream segment	Drainage Basin	Use Protected	Identified Beneficial Uses	303(d) listed	M&E listed	Impairment	Severity
White River	21	White River	N/A	Aquatic life warm 1, Recreation 1a, Water Supply, Agriculture	No	No	N/A	N/A
Dripping Rock Creek	22	White River	UP	Aquatic life warm 2, Recreation 1b, Agriculture	Yes	Yes	Sediment (specific watersheds identified in this table are NOT listed)	Low
Stinking Water Creek								
Coal Gulch								
Hard Away Draw								

(CDPHE 2005a)

An intermediate level of water quality protection applies to waters that have not been designated outstanding waters or use-protected waters. For these waters, no degradation is allowed unless deemed appropriate following an antidegradation review. The antidegradation review requirements in the Antidegradation Rule are not applicable to waters designated use-protected.

For those waters, only the protection specified in each reach will apply. Numeric standards for inorganic compounds and metals can be found within Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin (CDPHE 2005a).

Newly promulgated Colorado Regulations Nos. 93 and 94 (CDPHE 2006c and 2006d, respectively) were reviewed for information related to the proposed project area drainages. Regulation No. 93 is the State's Section 303(d) list of water-quality-limited segments requiring Total Maximum Daily Loads (TMDLs). The 2006 303(d) list of segments needing development of TMDLs includes two segments within the White River - segment 9b, White River tributaries North and South Forks to Piceance Creek, specifically the Flag Creek portion (for impairment from selenium with a low priority for TMDL development) and segment 22, tributaries to the White River, Douglas Creek to the Colorado/Utah boarder, specifically West Evacuation Wash, and Douglas Creek (sediment impairments). Regulation 94 is the State's list of water bodies identified for monitoring and evaluation, to assess water quality and determine if a need for TMDLs exists. The list includes two White River segments that are potentially impaired – 9 (Flag Creek) and 22 (Soldier Creek). The affected portions of stream segment 22 will not be impacted by the proposed actions. Stream segment 21 is not listed.

Ground Water: The proposed grazing permit renewal will have no direct impact to ground water resources.

Environmental Consequences of the Proposed Action: Under the proposed action alternative A, active AUMs will decrease from 315 to 295. This slight reduction in active AUMs should slightly increase potential litter accumulation and vegetal cover. As a result, soils should become slightly less vulnerable to erosional processes reducing sediment/salt production to lower reaches of the affected watersheds. In addition, reducing livestock numbers in riparian areas (White River and near BLM spring 151-04) would likely have a positive impact to the health and vigor of riparian communities. Healthy riparian communities help anchor stream banks, and maintain functional channel morphologic conditions in which sediment supply is in balance with flow characteristics. However, due to past, current and potential future energy development within the allotment boundaries, potential adverse environmental consequences on water quality resulting from livestock grazing will be minor in comparison to potential impacts from energy development (e.g. construction of roads, pipelines, well pads, production facilities,…).

Environmental Consequences of the Continuation of Current Management Alternative: Under the current grazing alternative, active AUMs will remain at 315. Continuation of the current grazing management plan in combination with continued drought conditions and energy development would likely contribute to reductions in litter accumulation and vegetal cover. As a result, soils may become increasingly vulnerable to erosional processes elevating sediment/salt loads to lower reaches of the affected watersheds. In addition, dry conditions combined with the continuation of the current grazing management plan may deteriorate the health of riparian communities (White River and near BLM spring 151-04). Deteriorating riparian communities will reduce the ability of the system to anchor stream banks, and maintain functional channel morphologic conditions in which sediment supply is in balance with flow characteristics.

Environmental Consequences of the No Grazing Alternative: No grazing will be permitted. Preferred upland and riparian vegetative communities would have greater potential for recovery. The effective ground cover would likely increase providing greater soil stabilization, increased stream bank protection, and reduced sediment/salt loading to the White River.

Mitigation: Compliance monitoring for vegetation improvement would help identify if additional actions were needed to comply with the *Clean Water Act*. In addition, continued monitoring of stream channel morphology (Rosgen survey data) will be essential to evaluate the impacts of increased livestock numbers on the White River and its affected tributaries.

Finding on the Public Land Health Standard for water quality: Stream segment 21 of the White River Basin currently meets water quality standards set by the state. However, many of the upper tributaries are ephemeral, flow only in direct response to storm events/snowmelt and do not meet the standards during periods of flow. Specified portions of stream segment 22 of the White River Basin have been listed on the states 303(d) and M&E Lists for sediment impairments. None of the watersheds affected by the proposed action are currently listed. Many of the upper tributaries in segment 22 also are ephemeral, flow only in direct response to storm events/snowmelt and do not meet the standards during periods of flow. By following all suggested mitigation measures, water quality in stream segments 21 and 22 should remain unchanged from current conditions.

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

Affected Environment: Within the Coal Oil allotment, known riparian systems located on BLM administered lands include the White River (2 ¼ miles) and a small seep/well (spring P151.04) east of Raven Ridge and Coal Gulch identified as Raven Ridge segment #1 (¼ mile).

The White River forms the southern boundary of the allotment through a combination of private and public lands. The river system on BLM lands was inventoried for Proper Functioning Condition (PFC) on 11/07/05. Dominant plant species within the historic floodplain and channel include inland saltgrass, buffaloberry, Fremont cottonwoods, tamarisks (invasive, non-native), and Russian olives (invasive, non-native). Immediate upland vegetation along the river corridor includes Wyoming big sagebrush, rabbitbrush; greasewood, shadscale, and Gardner saltbush with an understory of bottlebrush squirreltail, western wheatgrass, cheatgrass, Indian ricegrass, and needle-and-thread-grass (see vegetation section). Also, a livestock corral is located on BLM lands along the terrace adjacent to the White River.

Kenney Reservoir and associated Taylor Draw Dam are located approximately 12 ¼ miles upriver from the allotment. This dam influences, dictates, and limits downstream flows (i.e. flooding and floodplains) of the White River. Noted concerns during the PFC inventory included these influences from Taylor Draw Dam, such as limited flooding that diminishes cottonwood regeneration (present cottonwoods are mature, limited young) and limits the potential extent of the floodplain from its natural coverage area. However, the Taylor Draw

Dam and its influences are outside the land manager's control. Overall, this White River segment was rated as Proper Functioning Condition with a static trend.

The Raven Ridge segment is located approximately ½ mile north of the White River within an unnamed drainage, and was inventoried for PFC on 11/07/05. Within this system, an old oil well (well #2, drilled 1964, plugged 1966, encountered water at 400 feet) is excreting/saturating the ground with surface water for approximately 50 feet. Dominant plant species include cattails, rushes, Fremont cottonwoods, tamarisks, and Russian olives. This riparian segment is wholly dependent upon the well that has formed an artificial riparian community. Further down the drainage, a small seep is located with limited surface water but is saturating soils for the establishment of riparian species including rushes and tamarisks (non-native, invasive). Upland vegetation of the drainage consists of rabbitbrush, greasewood, and Wyoming sagebrush with a limited understory of western wheatgrass, squirreltail, needle-and-thread-grass, and cheatgrass. This riparian community down channel of the well is marginal due to limited water availability. Overall, there is restricted potential for a robust riparian community due to a lack of sufficient water. Overall, the Raven Ridge #1 segment was rated as Proper Functioning Condition with a static trend.

Environmental Consequences of the Proposed Action: The proposed action lessens the number of sheep from 700 to 615 with the grazing period being 5 days less ending 04/10. The proposed season of use (12/16-04/10) is majority winter with available upland water sources (snow, reservoirs, etc.) for livestock that aid in distribution. When snow is not readily available, sheep access the White River on BLM administered lands for watering purposes and then are herded back to the uplands for grazing. No significant utilization by livestock occurs within the riparian zones due to active herding practices and robust tamarisks and Russian olives (invasives) that form a barrier.

Livestock grazing by sheep during the proposed grazing season (12/16-04/10) is mostly outside the critical growing season (04/01-05/15). During this grazing period sheep are dependent upon upland vegetation (Wyoming sagebrush) for foraging and then bed at night within the steeper topography areas away from any riparian zones.

The greatest area of livestock use within the riparian zones is concentrated around the corrals adjacent to the White River. This utilization is moderate in level and within the levels sustainable level for riparian communities.

Overall, the proposed action will have slight benefit on riparian vegetation and will keep the riparian areas in a Properly Functioning Condition with a static to slightly upward trend.

Environmental Consequences of the Continuation of Current Management Alternative: The current alternative allows for 700 sheep with a grazing period of 12/16-04/15. This additional number of sheep and longer use period versus the proposal will enable a greater concentrated use level by sheep within the riparian community to a minor degree.

Sheep currently make little use of the riparian areas due to the season of use, herding of sheep, and natural characteristics of sheep. Sheep use during the winter period are not dependent upon

live water for meeting watering requirements, because snow may be used to meet the watering needs of sheep.

During the current period of use sheep are dependent upon upland vegetation (Wyoming sagebrush) for foraging and then bed at night within the steeper topography areas away from any riparian areas.

Overall, authorized sheep use is currently and will continue to have a nominal impact on the functionality of the riparian systems. Thus, the systems will continue to have a rating of Proper Functioning Condition with a static trend that will forgo the slight improvement under the proposal.

Environmental Consequences of the No Grazing Alternative: Without grazing, the riparian systems will continue in a Proper Functioning Condition and meet Public Land Health Standards for Riparian Systems with an improvement in vegetative growth of riparian species. This additional growth will aid in further bank stabilization and sediment entrapment, which would be greatest along the White River as this is a concentration area of sheep use with a corral and water along the corridor.

No grazing will alleviate the need for the livestock corrals along the White River corridor that receives moderate use. Therefore, there is a potential for the surrounding riparian vegetation to improve in stature.

However, as shown from the current functional state of the riparian system, this increase in riparian plant growth would not be substantial and/or affect the functionality of the system to sustain itself.

Mitigation: None

Finding on the Public Land Health Standard for riparian systems: There are 2.50 miles of riparian systems on the Coil Oil allotment. All 2.50 miles of riparian systems are currently meeting Public Land Health Standards and for Riparian Systems and rated as Proper Functioning Condition, which will continue under all alternatives.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No flood plains, prime and unique farmlands, or Wild and Scenic Rivers exist within the area affected by the proposed action. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

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

SOILS (includes a finding on Standard 1)

Affected Environment: The table below is a breakdown of soil units and associated ecological sites for the Coal Oil allotment. Soils analyzed in this document have been covered in the Rio Blanco County Soil Survey. Common soils on BLM lands in the Coal Oil allotment include Badlands (useable by sheep) and Chipeta silty clay loams.

Coal Oil Allotment (06313) Soil Units		
Soil Unit	**Ecological Site**	**BLM Acres**
5- Badland	None	592.47
5- Badland (Useable)	None (Useable)	1441.89
7- Billings silty clay loam,0-5%slopes	Alkaline Slopes	159.36
8- Billings-Torrifluvents complex,gullied,0-5%slopes	Alkaline Slopes/None	67.35
16- Chipeta silty clay loam,3-25%slopes	Clayey Saltdesert	405.33
17- Chipeta silty clay loam,3-25%slopes,eroded	Clayey Saltdesert	100.69
18- Chipeta-Killpack silty clay loam,3-15%slopes	Clayey Saltdesert	542.71
21- Cliffdown-Cliffdown Variant complex,5-65%slopes	Saltdesert Breaks	201.51
25- Colorow sandy loam	Sandy Saltdesert	76.67
32- Fluvaquents, frequently flooded	River bottom	11.79
46- Kinnear fine landy loam,1-5%slopes	Loamy Saltdesert	19.69
78- Rock Outcrop	None	248.98
78- Rock Outcrop (Useable)	None (Useable)	196.5
93- Turley fine sandy loam,0-3%slopes	Alkaline Slopes	4.57
94- Turley fine sandy loam,3-8%slopes	Alkaline Slopes	305.68
W- Water	None	3.75
	Total:	**4378.94**

Soils that are occupied with plant communities rated as a mid seral, late seral or Potential Natural Community (PNC) have sufficient cover of desirable plant species to produce adequate litter and ground cover to minimize runoff and provide for soil protection (refer to the Vegetation section below). These soils are meeting the Colorado Public Land Health Standard for upland soils. The Coal Oil allotment has 2284 BLM acres (64%) achieving or moving towards achieving the Standards for Public Land Health (Refer to the below Vegetation section of this document).

Soils that have sites rated as early seral plant communities (1250 BLM acres, 36%) do not have sufficient diversity and/or cover of native plant species to provide effective ground cover to prevent overland flow, runoff, and general soil degradation (See Figure 4: Map of BLM Acres not Meeting Public Land Health Standards). These soils are experiencing a certain degree of pedestaling, minor expression of rills, and some areas have active gully erosion. Past evidence of gully erosion forming incised washes is common throughout the allotment. Erosion is most evident within the saltdesert communities in Coal Oil Basin whose soils have a high clay content or in areas with little vegetative understory to provides soil protection. The early seral sites have soils that are typically within drainage bottoms and toe slopes that are found on soil units such as Chipeta-Killpack silty clay loam, 3-15% slopes (Clayey Saltdesert), Chipeta silty clay loam, 3-

25% slopes (Clayey Saltdesert), Rock Outcrop, and Badlands. These early seral sites are not meeting land health standards. The Coal oil allotments has 1250 BLM acres (36%) not achieving Standards for Public Land Health (refer to the below Vegetation section of this document).

Environmental Consequences of the Proposed Action: The proposed action lessens the number of sheep (700 to 615 sheep) and slightly shortens the grazing period's end date (04/15 to 04/10). This change will aid in the vegetation community that provides ground cover of native perennial plant species and litter, which is central in the protection and stabilization of soils.

On most mid seral sites and some limited early seral rangelands there would be an increase in surface litter accumulation, canopy cover, and ground cover due to the reduced grazing intensity (AUMs) and shortened season of use provided by livestock management under the proposed action. This impact would be greatest in portions of Coal Gulch and various saltdesert shrub communities as these areas still have an understory component of perennial vegetation. Soils with early seral plant communities will mostly continue at their current state because they have crossed a threshold of annual plant domination (cheatgrass) that provides little soil protection. This situation is nearly irreversible regardless of the livestock management without some form of disturbing agent such as fire, chemical, or mechanical means. Historical grazing practices (spring use, over utilization, etc.) and current continued drought created the situation in which most of the early seral plant communities are not meeting the rangeland health standards for soils.

It is anticipated that soils with late seral or PNC plant communities will experience little change from the current status in regards to plant cover that provides soil protection. These sites are already at full potential, meeting health standards, and will not be appreciably influenced by the proposal.

Environmental Consequences of the Continuation of Current Management Alternative: The current management alternative allows for greater livestock numbers over a longer period. This situation would have a slight negative effect on the vegetative ground cover that provides soil protection, particularly within the mid seral ecological sites that have potential for improvement.

Under the current alternative, a slightly negative impact would occur in regards for achieving rangeland health standards. Such impacts to soils may include a slightly/moderately downward change in species composition, diversity, desired plant cover, and/or reduced production for some rangelands, which would mostly occur within mid seral sites and to a lesser degree within the late seral communities. The PNC communities would continue to meet health standards and the early seral communities would not.

Environmental Consequences of the No Grazing Alternative: Under a no grazing by livestock alternative, most localities that are being grazed by sheep would experience a short-term increase in both perennial plant cover and soil surface litter accumulation. Mid seral ecological sites would likely experience the greatest benefit of increased perennial plant cover and would continue to meet Public Land Health Standards.

On early seral ecological sites such as areas of salt desert rangelands dominated by cheatgrass, the majority of areas are not expected to change in perennial plant cover that provides greater soil protection because they have crossed a threshold of annual plant domination.

Soils associated with late and PNC ecological sites would continue to meet standards and experience minimal changes in plant species composition and diversity.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial)*:* Soils that occupy early seral communities are mostly not meeting the Standards due to the lack of soil protection caused from a composition of cheatgrass, an invasive annual grass, and due to the mono-cultures in some greasewood communities (1250 acres). All other communities are currently meeting standards and make up the bulk of acres on all allotments (3129 acres). Implementation of the proposed action will enhance the ability of the rangelands to meet and continue to meet Public Land Health Standards.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The following table lists the plant community appearance for the ecological sites or woodland types on allotments 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% of the composition of several of the plant communities listed, are not presented in the following table because they generally are not contributors to the appearance nor the dominance of the community. Dominant ecological sites on BLM lands within the Coal Oil allotment are Clayey Saltdesert and Badlands/Rock Outcrop.

Ecological Site / Woodland Type	Plant Community Appearance	Predominant Plant Species in the Plant Community
Alkaline Slopes	Sagebrush / Grass Shrubland	Wyoming big sagebrush, winterfat, low rabbitbrush, wheat grasses, Indian rice grass, squirreltail
Clayey Saltdesert	Salt Desert Shrubland	Gardner saltbush, shadscale, mat saltbush, galleta, salina wildrye, squirreltail, Indian rice grass, western wheatgrass
Loamy Saltdesert	Grass / Salt Desert Shrubland	Needle-and-thread, galleta, Sandberg bluegrass, squirreltail, Indian rice grass, western wheatgrass, Gardner saltbush, shadscale, winterfat, horsebrush
Saltdesert Breaks	Salt Desert Shrubland	Galleta, salina wildrye, squirreltail, Indian rice grass, needle-and-thread, shadscale, winterfat
Sandy Saltdesert	Grass / Salt Desert Shrubland	Needle-and-thread, Indian rice grass, sand dropseed, sandberg bluegrass, squirreltail, galleta, shadscale, winterfat, horsebrush
Pinyon/Juniper (Badlands / Rock Outcrop)	Pinyon/Juniper Woodland	Pinyon pine, Utah juniper, mountain mahogany, serviceberry, Wyoming big sagebrush, western wheatgrass, salina wildrye, June grass, Indian rice grass

The table below is a breakdown of ecological sites within the Coal Oil allotment for public lands managed by the BLM. See table above for plant communities associated with ecological sites listed below.

Ecological Site	BLM Acres
Alkaline Slopes	470
Alkaline Slopes/None	67
Clayey Saltdesert	1048
Loamy Saltdesert	20
Badlands/Rock Outcrop	845
Badlands/Rock Outcrop, Useable	1638
Riverbottom	12
Saltdesert Breaks	202
Sandy Saltdesert	77
Total:	**4379**

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

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

The table below shows an estimate of the public land acreage falling within one of the seral ratings for each ecological site on the Coal Oil allotment. These estimates are based upon professional judgments of the Rangeland Management Specialist. Nearly all ecological sites were visited during the 2005 field seasons for a plant community assessment of the Colorado Public Land Health Standards on the Coal Oil allotment. Only suitable/useable acres for livestock (sheep) grazing were classified.

Coal Oil Allotment (06313) Ecological Site Similarity Rating						
Ecological Site	**BLM ACRES**	**PNC**	**Late Seral**	**Mid Seral**	**Early Seral**	**BLM Acres Classified**
Alkaline Slopes	470	265	15	30	160	**470**
Alkaline Slopes/None	67	0	0	17	50	**67**
Clayey Saltdesert	1048	23	100	305	620	**1048**
Loamy Saltdesert	20	0	3	7	10	**20**
Badlands/Rock Outcrop	845	n/a	n/a	n/a	n/a	**n/a**

Coal Oil Allotment (06313) Ecological Site Similarity Rating						
Ecological Site	**BLM ACRES**	**PNC**	**Late Seral**	**Mid Seral**	**Early Seral**	**BLM Acres Classified**
Badlands/Rock Outcrop, Useable	1638	1006	300	110	222	**1638**
River bottom	12	4	2	6	0	**12**
Saltdesert Breaks	202	0	0	55	147	**202**
Sandy Saltdesert	77	21	10	5	41	**77**
Total:	**4379**	**1319**	**430**	**535**	**1250**	**3534**
% BLM Acres Classified:		**37%**	**12%**	**15%**	**36%**	

As shown within the Coal Oil allotment, 64% of the ecological sites represent plant communities within acceptable thresholds for healthy communities and within acceptable levels of desired plant communities (mid seral to PNC) as defined in the White River ROD/RMP. Vegetation production and species composition on these sites provide adequate cover for soil protection and forage production to meet livestock and ecological demands.

Many of the allotment's acres are Badlands/Rock Outcrops dominated by Pinion (*Pinus edulis*) / Juniper (*Juniperus osteosperma*) (PJ) woodlands (2483 acres). These ecological sites are generally within an acceptable land health standard status due to the low impact from livestock and/or wildlife use because these areas lack appreciable natural resources (i.e. forage). A portion of these sites (1638 acres) have forage readily available for sheep use, while 845 acres are essentially unsuitable for grazing purposes (i.e. steep terrain, limited understory, rock dominant, etc.). The dominant vegetation within the Badlands/Rock Outcrop consists of Juniper trees, mountain mahogany (*Cercocarpus montanus*), with an understory of salina wildrye (*Elymus salinus*), squirreltail (*Sitanion hystrix*), junegrass (*Koeleria cristata*), and western wheatgrass (*Agropyron smithii*).

The southern boundary of the allotment includes the White River corridor (Rover bottom ecological site) whose dominant vegetation includes abundant Russian olives (*Elaeagnus angustifolia*), tamarisks (*Tamarix ramosissima*), Fremont Cottonwoods (*Populus fremontii*), and inland saltgrass (*Distichlis spicata*). Russian olives and tamarisks, both non-native/invasive species, are robust and dominant along the river's corridor and the cottonwoods (native) are located upon the historic floodplains. However, the upstream Taylor Draw Dam limits flooding necessary for the successful establishment of cottonwoods. Therefore, the cottonwood stands lack a diverse age class and are mostly mature with few seedling/young trees necessary for the long-term vitality of the cottonwoods. However, the dam's influences on the vegetative communities are outside the control of the land manager.

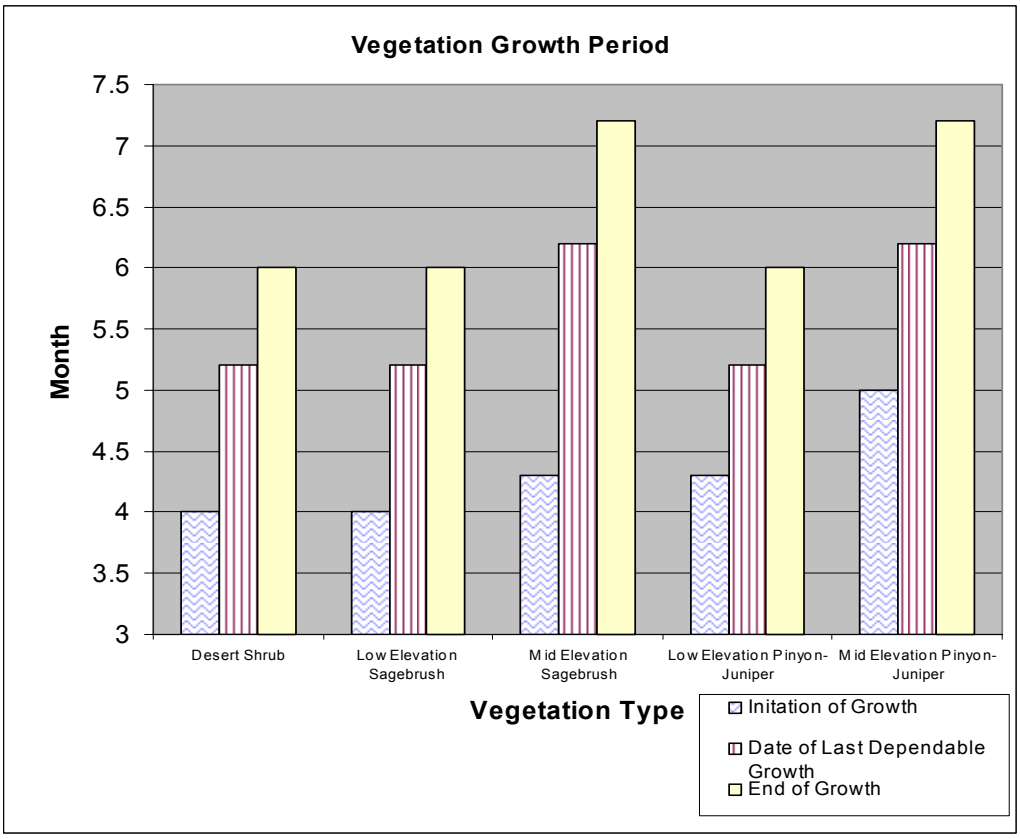
The majority of early seral sites (1250 acres, 35% of classified acres, 29% of total acres) have a plant understory that is dominated by cheatgrass (*Bromus tectorum*), an invasive, non-native, and annual plant species that is highly competitive with native vegetation. Cheatgrass provides little resource value and limited foraging worth due to its annual growth habits such as producing a shallow root system, protruding awns, and aggressive growth/reproduction capabilities. Cheatgrass is the dominant understory within Coal Gulch and much of Coal Oil Basin, and is particularly prevalent within the ecological sites Clayey Saltdesert (Coal Oil Basin) and

Badlands/Rock Outcrop's (useable) lowlands and drainages. In these areas, cheatgrass consists of approximately 70-80% of the species composition or 30-35% of the total canopy cover. These early seral sites have typically converted the shrub understory from western wheatgrass (*Agropyron smithii*) and needle-and-thread grass (*Stipa comata*) to cheatgrass communities. Early seral sites are typically valley bottoms, valley toe-slopes, and/or areas of gentle terrain which have been degraded from drought and historical influences of livestock grazing (i.e. spring use, over utilization, bedding of sheep, etc.). These early seral communities do not meet the Colorado Public Land Health Standards for species diversity and/or soil protection. Many of these early seral areas have crossed an ecological threshold into a transitional state of cheatgrass domination. The table below is a breakdown of BLM acres delineated by ecological sites that are not meeting Public Land Health Standards (See Figure 4: Map of BLM Acres not Meeting Public Land Health Standards).

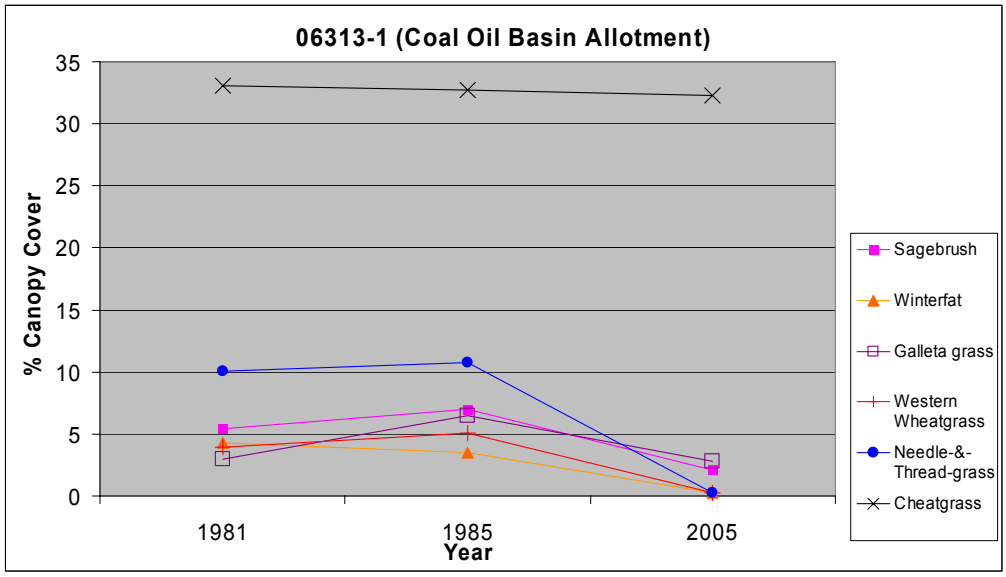
Acres Not Meeting Public Land Health Standards (Standards & Guides) Coal Oil Allotment - 06313			
Unit	**Soil Unit**	**Ecological Site**	**BLM Acres**
5	Badland	None	141
7	Billings silty clay loam,0-5%slopes	Alkaline Slopes	105
8	Billings-Torrifluvents complex,gullied,0-5%slopes	Alkaline Slopes/None	50
16	Chipeta silty clay loam,3-25%slopes	Clayey Saltdesert	215
17	Chipeta silty clay loam,3-25%slopes,eroded	Clayey Saltdesert	25
18	Chipeta-Killpack silty clay loam,3-15%slopes	Clayey Saltdesert	380
21	Cliffdown-Cliffdown Variant complex,5-65%slopes	Saltdesert Breaks	147
25	Colorow sandy loam	Sandy Saltdesert	41
46	Kinnear fine sandy loam,1-5%slopes	Loamy Saltdesert	10
78	Rock Outcrop	None	82
93	Turley fine sandy loam,0-3%slopes	Alkaline Slopes	4
94	Turley fine sandy loam,3-8%slopes	Alkaline Slopes	51
		Total Acres:	**1250**

Precipitation in 2005 was favorable with the timing and amount of rainfall, which produced abundant plant growth. However, the area has been particularly impacted by past drought which has caused low vigor within the Wyoming big sagebrush (*Artemisia tridentata*) and winterfat (*Ceratoides lanata*) communities, with these shrubs experiencing varying degrees of decadence with intermixed mortality.

Growing Season: The following table depicts vegetation growth periods of various vegetation types within the Coal Oil allotment. These growth periods are considered an average growing season, however this season may vary year to year dependant upon climatic conditions. The date of initial growth to the last date of dependable growth is considered the growing season, which averages April 1st – May 15th. This growing season is dependant upon yearly precipitation levels that can vary year to year.



Vegetation Trend: The table below displays the percent canopy cover of key plant species at the daubenmire canopy cover trend transect (06313-1) located in upper Coal Gulch. As shown within the plant community's understory, desired cool season perennial plant species (needle-and-thread grass & western wheatgrass) have declined in cover with cheatgrass remaining essentially static in percent ground cover (1981-33.1% to 2005-32.3%). Yet, cheatgrass is the overall dominant plant species and has increased from 39.1% (1981) to 76.8% (2005) of the total species composition within the plant community (not shown in table). In 1981 needle-and-thread grass made up 10.1% of the canopy cover, however by 2005 it constituted only 0.3% of the canopy cover. The overstory of shrubs (sagebrush, winterfat), have also declined in percent canopy cover (1981-9.7% to 2005-2.4%). These situations have also demonstrated through the historic trend photographs at the transect, where a noticeable decline in needle-and-thread-grass is apparent.



Overall, from 1981 to 2005 there has been a decrease in canopy coverage of desired plant overstory and understory with cheatgrass (undesirable) remaining static in cover. Yet cheatgrass increased its dominance amongst the species composition within the plant community as overall ground cover of other plant species decreased. This situation is apparent throughout much of the early seral acres not meeting Public Land Health Standards.

Environmental Consequences of the Proposed Action: The proposal outlines a reduction in sheep from 700 to 615 and a shortened grazing season changed from 12/16-04/15 to 12/16-04/10 versus the current management alternative. AUMs associated with the proposed action (295) are within the rangeland's current carrying capacity to meet resource objectives (refer to Rangeland Management section).

As shown in the table below, a minimal amount of livestock use (8%) will be authorized during the growing season (04/01-05/15) under the proposal. This growing season use is reduced by 42% in comparison to the current management alternative (43 AUMs vs. 25 AUMs). Thereby, these changes will reduce grazing pressure to meet the rangeland's carrying capacity by giving plant communities a greater opportunity for replenishment of root reserves, biomass accumulation, and plant propagation. This net benefit will be greatest within the mid and late seral ecological sites as they still have a perennial understory (western wheatgrass, needle-and-thread grass, etc.) component within the plant community.

Allotment	AUMs Authorized in the Growing Season	% of Authorized AUMs used in the Growing Season
Coal Oil	25	8%

As discussed in the Issues and Concerns section of this document, the Coal Oil allotment has been heavily impacted by past and current oil and gas (O&G) development, with over 600 wells drilled over the last 75 years and spread over approximately 4659 BLM and private acres in the allotment. Associated with these wells are networks of roads, pipelines, powerlines, compressor stations, etc. These situations reduce available rangelands for grazing purposes,

remove plant populations, and fragment vegetation communities. Thus, the abundant O&G activities reduce the carrying capacity of the allotment and introduce impediments to livestock grazing. Successful rehabilitation along pipelines and abandoned well pads provide desired vegetative cover. O&G development has steadily increased throughout the grazing permit's previous allocation of AUMs. These factors where taken into consideration under the proposed action's AUMs, grazing period, and % PL calculation (BLM vs. private AUM allocations).

Overall, the proposal will have the greatest positive impact on the mid and late seral ecological sites, such as an increase in perennial plant cover. On PNC ecological sites, a neutral to slightly positive impact will occur as these sites are already meeting or exceeding the standards for public land health. On most early seral sites, the present situation will typically continue at their current state unless some influencing agent was implemented such as fire/seeding because most of these sites have crossed a threshold of cheatgrass domination. It is apparent that current early seral ecological sites within Coal Oil allotment are a result of historic/current critical growing season use (lambing), prolong drought conditions, and abundant oil and gas activities. Therefore, these situations have created an opportunity for cheatgrass establishment and dominance within early seral communities.

Environmental Consequences of the Continuation of Current Management Alternative: The Current Management alternative outlines a grazing permit for 700 sheep from 12/16-04/15 at 315 AUMs. This level of use is above the livestock carrying capacity for the Coal Oil allotment (see Rangeland Management section).

As shown in the table below, 14% of the authorized livestock use can occur during the growing season (04/01-05/15) under the proposal.

Allotment	AUMs Authorized in the Growing Season	% of Authorized AUMs used in the Growing Season
Coal Oil	43	14%

The greatest impacts of authoring use beyond the landscapes ability to support them would mostly occur within the mid seral sites and to a lesser degree within the late seral ecological areas. There would be potential to convert the mid seral areas to early seral by lessening the competitive ability of native, perennial vegetation against non-native plants. The greatest concern would be within the western wheatgrass and/or needle-and-thread grass communities being converted to a sole understory of cheatgrass.

The Sturgeons have typically operated below their full active AUM level within the Coal Oil allotment. However, they have extended their off-date (5/20) into the growing season to accommodate lambing operations with the greatest use on private lands. This continual extension into the spring growing season reduces the plant communities' ability to produce seed, replenish reserves, and lowers growth requirements. Therefore, this situation lowers plant maintenance and reproduction capabilities that lessen the long-term sustainability of the vegetation. This situation is greatest on the Emerald lease (private land) within the salt-desert shrub community in Coal Oil Basin.

As shown in the downward trend between 1981 and 2005 of desired, perennial vegetation (western wheatgrass and needle-and-thread grass) in Coal Gulch is that current management, in combination with the prolong drought, have created a situation of declining rangeland health. Therefore, these actions have helped to create early seral sites dominated by cheatgrass that do not meet Public Land Health Standards for the long-term sustainability of the native plant communities.

As discussed in the Issues and Concerns section of this document, the Coal Oil allotment has been heavily impacted by past and current oil and gas (O&G) development, with over 600 wells drilled over the last 75 years and spread over approximately 4659 BLM and private acres. Associated with these wells are networks of roads, pipelines, powerlines, compressor stations, etc. These situations reduce available rangelands for grazing purposes, remove plant populations, and fragment vegetation communities. Thus, the abundant O&G activities reduce the carrying capacity of the allotment and introduce impediments to livestock grazing. Successful rehabilitation along pipelines and abandoned well pads provide desired vegetative cover. O&G development has steadily increased throughout the grazing permit's previous allocation of AUMs, yet the grazing permit has not been taken this into account or re-analyzed forage availability for over 20 years. Thus, the diminished forage returns resulting from O&G development has hyper-inflated the current grazing permit's allocation of resources.

Environmental Consequences of the No Grazing Alternative: Under a no grazing by livestock alternative, most localities that are being grazed by sheep 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 such saltdesert rangelands dominated by cheatgrass, the majority of areas are not expected to change significantly in perennial plant cover because they have crossed a threshold of brush and/or annual plant domination (1250 acres). The PNC ecological sites would continue to meet standards and experience minimal changes in plant species composition and diversity.

The proliferation of cheatgrass 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 cheatgrass. 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 (approximately 250 acres) due to the current cheatgrass domination of early seral plant communities that have crossed a threshold and due to other grazers within the area.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial)*:* The 1250 acres (36%) of early seral communities are mostly not meeting the Standards due to a high composition of cheatgrass, an invasive annual grass. 2284 acres of all other seral communities (Mid – PNC) are currently meeting standards and make up the majority of acres (64%) on the Coal Oil allotment. Implementation of the

proposed action will maintain and improve the ability of the rangelands to meet the Standards in the future.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: Higher order aquatic habitats potentially influenced by livestock within the permit area consist of a 2 ¼ mile stretch of the White River which parallels the southern boundary of the allotment. This lower portion of the White River supports appropriate populations of game and non-game fish (e.g., flannelmouth and bluehead sucker), amphibians (e.g., chorus frog), beaver and waterfowl.

Dominant vegetation along the floodplain and channel include inland saltgrass, buffaloberry, Fremont cottonwoods, tamarisks (invasive, non-native), and Russian olives (invasive, non-native). Upland vegetation along the river corridor includes Wyoming big sagebrush, rabbitbrush, greasewood, shadscale, and Gardner saltbush with an understory of bottlebrush squirreltail, western wheatgrass, cheatgrass, Indian ricegrass, and needle-and-thread-grass.

Environmental Consequences of the Proposed Action: The proposed action would have no conceivable influence on aquatic wildlife and associated habitat(s) as livestock are unable to access the floodplain (see discussion for bald eagle and Colorado pikeminnow and associated warm water fish in TES section above).

Environmental Consequences of the Continuation of Current Management Alternative: Continuation of current management practices would have no conceivable influence on aquatic wildlife and associated habitat(s) as livestock are unable to access the floodplain (see discussion on bald eagle and Colorado pikeminnow and associated warm water fish in TES section above).

Environmental Consequences of the No Grazing Alternative: The proposed action would have no conceivable influence on aquatic wildlife and associated habitat(s) as livestock are unable to access the floodplain (see discussion on bald eagle and Colorado pikeminnow and associated warm water fish in TES section above).

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): The public land health standard for aquatic wildlife communities is currently being met. Under the proposed action, the standard would continue to be met since there would be no substantive change in the use of livestock waters and the aquatic conditions which they provide. It is uncertain what influence no grazing would have on these features, but it would not detract from continued meeting of the standard through the term of the permit.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The lower elevation shrublands immediately adjacent to the White River (along the extreme southern edge of the allotment) are categorized by the Colorado Division of Wildlife as severe winter range - a specialized component of winter range that periodically supports virtually all an area's deer under the most severe winter conditions (i.e., extreme cold and heavy snowpack). The southern and western portions of the allotment are considered general winter range. These areas typically sustain use from November through April. In addition, much of Coal Oil Basin is inhabited year-round by a small resident herd of pronghorn.

Breeding raptor use of the project area is represented largely by cliff-nesting golden eagle and red-tailed hawk. Ferruginous hawk and burrowing owl are uncommon nesters within Coal Oil Basin and it is likely very few actually nest within the allotment (see discussion in TES section). Juniper woodlands along the western boundary of the allotment (Raven Ridge) may support a small number of accipitrine and long-eared owls. A number of raptors forage opportunistically during the winter in Coal Oil Basin, the most common being rough-legged hawks, red-tailed hawks, and golden and bald eagle and prairie falcon.

Nongame bird and small mammal populations associated with the project area are typically common and broadly distributed in extensive shrubland and woodland communities found throughout the Resource Area, as well as the Great Basin. The abundance and distribution of non-game bird populations, in particular, are believed to be appropriate with no notable lapses or inconsistencies in potential expression. Although much of the lower elevation shrublands are dominated by introduced annual weeds, the generally patchy and discontinuous distribution of these sites does not detract appreciably from habitat extent and continuity at local landscape scales. Many of these early seral sites are inhabited by white-tailed prairie dogs, whose burrow systems appear to successfully fulfill the habitat requirements for a number of small, fossorial mammals (see discussion in TES section).

Environmental Consequences of the Proposed Action: Under the proposed action reductions in livestock numbers and days of use will result in a 12% decrease in dormant season use (12/16 – 02/28) and a 23% decrease during the early portions of the growing season (03/01 - 04/10). These reductions would likely increase herbaceous ground cover and enhance plant vigor—effects that would increase the abundance and variety of ground cover and herbaceous forages available for big game and non-game in the long term. These increases would be most evident in the 535 acres of mid-seral communities that are at the cusp of converting to an early-seral community. Increases in the amount of perennial groundcover would be evident in late-seral and PNC communities. While reductions in numbers and duration may improve composition and abundance of herbaceous ground cover in the 1250 acres of early-seral communities in the long-term, they are not expected to have any marked effect during the life of the permit.

The proposed action would continue to be compatible with non-game wildlife populations and habitat. Reductions in duration and intensity of use would allow for increases in density and variety of herbaceous groundcover which would be particularly beneficial for small mammal populations better suited to heavier ground cover expression. Increases in small mammal

numbers would likely benefit raptors foraging in the area. Proposed grazing use is likely to have little impacts on those raptor species associated with the nearly 2500 acres of pinyon-juniper/juniper dominated woodlands due mainly to limited use from livestock (e.g., limited forage availability and inaccessible terrain).

Environmental Consequences of the Continuation of Current Management Alternative: Current grazing practices are largely compatible with big game wildlife populations. There are no extensive or chronic big game-livestock forage competition issues known to occur on the permit area. Continuation of the current management alternative is not likely to have any measurable affect, at least during the life of the permit, on the extent or quality of habitat available for big game and non-game wildlife within the 1250 acres of early-seral communities that have crossed the threshold to domination by annuals. The most prominent differences would likely involve minor decreases in the amount and variety of herbaceous forage within those mid-seral and to a lesser extent, late-seral communities. Continued grazing practices may potentially convert mid-seral communities to early-seral, reducing the amount and variety of forage and ground cover available for big game and non-game wildlife. Current livestock management appears to be largely compatible with non-game wildlife populations and habitat, including raptors (see also Migratory Bird and Threatened and Endangered Species sections above) as use on the allotment occurs prior to the reproductive season (May – July).

Environmental Consequences of the No Grazing Alternative: Under a no grazing alternative the majority of the allotment would experience an increase in perennial ground cover – most evident in the 535 acres of mid-seral communities that have not crossed a threshold in respect to domination by invasive, annuals (e.g., cheatgrass) and to a lesser extent, late-seral and PNC communities. The early-seral communities (~ 1250 ac) are not expected to markedly differ (at least during the life of the permit) should livestock be removed due to degraded rangeland conditions (e.g., domination by annuals), most likely attributable to historic grazing practices. Expansion of native perennial grass communities would be expected, albeit limited, resulting in minor increase in herbaceous forage and ground cover available for migratory birds.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): Approximately 1250 acres within the allotment are dominated by annual weeds. Although these sites in and of themselves cannot be considered meeting the definition of the land health standard, the majority of the shrubland communities comprising this landscape likely retain sufficient character to support viable populations of resident wildlife, although likely at populations reduced from potential.

Consistent with the intent of the standards, proposed reductions in growing season use would promote gains in perennial ground cover (as residual and new growth) and would be expected to bolster (on a local scale) the nutritional planes and reproductive performance of local populations of big game and non-game wildlife. Reducing the grazing intensity would improve habitat function, especially for non-game mammal and bird populations.

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

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

HYDROLOGY AND WATER RIGHTS

Affected Environment: The Coal Oil Allotment encompasses approximately 5,400 acres of the White River (near Rangely, CO) 5th level watershed and approximately 2,780 acres of the Cottonwood Gulch 5th level watershed. 6th and 7th level watersheds directly affected by land management decisions on the Coal Oil Allotment are Dripping Rock Creek, Stinking Water Creek, Coal Gulch, Hard Away Draw, and the White River below Rangely, CO. The White River contains the only perennial surface water on the allotment. The remaining watersheds are ephemeral in nature and flow only in response to snowmelt runoff and high intensity precipitation events.

Level I Rosgen stream classification (Geomorphic characterization) was done on the drainages within the allotment boundaries. Results indicate that Dripping Rock Creek, Coal Gulch, and Hard Away Draw are "G" channels. "G" channels are characterized as being unstable with grade control problems (e.g. frequent head-cutting) and high bank erosion rates. "G" type stream channels are entrenched, narrow, and deep, step/pool channels with low to moderate sinuosity. Channel slopes are generally steeper that 2% (Rosgen 1996, pp. 4-10).

Stinking Water Creek was identified as an "F" channel. "F" channels are deeply incised in valleys of relatively low elevation relief, containing highly weathered rock and/or erodible materials. The "F" stream systems are characterized by very high channel width/depth ratios at the bankfull state, and bedform features occurring as a moderated riffle/pool sequence. "F" stream channels can develop very high bank erosion rates, lateral extension rates, significant bar

deposition and accelerated channel aggradation and/or degradation while providing for very high sediment supply and storage capacities (Rosgen 1996, pp. 4-10).

The White River near the southern edge of the Coal Oil Allotment was identified as a "C" channel. "C" channels are located in narrow to wide valleys, constructed from alluvial deposition. The "C" type channels have well a developed floodplain (slightly entrenched), are relatively sinuous with a channel slope of 2% or less and a riffle/pool bedform configuration. The primary morphologic features of "C" channels are the sinuous, low relief channel, the well developed floodplains built by the river, and characteristic "point bars" within the active channel. "C" type channels can be significantly altered and rapidly de-stabilized when the effects of imposed changes in bank stability, watershed condition, or flow regime are combined to cause an exceedance of a channel stability threshold (Rosgen 1996, pp. 4-6, 4-7).

Six stock watering ponds are located on public lands within the Coal Oil Allotment, the ponds are situated adjacent to ephemeral channels and collect water from spring runoff and winter/spring precipitation. BLM springs 151-01 and 151-04 have been identified on the Coal Oil Allotment. The majority of the resource area was inventoried in the early 1980's for springs. The springs listed in Table 3 were most recently inventoried in November of 2005. Table 3 is a product of the WRFO Water Atlas for the Coal Oil Allotment and lists identified springs and associated water quality parameters.

Table 3:

Map Code	Structure Name	Qtr	Sec#	Twp	Rge	Water Right Case #	SC	pH	Q (gpm)	Date	Comments
151-04	Mile High Spring	SWSW	6	1N	102W	85CW456	6638	8.1	1.9	5/19/83	Perennial
151-04	Mile High Spring	SWSW	6	1N	102W	85CW457	1000	6.57	saturated	11/7/05	Perennial
151-01	---	NWNE	34	2N	103W	N/A	3400	8.4	no flow	6/7/83	Seasonal
151-02	---	NWNE	34	2N	103W	N/A			no flow	11/7/05	Seasonal

An onsite evaluation of BLM spring 151-04 indicated that the source of the spring was an old drill hole (Well #2). Well #2 was drilled in 1964 and plugged in 1966. The operators encountered water at 400 feet and attempted to plug off the water with 5 bags of cement followed by shale. Spring 151-01 was also inventoried on 11/7/2005 and no water or evidence of recent water was found at the site identified in table 3.

It should be noted that much of the allotment is dominated by cheat grass which lacks sufficient rooting depth and density needed to stabilize soils and protect functional stream channel morphologic conditions in downstream stream reaches.

Environmental Consequences of the Proposed Action: Reducing the number of active AUMs on the allotment should slightly aid in re-establishment of preferred vegetative communities necessary for retaining sediment in the uplands and stabilizing stream banks. All of the affected stream types within the Coal Oil Allotment can be rapidly de-stabilized and highly erosive with even slight changes in watershed conditions.

Because of the past, current and potential future energy development within the allotment boundaries, potential adverse environmental consequences on surface and ground water hydrology resulting from livestock grazing will be minor in comparison to potential impacts from energy development (e.g. construction of roads, pipelines, well pads, production facilities,…).

Environmental Consequences of the Continuation of Current Management Alternative: Because of the unstable nature of "F" and "G" type channels, the current grazing alternative in combination with continued drought conditions and energy development would likely result in reductions in desired vegetative communities (upland and riparian vegetation) necessary to retain soils and stabilize stream banks. Decreased stability in "F" and "G" tributary channels to the White River ("C" channel type) will elevate sediment/salt loads and further alter morphologic conditions within the White River. Increased erosion rates will likely silt-in existing livestock watering ponds on public and private lands rendering them non-functional and concentrating more livestock at fewer watering locations.

Environmental Consequences of the No Grazing Alternative: No grazing will be permitted. Preferred upland and riparian vegetative communities would have greater potential for recovery. The effective ground cover would likely increase providing greater soil stabilization and increasing stream bank protection.

Mitigation: Spring and stock pond developments must be maintained and all non-functional items (e.g. old water troughs, pipes, fence, ect…) must be removed and properly disposed of by the permit holder. Range improvement projects (springs and stock ponds) will be monitored to evaluate the functionality of developments and assess water quality at spring sources.

PALEONTOLOGY

Affected Environment: The allotment is overlaid on five different formations (Tweto 1979). Two of the Formations, Lower Green River/Wasatch and the Upper Mesa Verde, have been classified by the BLM, WRFO as Condition I fossil bearing formations. Two of the formations< Sego Sandstone, Buck tongue of the Mancos and the Mancos are classified by the BLM, WRFO, as Condition II formations. The final formation present is Quaternary Alluviums which are considered non-fossiliferous.

The Wasatch formation is know for it's preservation of the Lysite (Middle early Eocene) age fossils such as *Mesohippus, Coryphodon, hyopsodus* (Kuntz, Armstrong and Athearn ed. 1989) *,* an numerous early primates such as members of the *omomydia, procolemur* and *Phenacolemur* (Doi 1989). These represent vertebrate fossils that are of scientific interest.

The Upper Mesa Verde group is know for preservation of a variety of vertebrate, invertebrate and plant fossils including certain members of the *Hadrosaur* and *Certopsian* families along with numerous multituberculates, an early form of mammal. These also represent fossils of scientific interest.

The Mancos Shale and the Sego Sandstone Buck tongue member of the Mancos Shale are regarded as Condition II formations as they mostly produce invertebrate marine fossil though vertebrate fossil are not completely unknown. Said vertebrate fossil are generally quite rare which makes them particularly significant to the scientific community when they are found.

Environmental Consequences of the Proposed Action: Where outcrops of the fossil bearing formations are present at the surface, particularly horizontal surfaces of slopes of less that 30 percent there is a potential to impact fossil resource that may be present, particularly in areas of livestock concentrations such as places where mineral supplements are sited, around watering features or shady areas where animals go to avoid mid day heat. Impacts may also occur on vertical surfaces and low overhanging surfaces where animals may come to rub or scratch. Any fossil that may be present, especially the smaller species, could be crushed by trampling or dislodged from the formation and then trampled by concentrating animals.

Environmental Consequences of the Continuation of Current Management Alternative: Impacts under the Continuation of Current Management Alternative would be similar to the proposed action but since there would be a slightly larger number of animals present during the use period (700 animals versus 615 animals) there would be a potential for greater numbers of animals in the concentration areas and slightly higher level of trampling or rubbing impacts to any fossil resources that might be present.

Environmental Consequences of the No Grazing Alternative: Under the No Grazing Alternative there would be no impacts to fossil resources from domestic livestock trampling or rubbing on the exposed outcrops of the formations.

Mitigation: 1. Mineral supplements shall not be placed on or within 200 meters of exposed rock outcrops of the Upper Mesa Verde or Wasatch Formations.

2. Holding pens or corrals shall not be constructed on exposed rock outcrops or within 200 meters to avoid funneling animals across exposed rock outcrops. Corrals or pens should be sited to direct concentrations toward areas with soil exposures to avoid impacting fossiliferous formations.

3. Where possible water catchments or other watering facilities shall be sited to avoid the Upper Mesa Verde and Wasatch formations unless a paleontological inventory has determined that no fossils are present in the location.

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

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be

used (assuming in situ preservation is not feasible)

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

RANGELAND MANAGEMENT

Affected Environment: Wesley and Ila Sturgeon (0501433) are the BLM authorized grazing permit holders on the Coal Oil allotment (06313). They acquired the grazing permit in 1986 from J. Rex Robinson with no changes made to the grazing permit. Within the Coal Oil allotment, the Sturgeon's have a grazing lease for 2189 private acres owned by Emerald Oil located in Coal Oil Basin.

The table below reflects the billed AUMs (Historic AUM Use) for the Coal Oil allotment by grazing year. The grazing year begins March 1st and end February 28th, and billed AUMs are based upon a submitted grazing application before the grazing season. For the period of 1991 through 2006, the average use has been 241 AUMs, which is 77% of the permitted 315 active AUMs (see table below).

Historic AUM Use Coal Oil Allotment	
Grazing Year (03/01-02/28	**AUMs Authorized**
2006	220
2005	136
2004	164
2003	167
2002	140
2001	283
2000	232
1999	331
1998	347
1997	306
1996	176
1995	355
1994	365
1993	198
1992	270
1991	145
Average AUM Use	**241**
Active AUMs	**315**
% of Active AUMs Used.	**77%**

The Coal Oil allotment has few developed water sources and dependable waters are located at the White River and upper Coal Gulch (earthen reservoir, haul water). There are two large

reservoirs in Coal Oil Basin on BLM administrated lands (Robinson Reservoirs 1 & 2), however they have become filled with sediment and hold limited water. Due to this lack of reliable waters to aid in livestock distribution, winter use is most beneficial as the sheep are able to utilize snow. Without snow, water must typically be hauled to provide a reliable water source on the allotment.

Environmental Consequences of the Proposed Action: Refer to the Vegetation section of this document for greater analysis of rangeland vegetation impacts associated with the proposed action.

The following tables show the carrying capacity (Animal Unit Months, AUMs) of livestock for the Coal Oil allotment. An AUM is the amount of forage necessary for the sustenance of 5 sheep (1 cow) for a period of 1 month. The table is broken down by acres within an ecological site and acres per AUM, which determines AUMs for those acres when divided. The Sturgeon's submitted *Grazing Application for Permit Renewal* (06/19/06) was developed with the BLM using the Livestock Grazing Capacity (see table below) analysis of forage production to determine the rangeland's available forage contribution (AUMs). Also, the tables below are 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 stoking level that meets Public Land Health Standards in relation to the rangeland's carrying capacity and current rangeland conditions.

Coal Oil Basin Allotment (06313), Livestock Grazing Capacity for BLM Lands

Unit #	Soil Unit	Ecological Site	BLM Acres	Acres / AUM	BLM AUMs
5	Badland	None	592.47	25	24
5	Badland (Useable)	None (Useable)	1441.89	15	96
7	Billings silty clay loam,0-5%slopes	Alkaline Slopes	159.36	11	14
8	Billings-Torrifluvents complex,gullied,0-5%slopes	Alkaline Slopes / None	67.35	15	4
16	Chipeta silty clay loam,3-25%slopes	Clayey Saltdesert	405.33	13	31
17	Chipeta silty clay loam,3-25%slopes,eroded	Clayey Saltdesert	100.69	20	5
18	Chipeta-Killpack silty clay loam,3-15%slopes	Clayey Saltdesert	542.71	12	45
21	Cliffdown-Cliffdown Variant complex,5-65%slopes	Saltdesert Breaks	201.51	9	22
25	Colorow sandy loam	Sandy Saltdesert	76.67	7	11
32	Fluvaquents, frequently flooded	River bottom	11.79	9	1
46	Kinnear fine sandy loam,1-5%slopes	Loamy Saltdesert	19.69	11	2
78	Rock Outcrop	None	248.98	35	7
78	Rock Outcrop (Useable)	None (Useable)	196.50	15	13
93	Turley fine sandy loam,0-3%slopes	Alkaline Slopes	4.57	10	0
94	Turley fine sandy loam,3-8%slopes	Alkaline Slopes	305.68	15	20
W	Water	None	3.75	0	0
		Totals:	**4378.94**		**295**
			Acres/AUM		**15**

Coal Oil Basin Allotment (06313), Livestock Grazing Capacity for Controlled Private Lands (Emerald Lease)					
Unit #	Soil Unit	Ecological Site	Pvt Acres	Acres / AUM	Pvt AUMs
5	Badland (Useable)	None (Useable)	118.01	16	7
7	Billings silty clay loam,0-5%slopes	Alkaline Slopes	444.80	11	40
16	Chipeta silty clay loam,3-25%slopes	Clayey Saltdesert	751.99	13	58
17	Chipeta silty clay loam,3-25%slopes,eroded	Clayey Saltdesert	12.93	20	1
18	Chipeta-Killpack silty clay loam,3-15%slopes	Clayey Saltdesert	743.88	12	62
25	Colorow sandy loam	Sandy Saltdesert	9.65	10	1
78	Rock Outcrop	None	102.28	35	3
94	Turley fine sandy loam,3-8%slopes	Alkaline Slopes	4.94	15	0
		Totals:	**2188.48**		**172**
			Acres/AUM		**13**

The following table (Acres & AUM Breakdown) is a summarization of the individual Livestock Grazing Capacity tables above. The Percent Public Land (% PL), which is the percentage of BLM AUMs in relation to total AUMs, was determined for the Coal Oil allotment at 63% PL.

Acres & AUM Breakdown for the Coal Oil Allotment Proposed Livestock Grazing Capacity									
BLM AUMs	BLM Acres/AUM	Pvt AUMs	Pvt Acres/AUM	Tot AUMs: (BLM, Pvt)	% PL	BLM Acres	Pvt Acres	Total Acres	% BLM Acres
295	15	172	13	467	63%	4,379	2,189	6,568	67%

As shown in the table below of the proposed grazing permit, the active AUMs are within the livestock grazing capacity for the Coal Oil allotment. Therefore, the proposed grazing permit will aid in achieving plant maintenance through a reduction in livestock numbers (700 to 615 sheep) and shortened growing season use (04/15 to 04/10).

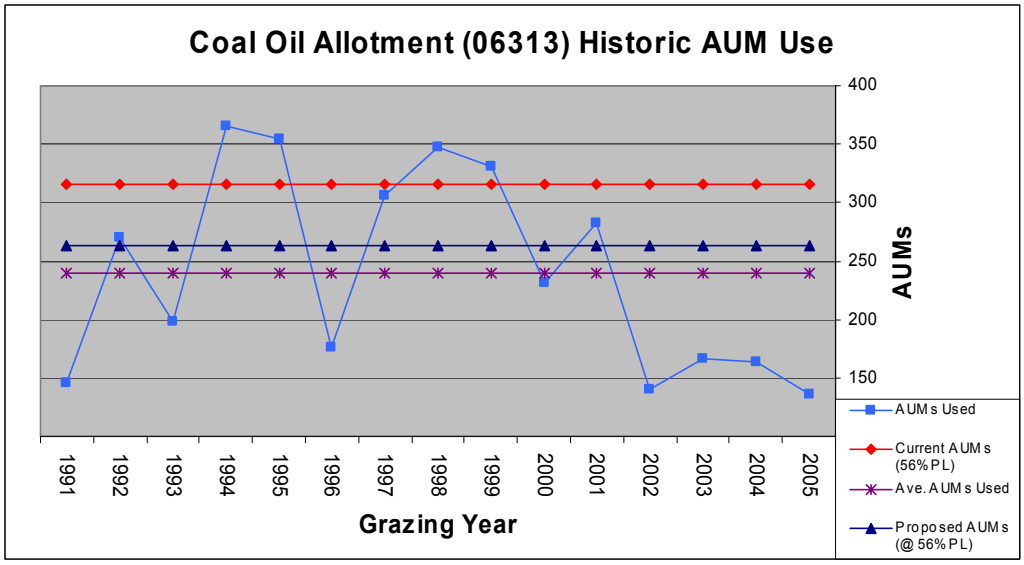
Proposed Grazing Permit (0501433) for Wesley & Ila Sturgeon										
Allotment		Livestock		Date		%	BLM	Active	Susp.	Total
Name	No.	Number	Kind	On	Off	PL	AUMs	AUMs	AUMs	AUMs
Coal Oil	06313	615	S	12/16	02/28	63%	**191**	**295**	**0**	**295**
		615	S	03/01	04/10	63%	**104**			

As shown in the Vegetation Section, the proposed action is expected to improve livestock grazing use in respects to a reduced grazing intensity (AUMs), a slightly shorter grazing season, and a reduction of AUMs used during the regular growing season. These situations will provide an opportunity for plants to receive less defoliation in relation to the Current Management Alternative, thereby giving the vegetation a greater opportunity for replenishment of root reserves, biomass accumulation, and plant propagation. Therefore, the proposal will aid in the long-term sustainability of the rangelands to produce forage for livestock.

The proposed grazing permit's active AUMs are based upon the above Livestock Carrying Capacity tables. Therefore, the proposal alters active AUMs to a level that is in accordance with

the ability of the rangelands to produce forage, be grazed, and still meet rangeland health standards over time.

The table below is a comparison of proposed AUMs in relation to current AUMs (315), actual AUMs used, and average AUMs used (241). For the table below the proposed AUMs (295) were calculated on at 56% PL (current % PL) for comparison purposes with the current management alternative. Thus, proposed AUMS where adjusted from 295 at 63% PL (proposed) to 263 at 56% PL (current).



Early seral ecological sites (1250 acres) dominated by cheatgrass provide limited forage and lowered yearly production for livestock in comparison to healthy, robust rangelands. Mid seral sites (535 acres) provide favorable forage and still has a cheatgrass component, yet late seral (1319 acres) and PNC (1319 acres) provide the greatest amount of forage in a sustainable, long-term manner within nominal cheatgrass populations.

It is anticipated that the management of the rangelands by Wesley and Ila Sturgeon will not be impaired by the implementation of the proposed action, as the ranch has applied for this use with their submitted *Grazing Application of Permit Renewal*.

Implementation of the proposed action will further enhance the ability of the rangelands to meet the various Public Land Health Standards in the future.

Environmental Consequences of the Continuation of Current Management Alternative: The table below is the current grazing permit authorized by Wesley and Ila Sturgeon.

Current Grazing Permit (0501433) for Wesley & Ila Sturgeon										
Allotment		Livestock		Date		% PL	BLM AUMs	Active AUMs	Susp. AUMs	Total AUMs
Name	No.	Number	Kind	On	Off					
Coal Oil	06313	700	S	12/06	02/28	56%	**193**	**315**	**0**	**315**

Current Grazing Permit (0501433) for Wesley & Ila Sturgeon										
Allotment		Livestock		Date		%	BLM	Active	Susp.	Total
Name	No.	Number	Kind	On	Off	PL	AUMs	AUMs	AUMs	AUMs
		700	S	03/01	04/15	56%	**119**			

The table below is the livestock grazing capacity as allocated on the current grazing permit for the Coal Oil allotment.

Acres & AUM Breakdown for the Coal Oil Allotment Current Livestock Grazing Capacity									
BLM AUMs	BLM Acres/AUM	Pvt AUMs	Pvt Acres/AUM	Tot AUMs: (BLM, Pvt)	% PL	BLM Acres	Pvt Acres	Total Acres	% BLM Acres
315	14	245	9	560	56%	4,379	2,189	6,568	67%

The current grazing permit (315 AUMs) exceeds the Proposed Livestock Grazing Capacity for BLM lands (295 AUMs). Also, the Current Livestock Grazing Capacity in the form of % PL for private lands is currently 245 private AUMs (9 Acres/AUM), which is higher then the proposed Livestock Grazing Capacity of 172 private AUMs (13 Acres/AUM). The combination of over-allocated BLM and private AUMs results in an excess of 93 AUMs (560 current total AUMs versus 467 AUMs proposed total AUMs) over the grazing capacity on the Coal Oil allotment. This creates an opportunity for excessive livestock use beyond the rangelands capacity to sustain grazing in a long-term manner consistent with vegetation production.

As shown from the Historic AUMs Use table above, the Sturgeons have typically operated (241 AUMs) below their full active AUM level (315 AUMs) within the Coal Oil allotment. A prolong drought that still persist has accounted for part of this lower historical AUM level. However, the ranch has extended their off-date (5/20) into the growing season to accommodate lambing operations with the greatest use on private lands (Emerald lease). This continual extension into the spring growing season reduces the rangelands ability to produce forage through a reduction in seed propagation, lower competitive abilities of desired vegetation, and reduced plant growth. Therefore, these situations lower plant maintenance and reproduction capabilities that lessen the long-term sustainability of the rangeland. This situation is greatest on the Emerald lease (private land) within the salt-desert shrub community in Coal Oil Basin.

Environmental Consequences of the No Grazing Alternative: Under this alternative, Wesley and Ila Sturgeon would not have the ability to authorize their existing grazing permit (0501433).

Within the Coal Oil allotment privately controlled acreage (Emerald Lease) accounts for 37% of the total forage production. Without the adjoining BLM grazing permits, Wesley and Ila Sturgeon would not be able to effectively utilize this privately held forage as it is open to BLM lands and would not be economically or environmentally feasible to fence separate

Therefore, without the BLM allocated forage and/or private forage, it would place an economical burden on the ranch and it likely would not be able to continue in its current state as a sheep operation.

Mitigation: None

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts from the proposed action would not exceed those discussed in the White River Resource Area RMP and/or White River Resource Area Grazing Management Environmental Impact Statement (EIS).

REFERENCES CITED:

Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Commission (WQCC), 2005a. Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin. Amended December 12, 2005 and Effective March 2, 2006.

CDPHE-WQCC, 2006b. "Status of Water Quality in Colorado – 2006, The Update to the 2002 and 2004 305(b) Report," April 2006.

CDPHE-WQCC, 2006c. "Regulation No. 93, 2006 Section 303(d) List Water-Quality-Limited Segments Requiring TMDLs," effective April 30.

CDPHE-WQCC, 2006d. "Regulation No. 94, Colorado's Monitoring and Evaluation List," effective April 30.

Doi, Kentaro
1990 Geology, And Paleontology of Tweo Primate Families of the Raven Ridge, Northwestern Colorado and Northeastern Utah. Unpublished Masters Thesis, University of Colorado. Manuscript on file Bureau of Land Management, White River Field Office, Meeker, Colorado.

Kuntz, David W. Harley Armstrong and Frederic J. Athearn
1989 Faults, Fossils, and Canyons: Significant Geologic Features on Public Lands In Colorado. Geologic Advisory Group, Bureau of Land Management. Cultural Resources Series Number 25. Colorado State Office, Bureau of Land Management, Denver Colorado

Rosgen, Dave. 1996. Applied River Morphology. Wildland Hydrology, Pagosa Springs, Colorado: 4-10, 4-10, 4-6, 4-7 pp.

PERSONS / AGENCIES CONSULTED: A Public Notice of the NEPA action is posted on the White River Field Office Internet website at the Colorado BLM Home Page asking for public input on Grazing Permit renewals and the assessment of public land health standards within the White River Field Office area. Local notification is published in the Rio Blanco Herald Times newspaper located here in Meeker, Colorado on a monthly basis. The Grazing Advisory Board

was notified of impending Grazing Permit renewals. Also, individual letters are sent to the lessees/permittees informing them that their lease is up for renewal and request any information they want included in or taken into consideration during the renewal process.

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Nate Dieterich	Hydrologist	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Gabrielle Elliot	Archaeologist	Cultural Resources
Michael Selle	Archaeologist	Paleontological Resources
Jed Carling	Rangeland Specialist	Invasive, Non-Native Species
Lisa Belmonte	Wildlife Biologist	Migratory Birds
Lisa Belmonte	Wildlife Biologist	Threatened, Endangered and Sensitive Animal Species, Wildlife
Melissa Kindall	Range Technician	Wastes, Hazardous or Solid
Nate Dieterich	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights
Jed Carling	Rangeland Specialist	Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness
Jed Carling	Rangeland Specialist	Soils
Jed Carling	Rangeland Specialist	Vegetation
Lisa Belmonte	Wildlife Biologist	Wildlife Terrestrial and Aquatic
Chris Ham	Outdoor Recreation Planner	Access and Transportation
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Jed Carling	Rangeland Specialist	Rangeland Management
Penny Brown	Realty Specialist	Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Chris Ham	Outdoor Recreation Planner	Visual Resources
Jed Carling	Rangeland Specialist	Wild Horses

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

CO-110-2005-124-EA

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

DECISION/RATIONALE: It is my decision to implement the proposed action to renew grazing permit # 0501433 (Wesley and Ila Sturgeon) for a period of ten years for the Coal Oil grazing allotment as described in the proposed action with the addition of the below mitigation.

MITIGATION MEASURES:

1. Appropriate mitigation measures may be identified in consultation with Colorado SHPO within the ten-year period of this lease. It is recommended that a renewal be issued for this lease subject to the allotment specific stipulations. If historic or prehistoric materials are uncovered by the permittee, the permittee shall immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the BLM.

2. If noxious weeds are identified within the Coal Oil allotment and occur on BLM administrated lands, they will be treated by a certified pesticide applicator either by the BLM or permittee. If livestock grazing practices have resulted in the establishment and/or increased spread of noxious weeds, the permittee will be responsible for the eradication of these weeds as directed by the BLM.

3. If in the future any Threatened or BLM sensitive plant species are found within the allotment and are being adversely impacted then additional mitigation may have to be developed.

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

5. Compliance monitoring for vegetation improvement would help identify if additional actions were needed to comply with the *Clean Water Act*. In addition, continued monitoring of stream channel morphology (Rosgen survey data) will be essential to evaluate the impacts of increased livestock numbers on the White River and its affected tributaries.

6. Spring and stock pond developments must be maintained and all non-functional items (e.g. old water troughs, pipes, fence, etc…) must be removed and properly disposed of by the

permit holder. Range improvement projects (springs and stock ponds) will be monitored to evaluate the functionality of developments and assess water quality at spring sources.

7. Mineral supplements shall not be placed on or within 200 meters of exposed rock outcrops of the Upper Mesa Verde or Wasatch Formations.

8. Holding pens or corrals shall not be constructed on exposed rock outcrops or within 200 meters to avoid funneling animals across exposed rock outcrops. Corrals or pens should be sited to direct concentrations toward areas with soil exposures to avoid impacting fossiliferous formations.

9. Where possible water catchments or other watering facilities shall be sited to avoid the Upper Mesa Verde and Wasatch formations unless a paleontological inventory has determined that no fossils are present in the location.

10. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:
    - whether the materials appear to be of noteworthy scientific interest
    - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

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

COMPLIANCE/MONITORING: Refer to the Monitoring and Evaluation section within the proposed action of this document.

NAME OF PREPARER: Jed Carling

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL: Michael Selle
acting Field Manager

DATE SIGNED: 8/9/2006

ATTACHMENTS:

- Figure 1: Map of the Proposed Action
- Figure 2: Soils of the Coal Oil Allotment
- Figure 3: Oil/Gas Wells on the Coal Oil Allotment
- Figure 4: BLM Acres not Meeting Public Land Health Standards

CO-110-2005-124-EA 49

Figure 1: Map of the Proposed Action:

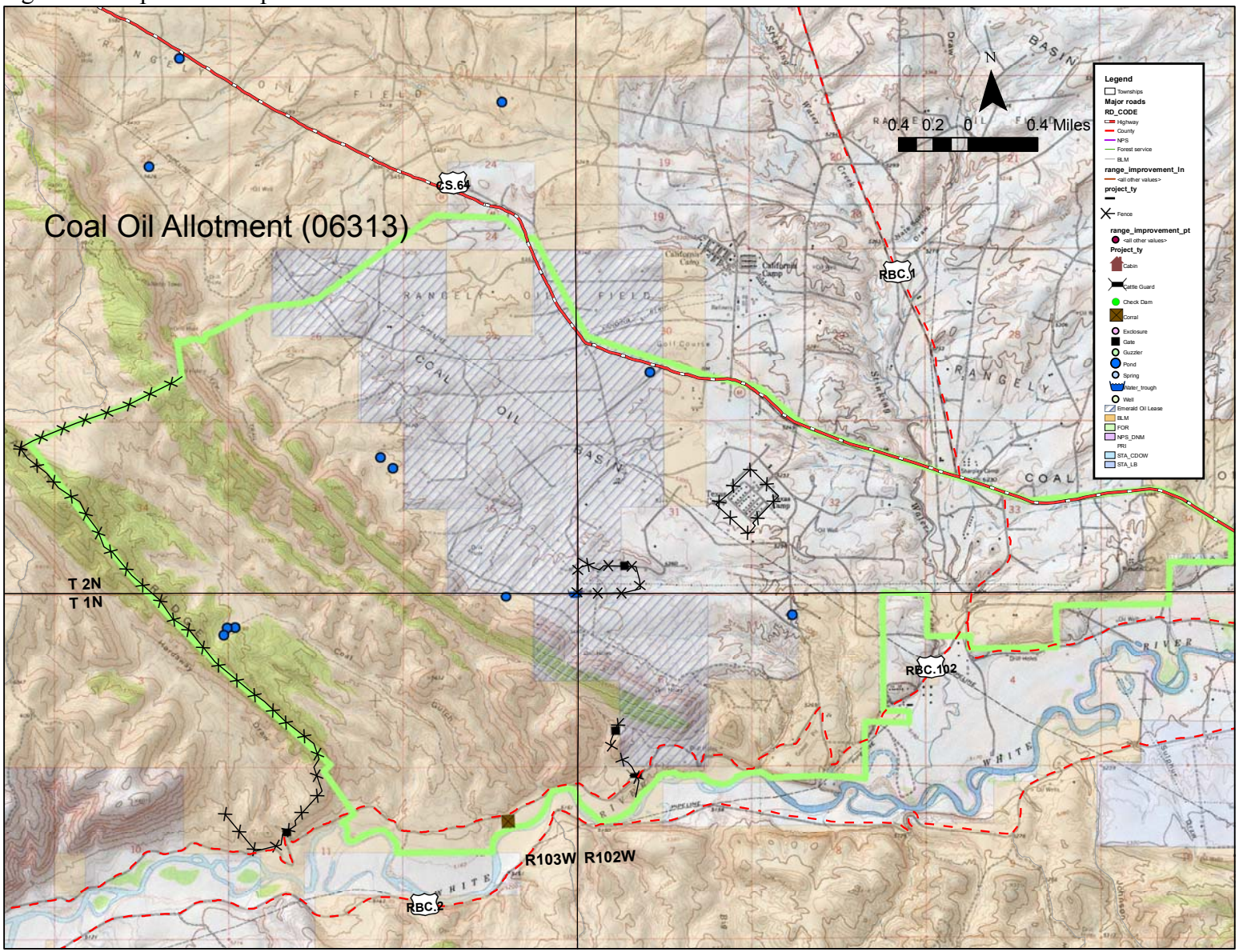


Figure 2: Soils of the Coal Oil Allotment

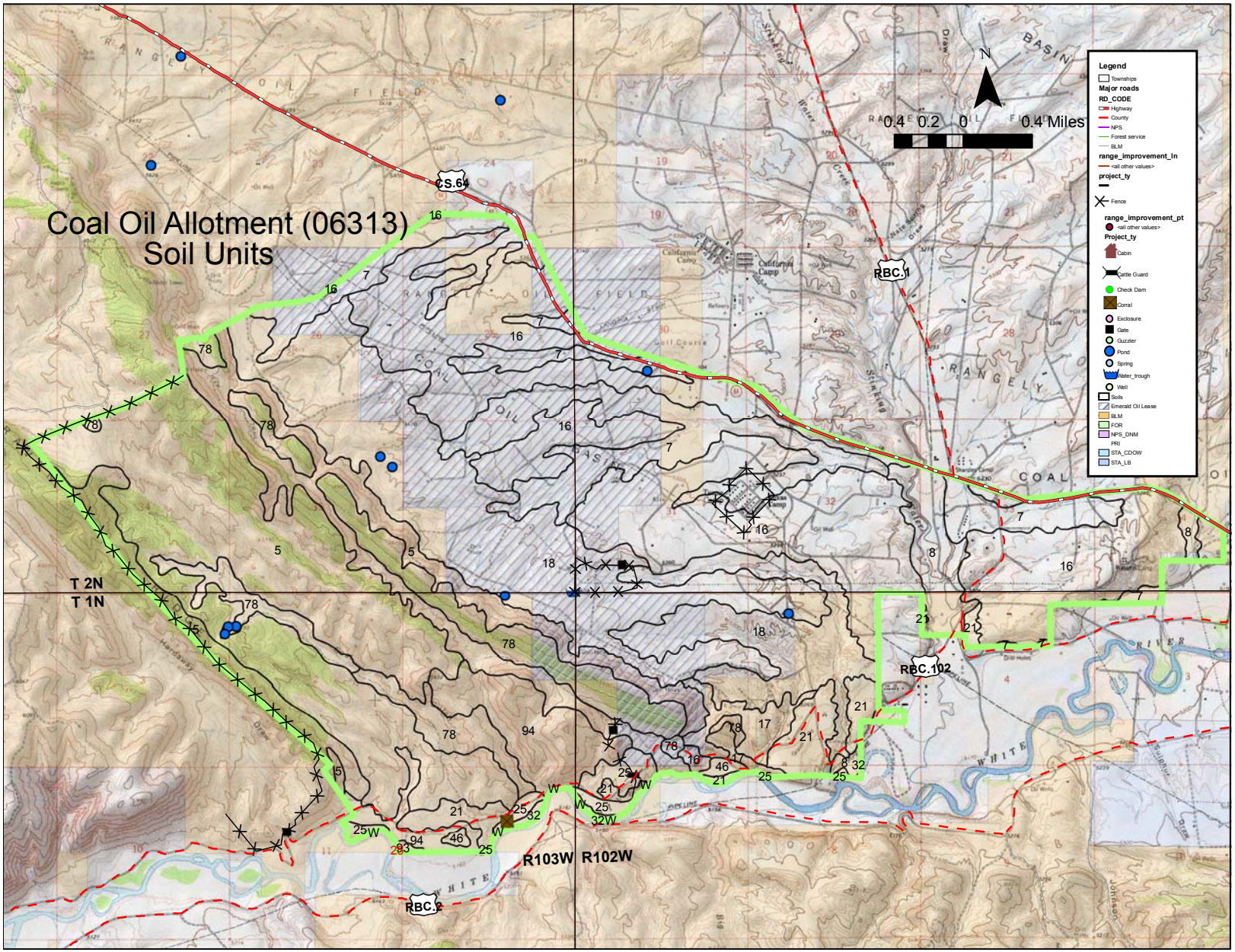


Figure 3: Oil/Gas Wells on the Coal Oil allotment

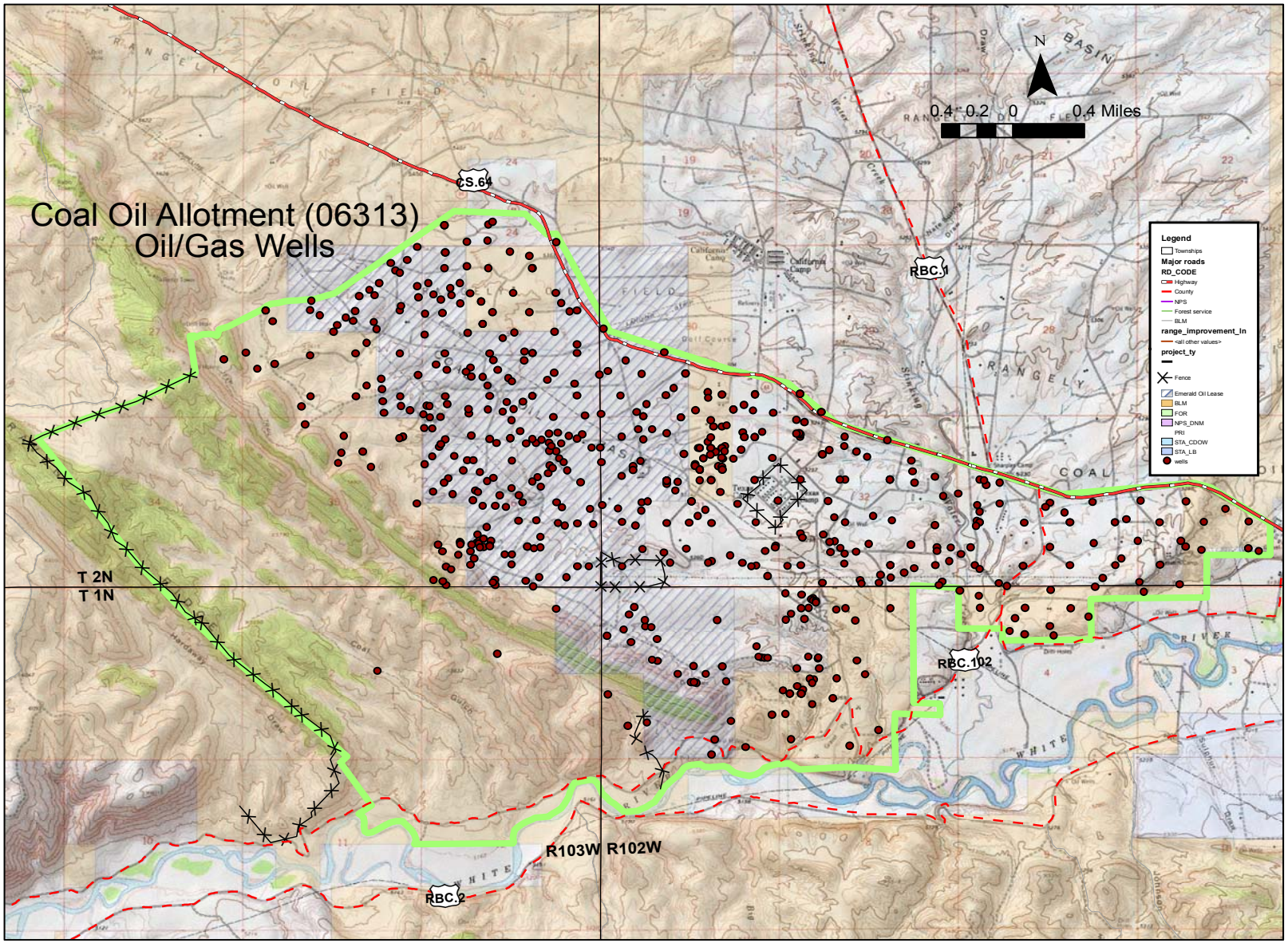


Figure 4: BLM Acres Not Meeting Public Land Health Standards