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

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2008-147-EA

CASEFILE/PROJECT NUMBER: Authorization #0503693

PROJECT NAME: Moody Grazing Permit Renewal - East Strawberry Allotment (06628)

LEGAL DESCRIPTION: T 1N R 94W, Sec 7, 8, 17, 18, 19, 20

APPLICANT: Doug and Shannon Moody

ISSUES AND CONCERNS: There are no resource concerns with this allotment. As part of the Grazing Permit Renewal the allotment boundary, season of use, livestock numbers, and percent public land are being adjusted.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: Doug and Shannon Moody acquired approximately 600 acres of the base property associated with the East Strawberry allotment earlier this year. The current grazing preference has been transferred to them and a permit issued under the Appropriations Rider. This allotment was previously part of the Grady Ranch Inc., which was due to be fully analyzed and the permit renewed in 2007.

The East Strawberry allotment is located approximately 4 miles northwest of Meeker on the Hogback east of Rio Blanco County (RBC) Road 7. The allotment is currently permitted for cattle grazing in the spring (5/1 – 5/30) and again in the fall (11/01 – 11/30). Precipitation in the area averages 12-16 inches. The western half of the allotment, along RBC Road 7 has gentle topography of around 6,200 feet. The eastern half of the allotment is mostly on the Hogback where elevations reach as much as 7,000 feet. Topography here is steep and approximately 25% of the allotment has slopes steeper than 35% making those areas only marginally accessible or completely inaccessible to livestock use. There are no range improvements (ponds) on BLM lands and primary water sources for livestock is located on private lands on the western side of the allotment. There is a small (0.6 acre) seep and associated wetland area on the northern border of the allotment on Bureau of Land Management (BLM) lands. Plant communities on BLM lands include sagebrush and grass parks on the gentle topography rolling loam sites. Pinyon Juniper woodlands with Gambel oak stands in the steep drainages dominate most of the

BLM lands on the Hogback though there are some open sagebrush parks up on the Hogback itself. Refer to the end of this document for a map of the allotment.

The White River Field Office (WRFO) has categorized all grazing allotments into three management categories that define management intensity: (1) Improve, (2) Custodial, and (3) Maintain. The categories define rangeland management objectives broadly in response to analysis of each allotment's resource characteristics, potential, opportunities, and needs. The East Strawberry allotment has been categorized as Maintain. The table below is a breakdown of acreages by land status of the East Strawberry allotment.

Breakdown of Total Acres within the East Strawberry Allotment 06628					
Allotment					
Name	No.	BLM Acres	State Acres	Private Acres	Total Acres
East Strawberry	06628	777	0	606* (557)	1383*

*Includes an additional 49 acres of private land entirely fenced that will be used as a private pasture.

Alternative A, Proposed Action: Renew the grazing permit for Doug and Shannon Moody (Authorization #0503693) for a ten year period as outlined in the proposed grazing schedule below. This grazing schedule could potentially result in the allotment being grazed for close to 150 days each year. However, all permitted use will be during the dormant season will be at a level that more closely matches the current calculated carrying capacity on BLM administered lands. The carrying capacity also takes into consideration factors such as slope and distance to water. The proposed grazing schedule below was discussed with, agreed to, and applied for by the permittee.

East Strawberry Allotment 06628 Grazing Permit									
Allotment		Livestock		Date		Total	%	BLM	Pvt
Name	No.	Number	Kind	On	Off	AUMs	PL	AUMs	AUMs
E. Strawberry	06628	40	C	09/28	2/28	203	27%	55	148
						203		**55**	**148**

Plan of Operation: Each year, thirty days prior to turnout in the allotment, the permittee shall submit a plan of operation (grazing application) for the grazing year to the Bureau of Land Management (BLM) for approval. The plan of operation shall include the anticipated turnout dates, and numbers of animals.

Objectives of this grazing schedule are to:

- Maintain or enhance a healthy rangeland vegetation composition and species diversity capable of supplying forage at a sustained yield to meet the current and future forage demands for livestock and wildlife.

- Provide for adequate forage plant growth and or re-growth opportunities necessary to replenish plants' food reserves and produce sufficient seed to meet the reproduction needs necessary to maintain an ecological presence in the plant community.

- Establish a grazing permit where the permittee can graze livestock in this allotment with a strategy that provides for plant growth requirements and provides for the most economical use of all forage resources available to the ranch operation.

An animal unit month (AUM) is the amount of forage necessary to sustain one cow and her calf for a one month period. The percent public land (%PL) is the amount of forage produced on BLM lands in the allotment as compared to the total amount of forage produced on both BLM and private lands combined in the allotment. As part of this permit renewal the %PL has been recalculated for the allotment. The current total calculated carrying capacity for the allotment is 203 AUMs; 55 AUMs of forage generated on BLM lands, and 148 AUMs of forage generated on private lands. This calculates to 27% of AUMs being produced on BLM lands. There are two primary reasons for the change in percent public land. First, when application was made for the grazing preference during a recent transfer the base property acreage to which the preference was being attached is different than under the previous permit, also resulting in a revised allotment boundary. Second, advances in technology (e.g. computer calculations using ArcMap and Excel spreadsheets) provided more accurate forage allocation based on land ownership.

Based on more accurate range site forage production analysis, combined with historic actual use data, Land Health Assessments and topography factors, the calculated livestock carrying capacity has also been reduced to reflect a more accurate and sustainable stocking rate. Slopes greater than 35% have been identified and given reduced forage production values. While livestock can and likely do derive some benefit from those areas, the majority of carrying capacity is based on the less steep areas of the allotment that are more readily accessible to livestock.

Rangeland Improvements Necessary to Implement the Grazing System: Currently there are no rangeland improvement (RI) projects proposed to implement the proposed grazing system. The permittee has expressed a desire to in the future develop a spring/seep at the north end of the allotment and pipe water to several water tanks to the south, providing water where there currently is none. This project would benefit both livestock and wildlife and improve distribution throughout the allotment. This project will not be analyzed in this document but will be submitted at a later date an analyzed in a separate environmental assessment (EA) at that time. Future evaluations of allotment conditions may identify additional improvements that may aid in achieving land health and livestock management objectives. In which case, a separate EA would be compiled to approve any such new RIs on a site specific basis.

Monitoring and Evaluation: There are currently no long term trend sites established in the East Strawberry allotment. In the 2007 field season Land Health Assessments were conducted of resource conditions. Land Health Assessments, utilization data, and actual use data will be used in the future to determine the need to or ability to adjust livestock numbers or season of use.

Grazing Permit Terms and Conditions: The following terms and conditions would be included in the grazing permit issued under this alternative:

1. Livestock grazing in the East Strawberry allotment will follow the grazing schedule outlined in the NEPA document CO-110-2008-147-EA.

2. The permittee shall submit an Actual Use form to the BLM within 15 days after completion of their annual grazing use as outlined in 43 CFR 4130.3-2(d).

3. 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).

4. This grazing permit/lease is subject to the provisions of executive Order NO. 11246 of September 24, 1964, as amended, which sets forth nondiscrimination clauses. A copy of this order may be obtained from the authorized officer.

5. In order to improve livestock distribution on the public lands, no salt blocks or mineral supplements will be placed within a 1/4 mile of any riparian area, wet meadow, or watering facility (either permanent or temporary) unless stipulated though a written agreement or decision in accordance with 43 CFR 4130.3-2(c).

6. The terms and conditions of this permit may be modified if additional information indicates that revision is necessary to conform to 43 CFR 4180.

Alternative B, No Action Alternative *(Continuation of Current Management):* The grazing permit for this allotment would be renewed without any changes to the livestock numbers or period of use. While the permittee agreed with and applied for the grazing schedule of the proposed action, the continuation of current management alternative will be carried forward throughout this document for comparative analysis purposes. This grazing schedule permits livestock grazing for a total of 60 days each year, 50% of which is during the critical growth period and there is no rotation to allow a rest period in the spring. The current authorization permits grazing use far above the current calculated carrying capacity for this allotment. The current permit is outlined in the table below.

East Strawberry Allotment 06628 Current Permit									
Allotment		Livestock		Date		Total		BLM	Pvt
Name	No.	Number	Kind	On	Off	AUMs	% PL	AUMs	AUMs
E. Strawberry	06628	167	C	05/01	05/30	165	49%	81	84
E. Strawberry	06628	167	C	11/01	11/30	165	49%	81	84
						330		**162**	**168**

Alternative C, No Grazing Alternative: The grazing permit would not be renewed and there would be no livestock grazing on public lands within this allotment where it is currently permitted. This alternative would not be in compliance with the White River ROD/RMP decision to provide for livestock grazing as one of the acceptable multiple uses on public lands.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: none

NEED FOR THE ACTION: The purpose of the proposed action is to manage multiple uses on Public Lands in a manner that avoids, minimizes, reduces, or mitigates potential impacts to other

resource values. The previous grazing permit for the East Strawberry allotment expired on February 28, 2007. A permit was issued under the appropriations rider and will remain in effect until the BLM fully processes the permit renewal as required by NEPA. The permit is 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 and 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 (Plant and Animal Communities) 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 Achieving**	**Causative Factors**	**Acres Achieving or Moving Towards Achieving**	**Acres Not Achieving**	**Acres Achieving or Moving Towards Achieving**	**Acres Not Achieving**
#1-Upland Soils							
East Strawberry #06628	732	45	Historical grazing practices and continued yearly spring grazing contributing to shift in plant community composition (i.e. increase in cheatgrass).	772	5	772	5
#2-Riparian Systems							
East Strawberry #06628	0.5 ac	0		0.5 ac	0	0.5 ac	0
#3-Plant Communities							
East Strawberry #06628	732	45	Historical grazing practices and continued yearly spring grazing contributing to shift in plant community composition (i.e. increase in cheatgrass).	772	5	772	5
#3-Animal Communities							
East Strawberry #06628	732	45	Invasive annuals as predominant component in herbaceous understory	772	5	772	5
#4-Special Status, T&E Species							
East Strawberry #06628	777	0	Small acreage not meeting vegetation standards considered a discountable inclusion	777	0	777	0
#5-Water Quality							

STANDARDS FOR PUBLIC LAND HEALTH							
Standard	Current Situation			With Proposed Action		With No Grazing	
	Acres Achieving or Moving Towards Achieving	Acres Not Achieving	Causative Factors	Acres Achieving or Moving Towards Achieving	Acres Not Achieving	Acres Achieving or Moving Towards Achieving	Acres Not Achieving
East Strawberry #06628	777	0	There are no water bodies downstream of this allotment that have been listed as not meeting Colorado water quality classifications*	777	0	777	0

* Based on Status of Water Quality in Colorado – 2008 The Update to the 2002, 2004, and 2006 305(b) Reports, http://www.cdphe.state.co.us/op/wqcc/Resources/waterstatus_305_b/305bUpdate08.pdf

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: The White River Field Office (WRFO) resource area has been classified as either attainment or unclassified for all air pollutants, and most of the area has been designated for the prevention of significant deterioration (PSD) class II. Unfortunately, no air quality monitoring data is available for this area. However, air quality conditions nearby in Grand Junction, CO indicate generally good air quality.

Environmental Consequences of the Proposed Action (Alternative A): The most likely time for increased dust production due to approved activities will be during periods of the day that cattle move to water, forage and/or nutrients, between pastures and onto and off of the allotment. Dust levels may be noticeable locally and especially during drier times. Livestock numbers are reduced under this alternative and the time of grazing has been extended to 5 months after the growing season from 2 months under the previous permit, 50% of which was during the growing season. Proposed use would occur after the growing season and total 38% of previous overall use in the allotment (BLM and private lands combined). Dust production could occur over a longer time period, but the reduced numbers and non-growing season use is likely to improve vegetation in many areas and improve dust levels in the long-term. 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 (μg/m3). This alternative is not likely to exceed this western Colorado dust standard.

Environmental Consequences of Current Management (Alternative B): The type of potential environmental consequences to air quality would be similar to the impacts of Alternative A. However, with higher numbers of livestock grazing during primary production in the spring (May) and again in November impacts can be expected to be more pronounced over a shorter duration.

Environmental Consequences of No Grazing Alternative: Impacts from the no-grazing alternative would generally result in no dust production due to grazing activities.

Mitigation: No additional mitigation is recommended.

CULTURAL RESOURCES

Affected Environment: The 1998 BLM/Colorado State Historic Preservation Office (SHPO) Protocol agreement requires the BLM to identify all historic properties, prehistoric sites and sacred sites on all lands within Colorado that are within the APE of a BLM undertaking. Area sites already recorded indicate a high cultural resource density. Sites were found in all ecozones with concentrations characterized by availability of water, location of suitable agricultural land and availability of game. Sites represent a range from Paleo-Indian (8,000-10,000 years ago) to historic Ute occupation (to 1880). National Register or otherwise eligible cultural properties are known to be situated in this allotment. Subsequent cultural resource inventories and evaluations will be conducted in areas where livestock concentrations coincide with high potential for vulnerable sites.

A review of the Colorado OAHP Compass database and the BLM, WRFO records indicates that one large site (20+ acres, as recorded) is known to exist on the allotment. This site has been identified as officially eligible for listing on or nomination to the National Register of Historic Places (NRHP). Subsequent inventories within the allotment did not identify new sites. However, less than 10% of the allotment has been surveyed for cultural resources, and several prehistoric and historic archaeological sites are known to exist near the allotment.

Environmental Consequences of the Proposed Action (Alternative A): 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 sites. Alteration of grazing patterns by introducing a rest period (elimination of growing season use) and reducing the numbers of livestock on the allotment should have the effect of decreasing any potential damage to existing cultural resources by decreasing the intensity of impacts on any given site.

Environmental Consequences of Current Management (Alternative B): Maintaining the current grazing regimen and timing will result in the current impacts to cultural resources remaining the same with continued losses due to erosion of soil and trampling.

Environmental Consequences of the No Grazing Alternative: Direct and indirect impacts on cultural resources, including trampling, chiseling and churning of site soils, cultural features and artifacts, artifact breakage, impacts from standing, leaning and rubbing against above ground features and rock art, increased soil erosion, increased gullying and increased potential for unlawful collection and vandalism, would be eliminated.

Mitigation: Appropriate mitigation measures may be identified in consultation with Colorado SHPO within the ten-year period of this permit. It is recommended that the proposed action be approved subject to the allotment pasture specific stipulations.

If historic or archaeological 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.

The Range program will work with the Cultural program to provide funding for monitoring of the NRHP eligible and potentially eligible sites on the allotment and, if necessary, provide funding for any site protection measures determined necessary, as a result of monitoring, to prevent further acute degradation of the sites.

Cultural resource inventory will be required for any range improvement projects determined necessary to manage the allotment including any new proposed mineral block locations.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: Cheatgrass (*Bromus tectorum*), a Colorado listed noxious weed, is currently present throughout the most of the plant communities in the allotment. During an allotment inspection in September of 2008 two small infestations of Scotch Thistle (< a dozen plants each) were discovered on private and BLM lands near the southern end of the allotment. The permittee is treating the infestation on private lands and the BLM will in the future treat the infestation on public lands. Eradication should be expected. During Land Health Assessments conducted in 2007 cheatgrass and to a lesser extent broom-snakeweed (*Gutierrezia sarothrae*), were noted as heavily infested pockets or being interspersed though the overall plant community composition of most of the rolling loam range sites. Cheatgrass is a non-native, invasive species present to some extent in most plant communities throughout the area surrounding and including this allotment. Its presence is generally a result of historic grazing practices such as continuous season long use at heavy stocking rates. Grazing desirable native forage plants every year during the critical growing season also contributes to the increased presence of cheatgrass. Due to the density and extent of cheatgrass, approximately 40% (45 acres) of the rolling loam range sites have been rated as not meeting the Standards for Public Land Health.

Environmental Consequences of the Proposed Action (Alternative A): Under the proposed action grazing use will occur after the growing season when forage plants are dormant and at a level that more closely matches the current calculated carrying capacity for public lands in this allotment. This situation should allow adequate opportunity for the native plant community, especially native perennial grass component, to meet physiological and reproductive needs to maintain a healthy plant community throughout the allotment. While livestock grazing at the proposed level should not promote or accelerate the rate or extent of cheatgrass invasion, regardless of livestock grazing cheatgrass is expected to persist in the plant community. Grazing at the proposed numbers should result in utilization levels of key forage species with management objectives outlined in the White River ROD/RMP. A healthy vigorous native plant community is more resistant to invasion by noxious weeds or invasive plant species. Continued

early detection and aggressive treatment of noxious and invasive weed infestations by the permittee and BLM are key factors in future weed-control success.

Environmental Consequences of Current Management (Alternative B): A continuation of current management would permit livestock to graze the allotment every year throughout the critical growth period. Grazing early would allow utilization of cheatgrass while it is most palatable (before going to seed). However, early grazing would also result in key forage species being grazed during the critical growth period. Defoliation during this period is most detrimental to perennial forage species because their nutrient reserves are at their lowest and they are least able to recover. This scenario would favor a decline in perennial forage species and the continued spread of cheatgrass. A continuation of current management would also permit livestock grazing at a level considerably above the current calculated carrying capacity for the public lands. This would most likely produce over-utilization of preferred forage species in key grazing areas such as the rolling loam range sites. These areas are already at risk of crossing a threshold to annual plant domination due to the presence of cheatgrass. Additionally, overall utilization levels in these areas would likely be above desired levels outlined in the White River ROD/RMP. Implementation of this alternative would not be consistent with meeting the Standards for Public Land Health.

Environmental Consequences of the No Grazing Alternative: Under the no grazing by livestock alternative there would be an increased growth potential of perennial grasses resulting in a more robust plant community more resistant to invasion by noxious or non-native species. However without the grazing permittee actively monitoring for the presence of noxious weeds there is greater potential for undesirable plant populations to be undetected and spread.

Mitigation: None

MIGRATORY BIRDS

Affected Environment: This allotment's pinyon-juniper (pj) woodlands and sagebrush (sage) shrublands support nesting functions of a representative array of migratory songbirds. Migratory birds that garner priority consideration (i.e., USFWS Birds of Conservation Concern) in these habitats include the following: pinyon jay and black-throated gray warbler (pj), and Brewer's sparrow (sage). These species are uniformly distributed in suitable habitat at appropriate densities throughout the White River Resource Area. Migratory birds (the pinyon jay is resident) return to breed by early May and nesting activity is largely complete by mid-July.

Environmental Consequences of the Proposed Action (Alternative A): Fall and winter livestock grazing, as proposed, would have no direct influence on migratory bird nesting functions. Birds associated with pinyon-juniper woodland communities are thought to be relatively insensitive to grazing effects on their typically sparse herbaceous understories. Most of the birds affiliated with sagebrush communities, such as Brewer's sparrow, nest in shrub foliage and are not known to be responsive to previous year's growth as supplemental nest cover. In the absence of livestock use through the growing season, full herbaceous expression would be available to nesting birds during the entire nesting and brood-rearing period as forage and substrate for invertebrate prey.

Environmental Consequences of Current Management (Alternative B): Under current management, peak reduction in herbaceous cover largely coincides with nest initiation. One to 2 weeks of reliable regrowth before plant dormancy likely affords modest recovery of ground cover as a forage/cover base for broods, but depending on available moisture, suppression of such factors as foliage volume and seed production would be expected to occasionally reduce reproductive success or recruitment of young.

Breeding bird densities in shrub communities are positively correlated with herbaceous volume and height; four-fold increases in herbaceous foliage density doubled breeding bird populations in mesquite grassland in Arizona. It is reasonable to suggest that moderate use levels (40-60% by weight) applied annually during the month of May could be expected to reduce breeding bird abundance by 25% across the allotment's 145 acres of sagebrush habitats. Because birds associated with pinyon-juniper woodland communities are thought to be relatively insensitive to grazing effects, reductions in nest densities across the allotment's 585 acres of woodland would remain subtle. These effects would not be expected to have any marked influence on the viability or composition of any population or community of breeding birds in the allotment.

Environmental Consequences of the No Grazing Alternative: In the complete absence of grazing, breeding bird populations on the allotment would likely respond in a manner similar to that discussed in the proposed action. Nest densities of birds associated with the sagebrush communities would likely increase, perhaps by 25%, with much more subtle or negligible response by woodland bird communities.

The accumulation of previous years' growth, as residual, may tend to bolster nest density and reproductive success of ground-nesting species, such as western meadowlark and spotted towhee, but this effect would not be expected to effect a marked change in avian community composition.

Mitigation: None.

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

Affected Environment: There are no listed, proposed, or candidate animals known to occupy or derive important benefit from the project area. BLM-sensitive animals that may make use of habitats available within the allotment are limited to the 3 species of bat and the northern leopard frog (for discussion, see aquatic habitat section below). Structural habitat components that may be used seasonally as diurnal roosts for small numbers of fringed and Yuma myotis and Townsend's big-eared bat include rock outcrops associated with the Grand Hogback and the allotment's mature pinyon-juniper woodlands.

Environmental Consequences of the Proposed Action (Alternative A): Livestock grazing use would not be expected to have any measurable influence on bat roosting substrate or features. Similar to the discussion in Migratory Birds, enhanced herbaceous development (e.g.,

foliage volume, robust growth and flowering) resulting from annual grazing season rest may improve the local availability of invertebrate prey and indirectly enhance the support (i.e., fitness) of these insectivores.

Environmental Consequences of Current Management (Alternative B): Livestock grazing use would not be expected to have any measurable influence on bat roosting substrate or features. Similar to the discussion in Migratory Birds, annual growing season use and reductions in foliage volume associated with current management would probably result in subtle (woodland) to minor (sagebrush) suppression in the abundance and/or variety of invertebrate prey available to bats. Although this may influence the fitness of individual bats, this grazing effect would not be expected to affect the distribution or viability of the bat community occupying the allotment.

Environmental Consequences of the No Grazing Alternative: Assuming the accumulation of residual herbaceous material would have no substantive influence on invertebrate populations, the effects on the No Grazing alternative on bats would be essentially the same as those discussed in the Proposed Action.

Mitigation: None.

Finding on the Public Land Health Standard for Threatened & Endangered species: The allotment's potential utility as habitat for BLM-sensitive bats would remain relatively static under any of the alternatives, although the proposed and no-grazing alternative would likely enhance the availability of invertebrate prey to some degree. None of the alternatives would contradict continued meeting of the land health standard for special status species.

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

Affected Environment: There are no plant species listed, proposed, or candidate to the Endangered Species Act, nor plants considered sensitive by the BLM, that are known to inhabit areas potentially influenced by the proposed action.

Environmental Consequences of the Proposed Action (Alternative A): The proposed action would have no conceivable influence on special status species or associated habitats.

Environmental Consequences of Current Management (Alternative B): This alternative would have no conceivable influence on special status species or associated habitats.

Environmental Consequences of the No Grazing Alternative: There would be no action authorized that would have potential to influence special status species or associated habitats.

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species: The proposed and no-action alternatives would have no influence on populations or habitats of plants associated with the Endangered Species Act or BLM sensitive species and, as such, would have no influence on the status of applicable land health standards.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of in this allotment, nor are there any known solid waste dump sites in the allotment.

Environmental Consequences of the Proposed Action (Proposed Action): No listed or extremely hazardous materials are proposed for use in this project. All applications of pesticides would be in compliance with BLM requirements.

Environmental Consequences of the No Action Alterative (Current Management): Same as the Proposed Action

Environmental Consequences of the No Grazing Alternative: No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: Please contact the BLM – WRFO Hazardous Materials Coordinator at (970) 878-3800 and/or the Colorado Department of Public Health and Environment (CDPHE) through the 24-hour spill reporting line at 1 (877) 518-5608, if the permittee suspects the release of any chemical, oil, solid waste, petroleum product, or sewage is observed within the allotment.

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

Affected Environment: Water Quality Classification by Beneficial Uses below the East Strawberry allotment include tributaries to the White River above the confluence with Piceance Creek (segment 9a) protected for Aquatic Life Warm 2, Recreation and Agriculture and the mainstem of the White River from Miller Creek to Piceance Creek (segment 7) protected for Aquatic Life Cold 1, Water Supply, Agriculture, from Dec1 - Mar 1 it is classified as Recreation 1b Mar 20 Nov 30 it is classified as Recreation 1a. There are two springs and 3 range improvement projects in the Northern part of the allotment.

Environmental Consequences of the Proposed Action (Alternative A): Grazing removes vegetation that may help reduce rain splash erosion, lessen surface runoff and grazers preferentially remove grass species that form root masses that hold together soil matrices better than non-desirable grass species. This may lead to a vegetation shift to grasses that are not as beneficial to water quality. Hoof action from trailing to and from water, nutrient and forage sources as well as travel through pastures create preferential flow paths that can concentrate overland flow and intercept subsurface flows. These impacts will be monitored changes may

occur during yearly modifications to address specific situations. These impacts tend to be localized and temporary with good and active livestock management.

Alternative A would begin grazing on September 28th and end on February 28th. This is generally after the growing season for these lands. In general, this late season grazing is easier on the upland areas that would be impacted by cattle and would occur on BLM lands only when snow conditions allow. When the uplands are not available for grazing the cattle will be fed hay on private lands adjacent to Rio Blanco County Road 7 (Strawberry Creek road).

The BLM-WRFO manages grazing on public lands according to the 1997 RMP for the WRFO that outlines Standards and Guidelines for Public Land Health and Colorado Livestock Grazing Management Guidelines. These Standards include guidelines for upland soils, riparian systems, healthy desirable plant species, and water quality (both surface and ground).

Environmental Consequences of Current Management (Alternative B): Alternative B would begin grazing would be from 5/1 - 5/28 and 11/1 - 11/30. At least half of this grazing use would be during the primary production period for these lands. Since this alternative would permit a higher number of AUMs and grazing use during the primary production period for these lands, impacts such as increased concentration of surface runoff and direct erosion impacts from hoof action would be greater under this alternative than under Alternative A.

Environmental Consequences of the No Grazing Alternative: The no action alternative results in no grazing on this allotment, but would not be in conformance with the 1997 RMP. However, nonuse of this area for grazing would generally reduce impacts to water quality.

Mitigation: Stocking rates should be reduced during periods of drought and/or during periods of drought recovery to improve upland health.

Immediate action should be taken to reduce trailing issues when they are identified. If accelerated erosion (rilling, gullying etc.) is occurring due to trailing please contact the authorized officer to determine if a change in management or a rangeland development project should be constructed or the grazing approach altered to reduce impacts.

If direct livestock use of undeveloped springs is documented, these areas should be considered for rangeland improvement projects that would fence the source and develop the spring if it is used as a water source by wildlife and/or livestock. Springs that are already developed, should be maintained in good condition to continue to protect water quality.

Finding on the Public Land Health Standard for water quality: This permit change would not cause and exceedance of Colorado water quality standards.

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

Affected Environment: There is a riparian area and wetland community encompassing approximately 0.6 of an acre and close to ¼ mile of riparian channel associated with this allotment. This system is located at the very northern edge of the allotment. It was visited and

assessed by BLM staff in September 2008. It currently supports a dense stand of rushes and sedges and is in Proper Functioning Condition.

Environmental Consequences of the Proposed Action (Alternative A): Livestock grazing at the proposed intensity and season is not expected to negatively affect the riparian vegetation associated with this seep. Though livestock numbers under this alterative are reduced, it is not known what the effects of 60 consecutive days of use (before soils freeze) will have on the wetland soils and vegetation. This vegetation has maintained in the face of higher intensity use during the growing season. The composition and condition of this community is not expected to attract concentrated dormant season use by livestock. Should future monitoring indicate that impacts are occurring, recommended mitigation included in the Aquatic Wildlife section on page 19 and 20 should be applied.

Environmental Consequences of Current Management (Alternative B): Currently livestock grazing in the allotment, including the wetland area is permitted for 30 days during the active growth period and then again for 30 days during the dormant season before soils freeze. Livestock grazing under this scenario would likely result in utilization of riparian species (i.e., sedges) during the active growth period but there would be ample growing season left after livestock are removed for plants to recover. Negative impacts are more likely to result from hoof action, trampling and shearing of soils and vegetation as livestock graze in the saturated area early in the season when flows are highest. Again, after livestock are removed the site would have most of the growing season left to recover and re-stabilize, likely maintaining a functional condition. Grazing in the late fall would have affects similar to the proposed action.

Environmental Consequences of the No Grazing Alternative: In the absence of livestock grazing, accumulations of herbaceous production would be maximized. There would be no affects from livestock to the soils and vegetation associated with the seep and it would maintain a functional condition and potentially expand somewhat beyond its current extent.

Mitigation: See Aquatic Wildlife section.

Finding on the Public Land Health Standard for riparian systems: This wetland and riparian habitat is in proper functioning condition. None of the alternatives would substantially modify current conditions over the term of the permit and thus would not contradict continued meeting of the standard.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACEC, flood plains, prime and unique farmlands, Wilderness, 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: Soil objectives of the White River ROD/RMP are to prevent impairment of soil productivity due to accelerated erosion and physical or chemical degradation resulting from surface use activities, including livestock grazing. Soils vegetated with sufficient cover of desirable perennial plant species that also produce adequate litter and ground cover to minimize runoff and provide for soil protection are considered to be meeting Colorado Public Land Health Standards for upland soils.

Soils analyzed in this document are presented in the Soil Survey of Rio Blanco County, published by the Natural Resource Conservation Service (NRCS). The Livestock Grazing Capacity tables in the Rangeland Management below provide a breakdown of the individual soil units and associated ecological sites on both BLM administered and private lands within the allotment. There are approximately 777 acres of BLM administered lands in the East Strawberry allotment. Of this amount, approximately 214 acres (28%) are on slopes greater than 35% and are considered only marginally accessible for cattle grazing. There are approximately 114 acres of rolling loam range site along most of the western edge of BLM lands. This area provides at least 30% of the overall forage production on BLM lands and probably receives most of the grazing use.

Land Health Assessments were conducted in the main range sites in 2007. Most areas on public lands were meeting Standards however assessments indicated approximately 45 acres of rolling loam range sites were heavily infested with cheatgrass and not meeting Standards. Compared to cheatgrass perennial forage species have deeper more extensive root systems that serve to stabilize soils. Areas vegetated by annual species such as cheatgrass are at greater risk of accelerated erosion due to its smaller, shallower root system.

Environmental Consequences of the Proposed Action (Alternative A): Under the proposed action, livestock grazing use on public land would be at a level compatible with the carrying capacity and would occur in the late fall and early winter when forage plants are dormant and least affected by grazing. The current overall calculated carrying capacity of the allotment is 203 AUMs (55 on BLM lands and 148 on private land). Forage plants would not be grazed during the growth period thus improving their ability to compete with cheatgrass, including the rolling loam sites that are currently heavily infested with cheatgrass. Regardless of grazing intensity or timing cheatgrass will maintain a presence in the plant communities but it is less likely to dominate any given area. Snow on the ground would provide water allowing livestock to distribute more and make better use of the uplands on the Hogback. Snow depth could preclude livestock grazing requiring that they be fed on private lands. Under this scenario it is likely that adequate litter would remain to provide for site conservation needs. If soils are not frozen there is potential for some soil disturbance as cattle trail and travel on wet soils to grazeable areas.

Environmental Consequences of Current Management (Alternative B): The allotment (both BLM and private lands) could continue to be grazed at use level totaling 330 AUMs each year. At least half of that use would be occurring during the critical growing season with no period of rest provided during the critical growth period. If full grazing preference were exercised, livestock grazing at 38% above the calculated carrying capacity through the critical growth period every year would likely produce utilization especially in key forage areas above desired objectives and result in increased spread and dominance of cheatgrass, which in turn puts soils at increased risk for accelerated erosion. A continuation of the current management alternative would likely result in an increase of acres that are not meeting the Standards for Public Land Health.

Environmental Consequences of the No Grazing Alternative: No grazing by livestock would fully address Colorado Livestock Grazing Management Guidelines for soil stability, simply because the allotment would receive no grazing pressure from livestock. Wildlife use would continue to occur though utilization of forage resources throughout these rangelands would be minimal compared to the livestock grazing scenario.

Most areas that are being grazed by cattle would experience an increase in both perennial plant cover and soil surface litter accumulation. Rangeland soil improvements would be greatest in the rolling loam range sites that are currently particularly impacted by livestock use. Those sites with a presence of cheatgrass would likely shift favorably back toward the native plant community composition, though some level of cheatgrass presence would likely persist in the plant community even in the absence of livestock grazing. Soils associated with the steeper, less accessible parts of the allotment would continue to meet the Standards for Public Land Health and experience minimal changes in plant species composition and diversity (see Vegetation section).

Overall, under the no grazing alternative soil objectives outlined in the White River ROD/RMP and Public Land Health Standards would be addressed with benefits to ground cover. Improvements would occur due to increased residual vegetation in the uplands effectively protecting soils from wind and water erosion. Increased establishment of deeper rooted native perennial grasses especially in drainage bottoms would also result in improved water infiltration into the soil.

Mitigation: None

Finding on the Public Land Health Standard for upland soils: With the exception of approximately 45 acres of rolling loam range sites, the Standards for Public Land Health are being met on public lands in the East Strawberry allotment. The rolling loam range sites that are not currently meeting Standards should benefit from implementation of the proposed action both in terms of the reduced overall use and the rest from grazing during growing season.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The following table lists plant communities and the dominant plant species for the ecological sites associated with the proposed action.

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 Foothills	Grass / Open Shrub Shrubland	Western wheatgrass, mutton grass, Indian rice grass, squirreltail, June grass, Wyoming big sagebrush, black sagebrush
Clayey Slopes	Grassland	Salina wildrye, mutton grass, western wheatgrass, June grass, squirreltail, shadscale
Deep Loam	Grassland	Bluebunch wheatgrass, muttongrass, needle-and-thread, western wheatgrass, slender wheatgrass, big sagebrush, serviceberry, snowberry.
Foothill Swale	Grass / Open Shrub Shrubland	Basin wildrye, western wheatgrass, slender wheatgrass, streambank wheatgrass, Indian rice grass, Nevada bluegrass, basin big sagebrush, fourwing saltbush, rubber rabbitbrush
Rolling Loam	Sagebrush / Grass Shrubland	Wyoming big sagebrush, winterfat, low rabbitbrush, horsebrush, bitterbrush, western wheat grass, Indian rice grass, squirreltail, June grass, Nevada and Sandberg bluegrass
Stony Foothills	Grass / Open Shrub Shrubland	Beardless bluebunch wheatgrass, western wheatgrass, needle-and-thread, June grass, Indian rice grass, fringed sage, Wyoming big sagebrush, black sage, serviceberry, pinyon and juniper
Pinyon/Juniper	Pinyon/Juniper Woodland	Pinyon pine, Utah juniper, mountain mahogany, bitterbrush, serviceberry, Wyoming big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, June grass, Indian rice grass, mutton grass

Most of plant communities associated with steeper topography currently are within acceptable thresholds and seral ratings with desirable plant communities as defined in the White River ROD/RMP and meet the Standards for Public Land Health. Though there is a moderate amount of pinyon/juniper encroachment in the allotment, vegetation production and species composition generally provide adequate cover for soil protection and if grazed at the appropriate time and stocking rate, sustainably meet livestock forage requirements.

BLM lands that support the majority of grazing use are comprised of rolling loam sagebrush/grassland sites. These sites are primarily vegetated with a combination of sagebrush (*Artemisia tridentata*) with a grass understory of western wheatgrass (*Agropyron smithii*), needle-and-thread grass (*Stipa comata*), Squirreltail (*Sitanion hystrix*), Indian rice grass (*Oryzopsis hymenoides),* and Sandberg bluegrass (*Poa secunda).* Common forbs within the allotment are globemallow (*Sphaeralcea spp.),* lupine (*Lupinus spp.*), arrowleaf balsamroot (*Balsamorhiza sagittata),* buckwheat (*Eriogonum spp.*), and phlox (*Phox spp).*

Under favorable precipitation conditions the most of the cool season forage species listed above often have a second growth period in the fall, producing high quality forage again later in the grazing season. Actual use over the past 25 years has averaged 78% of permitted AUMs. To

some degree this adjustment has most likely in response to resource conditions associated with lower than average precipitation during the past ten years.

During Land Health Assessments conducted in 2007 cheatgrass and to a lesser extent broom-snakeweed (*Gutierrezia sarothrae*), were noted as heavily infested pockets or being interspersed though the overall plant community composition of most of the rolling loam range sites. Cheatgrass is present to some extent in most plant communities throughout the allotment, however due to the density and extent of it approximately 40% (45 acres) of the rolling loam range sites have been rated as not meeting the Standards for Public Land Health. Currently desirable native species are still present but the sites are at risk of crossing a threshold to annual plant domination. The rolling loam range sites currently contribute close to a third of the overall forage production on public lands so a loss or reduction in the productivity of these particular sites would substantially diminish the overall carrying capacity of the public lands in this allotment.

Environmental Consequences of the Proposed Action (Alternative A): The proposed grazing schedule would permit livestock grazing use in the late fall and early winter. Forage plants would have complete deferment from grazing during the growth period. These plants would have ample opportunity to meet their physiological and reproductive requirement to maintain a favorable ecological presence in the plant community. This scenario would allow the native perennial forage plants especially in key forage areas such as the rolling loam sites favorable conditions in terms of competing against cheatgrass. Implementation of this alternative should allow Standard 3 of the Standards for Public Land Health to continue to be met in this allotment.

Environmental Consequences of Current Management (Alternative B): A continuation of current management would allow cattle grazing each year throughout the critical growth period and overall at a level 38% above the current calculated carrying capacity of the allotment. Key forage species such as Western Wheatgrass, Needle and Thread grass would continue to be subjected to grazing pressure during the time when they are weakest and least able to recover. Early season use would favor a continued shift in vegetative composition to annual species such as cheatgrass. With reduced competition cheatgrass would be better able to establish in new sites or dominate sites where it currently occurs. If full preference were exercised, utilization in key forage areas would likely exceed levels outlined in the WRFO ROD/RMP. This grazing schedule and level is not compatible with sustainable grazing of key forage species nor does it allow a rest period for forage species to promote plant community health. Continuation of this grazing schedule would likely result in additional acres degrading to a point where they no longer meet the Standards for Public Land Health.

Environmental Consequences of the No Grazing Alternative: Under a no grazing by livestock scenario there would most likely be a short-term increase in both perennial plant cover and soil surface litter accumulation especially throughout the main livestock forage areas (rolling loam range sites). Key forage species relieved from livestock grazing pressure would likely increase in throughout most plant communities. Regardless of the removal of livestock, cheatgrass would continue to be present to some extent though its rate of spread would likely be reduced as native grasses relieved from grazing pressure were better able to compete.

Mitigation: none

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial)*:* Implementation of the proposed grazing schedule should allow the public lands within this allotment to continue to meet or make progress toward meeting the Standards for Public Land Health in the future.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: The fenced northern boundary of the allotment encompasses a relatively large (0.6 acre) wetland that feeds about ¼ mile of subtending BLM-administered channel. The moderately incised channel appears (i.e., 2005 NAIP aerial photography) to support a narrow riparian fringe (about 2 meters wide). Downstream riparian expression (as well as continuity with aquatic habitats associated with the nearest perennial drainage, Strawberry Creek, about 1000 meters west) has been altered by a large earthen reservoir on private land. Strawberry Creek is an entirely privately-owned drainage that is not known to support fisheries, but almost certainly involves the support of other vertebrate forms (e.g., amphibians). BLM staff visiting the allotment's wetland site in September 2008 confirmed occupation of this system by northern leopard frogs, a BLM-sensitive species.

Environmental Consequences of the Proposed Action (Alternative A): Grazing use on other portions of the allotment has only limited, indirect potential to affect the aquatic community supported by Strawberry Creek. Because there have been no indications that sediment originating from this allotment has caused any problems with channel stability or irrigation practices under the current grazing (actual) use regimen, proposed dormant season use, within the context of eliminated growing season use, would be expected to have less risk of adverse consequences.

By extending the duration of use into the preceding month of October (as well as the succeeding months of December, January and February), the proposed action would prolong consecutive days of fall use from 30 to 60 days (assuming frozen soil conditions more resistant to trampling damage in December). It is uncertain if, or how, increased duration of use, albeit with fewer cattle and elimination of spring use, may alter overall livestock effects on this wetland system. Although it is expected that the proposed action would have no further influence on the condition of this system (particularly with future development of additional waters), in order to safeguard the integrity of this rather unique upland wetland, it is suggested that if subsequent monitoring indicates a trend toward channelization, increased trampling damage, or other forms of wetland or channel degradation, that employing means to exclude cattle from the wetland and/or preventing channel trailing be considered.

Environmental Consequences of Current Management (Alternative B): Current grazing use (i.e., averaging somewhat to substantially below full preference) has maintained the integrity of this wetland system and allowed for occupation by an isolated population of northern leopard frog. It is presumed that this grazing program, as implemented in the past, would maintain the

condition and extent of this aquatic habitat for the foreseeable future. It is less certain what consequences full exercise of the grazing preference would have on habitat condition or its support of current amphibian populations.

Environmental Consequences of the No Grazing Alternative: Removal of livestock related influences would drastically reduce the removal and mechanical damage of herbaceous foliage. It is suspected that the extent and condition of the main wetland would remain relatively unchanged, although the composition of the sedge-rush community may become increasingly represented by grazing-intolerant sedges. Full riparian expression and reduced trailing effects in the 200 meters of subtending channel would be expected to allow for progressive aggradation of this channel that would prompt incremental upstream and downstream expansion of the wetland complex to perhaps double its current extent.

Mitigation: Future development of water from the wetland complex will be designed to maintain channel surface flows adequate to maintain the existing extent and vegetation properties of the wetland community and subtending channel on BLM-administered lands, and tanks will be sited with the intent of reducing livestock effects on that system.

If subsequent monitoring indicates a trend toward channelization, increased trampling damage, or other forms of wetland or channel degradation, employing means to exclude cattle from the wetland and/or preventing channel trailing should be required.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): The two action alternatives would not be expected to change the character or functional condition of the wetland complex on the northern boundary of the allotment, and would allow for continued meeting of the land health standard for aquatic communities. The proposed action includes a condition for protecting the integrity of this wetland/riparian system in the event cattle use results in unexpected impacts. The No Grazing alternative would allow for full vegetation expression and unimpeded channel rejuvenation that may double the current extent of the wetland complex as amphibian habitat on BLM-administered lands, which would fully meet the standard.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: This allotment is predominantly composed of pinyon-juniper woodland (80% of BLM-administered lands). The remainder is represented by a series of small basins draining to the west that afford a number of Wyoming big sagebrush parks uniformly distributed across the allotment (about 13 parks with average size of 4.5 acres) and about 90 acres of sagebrush within 200-meters of the woodland interface along the eastern margin of the Strawberry Creek valley. The allotment's overall westerly exposure, which moderates snow depth, and fine intermix of sagebrush forage types and woodland cover enhance its utility in serving as severe winter range for deer. These winter ranges are occupied primarily from October through May, but their most important function involves efficient management of energy budgets under the harshest winter conditions (i.e., thermoregulation and forage acquisition with minimal locomotion expense) and nutritional recovery during the late

winter/early spring period of later December through April. Elk use this area in a similar manner; the BLM-administered portions encompassing ranges classified by the Colorado Division of Wildlife as winter concentration area and/or severe winter range. Herbaceous growth, both spring emergence and fall regrowth, and woody (sagebrush) forage supplies are seasonally important constituents of fall, winter, and early spring big game diets.

The influence of unregulated vehicle use on big game (e.g., heightened energy demands and reduced resource availability) was the focus of considerable management attention in the 1997 WRFO Resource Management Plan (RMP). Besides the powerline access that skirts the western margin of BLM-administered lands (1.2 miles), there are 3 short and discontinuous unimproved trails or tracks that extend onto BLM-administered portions of the allotment. These tracks (listed below) comprise a total length of about 1.5 miles. Collective road density of 2.2 miles per square mile (2.64 miles/1.2 square miles) exceeds the vehicle access density objective of 1.5 miles per square mile established in the current White River ROD/RMP for big game severe winter ranges.

Legal Descriptions (all in T1N R94W, 6th P.M.)			
Trail Length (meters/miles)	**Originating from:**	**Through:**	**Extending to:**
650 / 0.4	NENW section 17		SESW section 8
1000 / 0.63	NESW section 17	NWSE section 17	SWNE section 17
720 / 0.45	SWNE section 20		NWNE section 20

The abundance and composition of nongame bird communities associated with this allotment's predominantly Wyoming big sagebrush and pinyon-juniper woodland habitats are considered representative and complete with no obvious deficiencies in composition. Small mammal populations and distribution are poorly documented; however, the 20 or so species potentially occurring on this allotment are widely distributed throughout the State and the Great Basin or Rocky Mountain regions. Most of these mammals display broad ecological tolerance that allows occupation of habitats ranging from foothill to alpine sites. No narrowly distributed or highly specialized species or subspecific populations are known to occur in this allotment.

Environmental Consequences of the Proposed Action (Alternative A): The proposed action would increase the duration of livestock use during the dormant season from 1 month to 5 months and would increase full grazing preference at this time by 19%. However, it is expected that increased herbaceous vigor and production attending full growing season rest would adequately compensate for increased use levels in the fall and winter. It is likely that snow accumulations during the later winter months of January and February will further limit cattle distribution on, and use of, BLM-administered lands on the east half of the allotment. Under this grazing regime, herbaceous ground cover during the growing season is expected to increase in terms of ground cover density, vigor, and height. Over time, native bunchgrasses and forbs are also expected to appear more frequently and abundantly in understory composition. This progression would generally increase the availability of broadleaf forbs that are nutritionally preferred for seasonal big game nutrition. Use of dormant bunchgrass growth would continue at levels comparable to current management and provide enhanced big game (especially deer) access to emerging grasses in April and May. Livestock would not be expected to influence woody forage conditions for big game.

An absence of livestock grazing during the growing season would allow full herbaceous expression as a source of forage, prey substrate, and cover for nongame bird and small mammal communities across the allotment. Collective removal of dormant material as residual ground cover (e.g., winter cover for non-hibernating small mammals) cannot be calculated, but the offsetting influence of full growing season rest is expected to result in reductions of herbaceous residual comparable to those ascribed to current management in the short term, and perhaps allow for modest increases in the long term.

Environmental Consequences of Current Management (Alternative B): Current management, as presently practiced, may be expected to hold forage conditions for big game static, however, there is a strong likelihood that exercising the allotment's full grazing preference would suppress the density and vigor of herbaceous species important in establishing favorable body conditions for big game entering and recovering from the winter season.
Under present management, peak reduction in herbaceous cover occurs at the end of May. One to 2 weeks of reliable regrowth before plant dormancy and less reliable fall regrowth likely affords modest recovery of ground cover as a forage/cover base for wildlife, but the return of livestock for a month in the fall further reduces the volume and horizontal continuity of residual (i.e., as ground cover and forage base for nongame birds and mammals) remaining through the winter months and into the subsequent reproductive period. Depending on summer and fall moisture, suppression of such factors as foliage volume and seed production would be expected to occasionally reduce reproductive success or recruitment of young in these animal groups. However, with the potential for full exercise of the allotment's grazing preference, it is likely that consequent reductions in the vigor of perennial herbaceous vegetation and the increasingly heavy reduction in residual volume and continuity would measurably reduce the present abundance and diversity of nongame bird and small mammal populations, particularly those associated with the allotment's sagebrush communities.

Environmental Consequences of the No Grazing Alternative: Similar to the proposed action, herbaceous ground cover during the growing season is expected to increase in terms of ground cover density, vigor, and height. Over time, native bunchgrasses and forbs are also expected to appear more frequently and abundantly in understory composition. This progression would generally increase the availability of broadleaf forbs that are nutritionally preferred for seasonal big game nutrition. In the longer term, accumulations of residual material may suppress herbaceous production and diversity to some degree, but continued winter elk use would likely act as a partial surrogate for the removal of livestock. Use of dormant bunchgrass growth by elk would continue, but at levels considerably reduced compared to current management. Preconditioning of bunchgrass crowns by elk as a means of enhancing deer access to emerging grasses in April and May would be expected to be somewhat less extensive and prevalent than with current management, though the ramification of the affect across the allotment's 145 acres of sagebrush communities, as the primary forage type, would have no measurable consequence on local populations of deer.

In the absence of livestock grazing, full herbaceous expression during the growing season and increased accumulations of dormant residual (e.g., remaining from elk grazing use) would optimize nongame bird and, in particular, small mammal habitats. Although in both animal

groups there would be species favored by more strongly developed understories at the expense of others that favor more sparsely vegetated conditions, the former situation is much less common and of higher relative value for native wildlife populations in northwest Colorado.

Mitigation: Applicable to all alternatives: As a means of limiting further expansion of road-related effects on big game critical habitats, no net increase in the road/trail density should be authorized on this allotment. Any future road or trail improvements or extensions should be separately analyzed and mitigated through the NEPA process prior to considered authorization.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): Although invasive annuals appear frequently in understory composition throughout the allotment, the current conditions meet the land health standard on a landscape scale. The proposed action and no grazing alternatives would eliminate growing season use and initiate incremental gains in herbaceous understory expression, including increases in ground cover density, vegetation vigor, and native perennial components in understory composition. These effects, by enhancing system function, better meet the intent of the standard.

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		

PALEONTOLOGY

Affected Environment: The revised East Strawberry allotment pasture contains potential fossil yield classification (PFYC) 4 and 5 geological formation areas that are known to contain

vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils (Tweto 1979). The allotment area includes portions of:

- Wasatch Formation (PFYC 5), known to produce Paleocene to Eocene fossil mammals of various genera, crocodilians, lizards, turtles, birds, eggs, amphibians, fish and ostracoda; Fort Union Formation (PFYC 4), bearing Paleocene Mammals, reptiles, amphibians, fish, invertebrates (mollusks, including pelecypods and gastropods), plants, pollen, and (possibly redeposited) dinosaurs;

- Williams Fork Formation (PFYC 5), bearing upper Cretaceous mammals (multituberculates, marsupials, and eutherians), dinosaurs, crocodilians, turtles, champosaurs, marine reptiles, other genera of reptiles, sharks, fish (basal neopterygians), invertebrates (marine), and plants (including conifers, palms, and flower & fruit capsules) (Armstrong & Wolny, 1989).

Consideration of paleontological resources is necessary when in the Field Office review of available information, indicates that such fossils are present in the area.

Environmental Consequences of the Proposed Action (Alternative A): The introduction of a yearly rest period and an overall reduction in the current livestock use permitted on the allotment would reduce direct and indirect impacts on paleontological resources, including trampling, chiseling and churning of site soils and fossils, impacts from standing, leaning and rubbing against above ground fossils, increased soil erosion, increased gullying and increased potential for unlawful collection and vandalism.

Environmental Consequences of Current Management (Alternative B): Continued use of current grazing regimens would perpetuate the direct and indirect impacts on paleontological resources at the current levels. Direct impacts that may occur where livestock concentrate include trampling, chiseling and churning of site soils. There may be impacts from standing, leaning and rubbing against above ground features. Indirect impacts may include soil erosion, gullying and increased potential for unlawful collection and vandalism. In areas where fossil bed presence coincides with areas of livestock concentration, continued grazing may contribute to substantial ground disturbance and cause cumulative, long term, irreversible adverse effects to paleontological resources.

Environmental Consequences of the No Grazing Alternative: This alternative would eliminate livestock related direct and indirect impacts on paleontological resources, including trampling, chiseling and churning of site soils and fossils, impacts from standing, leaning and rubbing against above ground fossils, increased soil erosion and increased gully erosion. Potential for unlawful collection and vandalism would be reduced.

Mitigation: Negative impacts to paleontological resources occur when construction activities temporarily expose and then destroy buried fossil remains. Mitigation of such negative impacts generally consists of a comprehensive program including excavation monitoring, fossil salvage, preparation, curation, storage, and final report preparation. No range construction projects that have the potential to create disturbance will be permitted without paleontological

clearance in advance. All animal supplements such as salt blocks and water tanks and feed should be placed away from outcrop formations.

RANGELAND MANAGEMENT

Affected Environment: The two tables below summarize the estimated AUMs produced and the acres per AUM by range site for the allotment. An AUM is the amount of forage necessary to sustain one cow and her calf for a one month period. AUM figures in these tables are calculated to produce moderate stocking levels and account for such factors as slope, distance to water and current site production levels. Approximately 28% of BLM administered lands within this allotment are steep, rocky, pinyon/juniper dominated slopes that are generally inaccessible to livestock. Slopes greater than 35% are generally considered marginally accessible to livestock and therefore less suitable for grazing (Holechek, 1998). The acres per AUM on these sites have been adjusted somewhat to account for the less suitable topography. The Forage Production tables below detail the current calculated livestock carrying capacity (AUMs) for the allotment by ecological site. Livestock grazing permitted at or below these levels at the appropriate season will help assure that the Standards for Public Land Health continue to be met.

East Strawberry Allotment (06628) Livestock Grazing Capacity				
Soil Unit	**Ecological Site**	**BLM Acres**	**Acres / AUM**	**BLM AUMs**
Abor Clay Loam, 5-30% slopes	Clayey Foothills	74	7	11
Blazon, moist-Rentsac Complex,6-65%slopes	Pinyon-Juniper woodland	328	20	16
Havre loam,0-4%slopes	Foothill Swale	5	4	1
Patent loam 3-8% slopes	Rolling Loam	123	7	18
Rock Outcrop	None	31	0	0
Torriorthents-Rock Outcrop, complex,15-90%slopes	Stoney Foothills	16	12	2
Zoltay clay loam, 3-8%slope	Deep Loam	5	5	1
Acres with slope greater than 35%				
Blazon, moist-Rentsac Complex,6-65%slopes	Pinyon-Juniper woodland	152	30	5
Rock Outcrop	None	26	0	0
Torriorthents-Rock Outcrop, complex,15-90%slopes	Stoney Foothills	17	19	1
	Totals:	**777**		**55**
	Average acres/AUM		**14.80**	

East Strawberry Allotment (06628) Livestock Grazing Capacity				
Soil Unit	**Ecological Site**	**PVT Acres**	**Acres / AUM**	**PVT AUMs**
Abor Clay Loam,5-30%slopes	Clayey Foothills	138	4	35
Absher loam,0-3%slopes	Alkaline Slopes	55	4	14
Absher loam,3-8%slopes	Alkaline Slopes	6	4	1

East Strawberry Allotment (06628) Livestock Grazing Capacity				
Soil Unit	**Ecological Site**	**PVT Acres**	**Acres / AUM**	**PVT AUMs**
Blazon, moist-Rentsac Complex,6-65%slopes	Pinyon-Juniper woodland	0	20	0
Havre loam,0-4%slopes	Foothill Swale	21	2	10
Patent loam,3-8%slopes	Rolling Loam	144	4	37
Patent loam,8-15%slopes	Rolling Loam	44	2	19
Rentsac-Moyerson-RockOutcrop,complex,5-65%slps	PJ Woodlands/ Clayey Slopes	27	20	1
Torriorthents-Rock Outcrop, complex,15-90%slopes	Stoney Foothills	17	10	2
Zoltay clay loam, 3-8%slope	Deep Loam	103	4	30
Acres with slope greater than 35%				
Torriorthents-Rock Outcrop, complex,15-90%slopes	Stoney Foothills	1	19	0
	Totals:	**556**		**148**
	Average acres/AUM		**4.01**	

Environmental Consequences of the Proposed Action (Alternative A): The grazing schedule outlined in the proposed action on page two will allow forage species rest from grazing during the growing season every year. Under this schedule, a total of 203 AUMs (BLM and private combined) could be grazed throughout the allotment over a five month period. No livestock grazing will occur during the growing season. All livestock grazing is scheduled to occur after plants have gone dormant for the year. Forage plants will have optimal conditions for meeting physiological and reproductive requirements for maintenance. Late fall grazing will allow livestock to distribute more and make better use of the uplands on the Hogback since snow will provide a marginal water source throughout the allotment. However snow depth could preclude livestock grazing requiring that they be fed on private lands.

Environmental Consequences of Current Management (Alternative B): Refer to the tables on page four of this document for an outline of the current grazing permit for this allotment. Actual use during the spring growth period over the past 10 years has averaged 74 AUMs. Under this schedule, a total of 330 AUMs (BLM and private combined) could be grazed throughout the allotment. Half of the use could occur during the spring growth period and half of it could occur in the fall after plants have gone dormant. Grazing could potentially occur at 38% above the calculated carrying capacity for BLM lands in the allotment.

There is no allowance in this grazing schedule to assure native perennial forage plants rest from grazing during the critical growth period. Without adequate rest during the critical growth period forage plants would have reduced vigor and reproductive capability. Continued grazing under this schedule is not consistent in terms of providing critical growing season rest, meeting other site conservation requirements, or grazing at a level consistent with the allotment carrying capacity. This scenario would have potential to result in areas not meeting the Standards for Public Land Health.

Environmental Consequences of the No Grazing Alternative: Under this alternative, no permit would be issued to authorize livestock grazing on BLM lands within this allotment where it has previously been permitted. Most areas that are currently being grazed by livestock would

experience increased accumulations of perennial plant cover and persistent plant litter. Vigor and reproductive capability of perennial plants would also increase. Public Land Health Standards would continue to be met. The White River ROD/RMP recognizes livestock grazing as one of the acceptable multiple uses on these allotments and it would be inconsistent with the White River ROD/RMP and the Taylor Grazing Act to not authorize livestock grazing on these allotments.

Mitigation: none

REALTY AUTHORIZATIONS

Affected Environment: The only linear facility located on the subject public lands is COC23562, a joint Tri-State Generation/Transmission and Public Service Company of Colorado power line. The right-of-way grant for this Craig to Rifle 345 KV line is 150 feet wide.

Environmental Consequences of the Proposed Action (Alternative A): The uses of the public land for grazing and for the power line should be compatible and would not adversely affect either use. Any additional facility construction, permit improvements, or earth disturbing maintenance would require separate application, analysis, and authorization.

Environmental Consequences of Current Management (Alternative B): Same as Proposed Action.

Environmental Consequences of the No Grazing Alternative: The affected environment would be the same as Alternative A. If no grazing were permitted, there would be no possible environmental consequences from interaction between the uses.

Mitigation: None

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

REFERENCES CITED:

Armstrong, Harley J. and David G. Wolny
1989 *Paleontological Resources of Northwest Colorado: A Regional Analysis*. Museum of Western Colorado, Grand Junction, Colorado.

Holechek, J.L., R. D. Pieper, C. H. Herbel. 1998. *Range Management Principles and Practices*. Prentice-Hall, Inc.

Tweto, Ogden

1979 Geologic Map of Colorado. United States Geologic Survey, Department of the Interior, Reston, Virginia.

USDI Bureau of Land Management, Colorado. 1997. White River Record of Decision and Approved Resource Management Plan (ROD/RMP). Meeker, Colorado.

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 permit is up for renewal and request any information they want included in or taken into consideration during the grazing permit renewal process. Meetings were held with the permittee to discuss and develop the proposed action.

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Bob Lange	Hydrologist	Air Quality, Wastes (Hazardous or Solids), Water Quality (Surface and Ground), Hydrology and Water Rights.
Ken Holsinger	Botanist	Areas of Critical Environmental Concern, Threatened and Endangered Plant Species
Michael Selle	Archeologist	Cultural Resources, Paleontological Resources
Mary Taylor	Rangeland Management Specialist	Invasive, Non-Native Species, Vegetation , Rangeland Management, Wetlands and Riparian Zones
Ed Hollowed	Wildlife Biologist	Migratory Birds, Threatened, Endangered and Sensitive Animal Species, Terrestrial and Aquatic Wildlife
Chris Ham	Outdoor Recreation Planner	Wilderness, Access and Transportation, Recreation & Visual Resources
Jim Michels	Fire/Fuels Technician	Fire Management
Jim Michels	Fire/Fuels Technician	Forest Management
Linda Jones	Realty Specialist	Realty Authorizations
Melissa J. Kindall	Range Technician	Wild Horses

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

CO-110-2008-147-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analysis of 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 issue a proposed decision in offering a grazing permit based on the grazing schedule outlined in the proposed action with the addition of the mitigation below.

MITIGATION MEASURES:

1. Appropriate mitigation measures may be identified in consultation with Colorado SHPO within the ten-year period of this permit. It is recommended that the proposed action be approved subject to the allotment pasture specific stipulations.

   If historic or archaeological 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.

   The Range program will work with the Cultural program to provide funding for monitoring of the NRHP eligible and potentially eligible sites on the allotment and, if necessary, provide funding for any site protection measures determined necessary, as a result of monitoring, to prevent further acute degradation of the sites.

   Cultural resource inventory will be required for any range improvement projects determined necessary to manage the allotment including any new proposed mineral block locations.

2. Please contact the BLM – WRFO Hazardous Materials Coordinator at (970) 878-3800 and/or the Colorado Department of Public Health and Environment (CDPHE) through the 24-hour spill reporting line at 1 (877) 518-5608, if the permittee suspects the release of any chemical, oil, solid waste, petroleum product, or sewage is observed within the allotment.

3. Stocking rates should be reduced during periods of drought and/or during periods of drought recovery to improve upland health.

   Immediate action should be taken to reduce trailing issues when they are identified. If accelerated erosion (rilling, gullying etc.) is occurring due to trailing please contact the

authorized officer to determine if a change in management or a rangeland development project should be constructed or the grazing approach altered to reduce impacts.

If direct livestock use of undeveloped springs is documented, these areas should be considered for rangeland improvement projects that would fence the source and develop the spring if it is used as a water source by wildlife and/or livestock. Springs that are already developed, should be maintained in good condition to continue to protect water quality.

4. Future development of water from the wetland complex will be designed to maintain channel surface flows adequate to maintain the existing extent and vegetation properties of the wetland community and subtending channel on BLM-administered lands, and tanks will be sited with the intent of reducing livestock effects on that system.

   If subsequent monitoring indicates a trend toward channelization, increased trampling damage, or other forms of wetland or channel degradation, employing means to exclude cattle from the wetland and/or preventing channel trailing should be required.

5. Applicable to all alternatives: As a means of limiting further expansion of road-related effects on big game critical habitats, no net increase in the road/trail density should be authorized on this allotment. Any future road or trail improvements or extensions should be separately analyzed and mitigated through the NEPA process prior to considered authorization.

6. Negative impacts to paleontological resources occur when construction activities temporarily expose and then destroy buried fossil remains. Mitigation of such negative impacts generally consists of a comprehensive program including excavation monitoring, fossil salvage, preparation, curation, storage, and final report preparation. No range construction projects that have the potential to create disturbance will be permitted without paleontological clearance in advance. All animal supplements such as salt blocks and water tanks and feed should be placed away from outcrop formations.

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

NAME OF PREPARER: Mary Taylor

NAME OF ENVIRONMENTAL COORDINATOR: Carol Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL: Kurt F. Walter

Field Manager

DATE SIGNED: 10/01/08

ATTACHMENTS: Map of East Strawberry Allotment

East Strawberry #06628