

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

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-110-2009-0085-EA

CASEFILE/PROJECT NUMBER: Gordon-Naval Oil Shale (06015)

PROJECT NAME: Naval Oil Shale Pasture Grazing Application

LEGAL DESCRIPTION: T 5S R 94W Sec 6 and 7
T 5S R 95W Sec. 1, 2, 11, and 12,

APPLICANT: Larry and Susan Robinson

ISSUES AND CONCERNS: Trapper Creek forms the southern boundary of the Naval Oil Shale pasture and was recently designated an Area of Critical Environmental Concern (ACEC). One of the objectives of the ACEC designation is to protect habitat for a genetically pure population of Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*).

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: In 2008 the White River Field Office (WRFO) of the Bureau of Land Management (BLM) analyzed the Robinson's application to change their grazing use from sheep to cattle on the Naval Oil Shale pasture, Gordon Gulch allotment in environmental assessment (EA), CO-110-2008-042-EA. This EA was completed and signed on July 24, 2008 and while the Grazing Decision was being prepared to deny their application and adopt BLM's preferred alternative, the Robinsons changed their grazing application. The WRFO decided to license grazing use on the Naval Oil Shale Pasture as analyzed and approved in the CO-110-2008-042-EA (Year 1, Livestock Grazing Schedule) for one year, because there was insufficient time to analyze the Robinson's new proposal during the summer/fall of 2008. The WRFO agreed to analyze the Robinson's new application over the winter of 2008/2009. Their application is Alternative B of this environmental assessment.

Alternative A, Proposed Action: Grazing use for the Gordon-Naval Oil Shale Pasture (06015) would continue as described in the preferred alternative from CO-110-2008-042-EA and is incorporated by reference (attached): the Robinsons would be authorized to use the Naval Oil Shale pasture as specified in the following Livestock Grazing Schedule. In 2009, the Robinsons would follow Year 2 as outlined in the Livestock Grazing Schedule below:

| Year 1 Livestock Grazing Schedule | | | | | | | |
|-----------------------------------|-------------------------------|-------------|---------------|--------------|--------------|------------|------------|
| Allot # | Name | Livestock # | Kind | Date On | Date Off | %BLM | AUMs |
| 06015 | Gordon-Gordon Gulch | 100 | Cattle | 05/15 | 06/05 | 100 | 70 |
| 06018 | Schutte-Half Moon | 100 | Cattle | 06/06 | 06/25 | 33 | 21 |
| 06018 | Schutte-Oil Shale | 100 | Cattle | 06/26 | 07/30 | 33 | 39 |
| 06015 | Gordon-Naval Oil Shale | 100 | Cattle | 08/01 | 09/15 | 100 | 150 |
| 06018 | Schutte-Coyote | 1000 | Sheep | 10/01 | 10/08 | 100 | 55 |
| 06018 | Schutte Gulch | 100 | Cattle | 09/16 | 10/14 | 33 | 31 |

| Year 2 Livestock Grazing Schedule | | | | | | | |
|-----------------------------------|-------------------------------|-------------|---------------|--------------|--------------|------------|------------|
| Allot # | Name | Livestock # | Kind | Date On | Date Off | %BLM | AUMs |
| 06015 | Gordon-Gordon Gulch | 100 | Cattle | 05/10 | 06/09 | 100 | 100 |
| 06018 | Schutte-Half Moon | 100 | Cattle | 06/10 | 06/30 | 33 | 24 |
| 06015 | Gordon-Naval Oil Shale | 100 | Cattle | 07/01 | 08/15 | 100 | 150 |
| 06018 | Schutte- Oil Shale | 100 | Cattle | 08/16 | 10/14 | 33 | 65 |
| 06018 | Schutte- Coyote | 1000 | Sheep | 10/01 | 10/08 | 100 | 55 |

Alternative B, Permittee’s Application: The Robinsons applied for a change to their original proposal in the number of livestock from 150 cattle to 100 cattle, and are requesting a change from 2.5 months to 2-month duration of use every year with no rotation on the Naval Oil Pasture, Gordon Gulch allotment. The permittee’s application, with the cattle numbers, dates, and AUMs is as follows:

| Permit # | Allotment Number/Name | Livestock #/kind | Date | | % BLM | AUMs (BLM) |
|----------|---|------------------|-------|-------|-------|------------|
| | | | On | Off | | |
| 051415 | 06015 Gordon Gulch, Naval Oil Shale Pasture | 100 Cattle | 07/01 | 08/30 | 100 | 200 |

The permittee has determined that their application for use of the allotment would allow them the flexibility to maintain their livestock operation with maximum efficiency and minimal impact to other resource values within the pasture.

Alternative C, No Grazing Alternative: No livestock grazing would be authorized on the Gordon-Naval Oil Shale Pasture (06015) where it is currently permitted. The grazing permit held by the Robinsons (051415) would not be renewed. This alternative would not be in compliance with the White River Field Office ROD/RMP decision to provide for livestock grazing as one of the acceptable multiple uses.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None

NEED FOR THE ACTION: 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.

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: LG-1(P 51), LG-5(P 55)

Decision Language: (LG-1) With minor exceptions, livestock grazing will be managed as described in the 1981 *Rangeland Program Summary* (RPS), including: 1) allocation of forage among predominant grazing animals and other uses; 2) initiation of intensive grazing management; 3) continuation of existing intensive grazing management practices; 4) minimum period of rest for each allotment; and 5) identification of range improvements to enhance rangeland productivity and management. The current allocation of 126,490 AUMs will continue for the short term. (LG-5) 144 grazing allotments have been placed in one of three management categories (improve, custodial, and maintain) that define intensity of management.

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:

NATURAL, BIOLOGICAL, AND CULTURAL RESOURCES

AIR QUALITY

Affected Environment: This Proposed Action is located in rural northwest Colorado in the White River Basin, more than ten miles from special designation air sheds or non-attainment areas. Industrial facilities in White River Basin include coal mines, soda ash mines, natural gas processing plants, and power plants. Due to these industrial uses and increased population and oil and gas operations in this region, emissions of air pollutants in the White River Basin due to exhaust emissions and dust (particulate matter) are likely to occur and increase into the future. Despite increases in emissions, overall air quality conditions in the White River Basin are likely to continue to be good for some time to come due to effective atmospheric dispersion conditions and limited transport of air pollutants from outside the area. 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.

Environmental Consequences of Alternative A, Proposed Action: The environmental consequences to air quality from Alternative A would include the periodic and local production of dust due to cattle trailing to and from forage, water and nutrient sources. The most likely time for increased dust production due to approved activities would 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. The Colorado Air Pollution Control Division (APCD) estimates the maximum PM₁₀ 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 Alternative B, Permittee’s Application: Environmental consequences to air quality from Alternative B would be the same as Alternative A.

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

Mitigation: None Identified.

SOILS (includes a finding on Standard 1)

Affected Environment: Soils analyzed in this document are presented in the Soil Survey of Rio Blanco County, published by the Natural Resource Conservation Service (NRCS). The table below is derived from the Rio Blanco County Soil Survey and is a breakdown of the individual soil units and associated ecological sites on BLM administered lands.

| Naval Oil Shale Pasture | | |
|--|---------------------------|--------------|
| Soil Mapping Unit Name | Ecological Site | Acres |
| Irigul channery loam, 9-50%slopes | Loamy Slopes | 379 |
| Irigul-Starman channery loams,5-50%slopes | Loamy Slopes/Dry Exposure | 46 |
| Northwater loam,15-65%slopes | Aspen Woodlands | 291 |
| Parachute loam,25-65%slopes | Brushy Loam | 462 |
| Parachute-Rhone loams,5-30%slopes | Mountain Loam | 523 |
| Rhone loam,30-70%slopes | Brushy Loam | 710 |
| Rock Outcrop-Torriorthents complex, VSteep | None | 120 |
| Silas loam,3-12%slopes | Mountain Swale | 99 |
| Total | | 2323 |

Environmental Consequences of Alternative A, Proposed Action: The proposed grazing management plan and stocking rates have the best potential to allow pasture plant communities to meet or exceed their productive potential. The proposed action would maintain or enhance ground cover of perennial plant species and provide litter accumulation, both of which are integral to the protection and stabilization of soils. Livestock management under the proposed action would allow critical growing season rest and re-growth opportunities resulting in adequate surface litter accumulation, plant canopy cover, and ground cover. Areas currently meeting land health standards would not be appreciably influenced by implementation of the proposed action.

On soils with late-seral or potential natural community (PNC) plant communities, little change from the current status is expected

Environmental Consequences of Alternative B, Permittee's Application: In general the impacts for this alternative would be similar to those described for the proposed action; however, due to the longer period of grazing and stocking rate for this alternative (60 days vs. 45 days, 200 AUMs vs. 150 AUMs) there is greater potential for cattle to drift into Trapper Creek and have a consequent negative impact on soils in the riparian area.

Environmental Consequences of Alternative C, No Grazing Alternative: Under a no grazing scenario most of the areas on the allotment currently being grazed by cattle would experience an increase in soil surface litter and an increase in perennial vegetation in the short term. There would be a corresponding positive impact on soil formation and soil health.

Mitigation: Continue WRFO rangeland monitoring studies on the Naval Oil Shale pasture.

Finding on the Public Land Health Standard for upland soils: Soils in the pasture currently meet the Standard and are expected to continue to meet the Standard following implementation of the proposed action.

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 at sites in the allotments. There are no known solid waste dump sites within the allotments.

Environmental Consequences of Alternative A, 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 Alternative B, Permittee's Application: 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 Alternative C, 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 in the allotment.

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

Affected Environment: The table below depicts Water Quality Classification by Beneficial Uses for the Gordon Gulch allotment.

| Watershed | Waterbody | Segment | Designation | Acres |
|-----------------------|-------------------------------|---------|---|-------|
| Colorado River Basin | Trapper and Parachute Creek | 11d | Aq Life Warm 2, Recreation 2, Agriculture | 5,509 |
| Middle Piceance Creek | Piceance Tribs to White River | 16 | Aq Life Warm 2, Recreation 2, Agriculture | 180 |

The Gordon Gulch allotment-Naval Oil Shale pasture encompasses three watersheds. These three watersheds are as follows: Trapper Creek, East Middle Fork Parachute, and Corral Gulch all of which flow into Middle Fork Parachute Creek, Parachute Creek and the Colorado River.

A tributary to Trapper Creek was heavily utilized by cattle in the 2008 grazing season. This tributary joins Trapper Creek from the north just before the confluence with Northwater Creek. There are several locations where trailing and heavy use in the stream channel has caused vertical instability, impacts to the riparian community and bank shearing. Impact from cattle use were observed and documented at the end of the grazing season on 10/31/2008.

Environmental Consequences of Alternative A, Proposed Action: Grazing removes vegetation that may help reduce rain splash erosion, lessen surface runoff and livestock often preferentially remove grass and forb species that form root masses that hold together soil matrices better than non-desirable species. This may lead to a vegetation shift to grasses and forbs that are not as beneficial to water quality, such as Kentucky blue grass. 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 would be assessed and if impacts are observed, changes may occur during yearly range management modifications to address specific situations.

In most years, impacts to the Trapper Creek Tributary described above would occur at nearly the same magnitude as those observed for the 2008 gazing season. Over time the riparian vegetation would be replaced by more grazing tolerant vegetation. This type of grazing tolerant vegetation is typically shallow rooted and does not hold the soil during flood events as well as the current vegetation and they typically do not allow for as much bank storage of water. It is likely that vertical instability would increase at this site due to use, especially since cattle have not historically used this pasture (pre-2006). Water quality impacts such as increased sediment production may occur and streamflow characteristics may change (i.e., include more intense peak flow events and less baseflow).

Grazing impacts in this tributary could potentially deteriorate to the point that the water source is compromised for use by cattle. This can occur due to changes in streamflow characteristics when baseflow is reduced and streamflow only occurs during storm events. It is possible to have in intermittent streams such as this convert to ephemeral systems, if this type of use continues. Certainly streamflows in the late season when this pasture is used would diminish if these types of impacts on the stream channel persist. If the proposed action is implemented, cattle are likely

to use the main Trapper Creek stream channel as a water source, and consequently could increase impacts to Trapper Creek.

The BLM-WRFO manages grazing on public lands according to the White River ROD/RMP which 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). The condition of the tributary to Trapper Creek should be evaluated for standards to maintain the beneficial functions of healthy riparian areas for water quality. Range improvement projects such as increasing water supplies in the uplands or drift fences may be necessary if impacts continue in this area.

Environmental Consequences of Alternative B, Permittee's Application: In general the impacts for this alternative would be similar to those described for the proposed action; however, due to the longer period of grazing and stocking rate for this alternative (60 days vs. 45 days, 200 AUMs vs. 150 AUMs) there is greater potential for cattle to have negative impact on to the stream channel and the riparian area for the tributary to Trapper Creek described above.

Environmental Consequences of Alternative C, No Grazing Alternative: Nonuse of this area for grazing would generally improve water quality as compared to the Proposed Action or the No Action alternative.

Mitigation: Immediate action should be taken to reduce trailing issues when they are identified. If accelerated erosion (rilling, gullyng 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.

Range improvements should be implemented to improve grazing conditions in the tributary to Trapper Creek coming from the north just before the confluence with Northwater Creek if after monitoring it is determined to be needed. These range improvements may be drift fences, well development, spring development and/or other methods to reduce concentrated use in this stream channel. Range improvements will be developed with the permittee and will be evaluated in a separate NEPA action.

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

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: The Trapper Creek riparian area is on the southeast border of the Naval Oil Shale pasture and is on the boundary of the WRFO/GSFO. Trapper Creek was designated an Area of Critical Environmental Concern (ACEC) on March 13, 2008 as part of the

Roan Plateau Resource Management Plan Amendment (Roan Plateau RMPA). The primary rationale for its ACEC designation was to protect/preserve Trapper Creek as habitat for Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*). The Roan Plateau RMPA ROD/RMP objective states that livestock grazing should be managed so that “streambank damage does not exceed 10 percent of the stream length”. Trapper Creek is currently in proper functioning condition.

Environmental Consequences of Alternative A, Proposed Action: The grazing strategy of the proposed action is to employ a stocking rate and duration of grazing use in the pasture so that grazing use of the Trapper Creek riparian area is *avoided*. Even light livestock use of the riparian area during the proposed season has the potential to negatively impact the condition and function of Trapper Creek. It may be necessary to further shorten the grazing period in order to maintain the proper functioning condition of the Trapper Creek riparian area.

Environmental Consequences of Alternative B, Permittee’s Application: The permittee’s proposed use through increased stocking and duration of grazing use has a relatively higher potential to negatively impact the Trapper Creek riparian area. It is BLM’s prerogative to pursue a conservative grazing strategy in order to avoid any negative impact to the Trapper Creek riparian area.

Environmental Consequences of Alternative C, No Grazing Alternative: Under a no grazing scenario it would be expected that the condition of Trapper Creek would continue to improve and the vegetation component of the riparian area would progress toward a late seral condition. However, trespass grazing use from the GSFO Clough-Alber allotment contiguous to Trapper Creek could potentially negate that progress.

Mitigation: The Trapper Creek riparian area will be monitored in the latter part of the prescribed grazing period or immediately afterward using the greenline protocol as described in BLM Idaho Technical Bulletin 2008-01, (April 2008) to assess the amount of streambank alteration by livestock. Additional vegetation data will also be collected.

Finding on the Public Land Health Standard for riparian systems: The Trapper Creek riparian area is in Proper Functioning Condition and therefore, the Standard for riparian systems is being met on a site and watershed level. Livestock use as proposed in alternative A will be closely monitored to insure that it has no negative impact on the Trapper Creek riparian area. Any adjustments in grazing use necessary will be made to insure that the Trapper Creek riparian meets or exceeds the Standard in the future.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The Naval Oil Shale pasture is dominated by mountain shrub communities composed of mountain big sagebrush (*Artemisia tridentata vaseyana*), antelope bitterbrush (*Purshia tridentata*), and snowberry (*Symphoricarpos albus*). There are also patches of Utah serviceberry (*Amelanchier utahensis*) and Gambel oak (*Quercus gambelii*) as well as almost 300 acres of aspen stands (*Populus tremuloides*).

The following table lists the plant community appearance for each of the ecological sites or woodland types in the Naval Oil shale pasture along with the predominant plant species comprising the composition of each community. Forb species, though important to the diversity of a community and comprising 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 significant contributors to the general appearance of the community.

| Ecological Site/ Woodland Type | Plant Community Appear | Predominant Plant Species in Plant Community |
|-----------------------------------|---------------------------------------|---|
| Loamy Slopes | Mix Shrub/grass Shrubland | Mountain mahogany, bitterbrush, Utah serviceberry, mountain big sagebrush, Letterman needlegrass, beardless bluebunch wheatgrass, sedge, western wheatgrass, junegrass, indian rice grass |
| Mountain Loam | Grass/Open Shrub Shrubland | Polyanthus brome, nodding brome, slender wheatgrass, bearded wheatgrass, Letterman and Columbia needle grasses, mountain big sagebrush, low rabbitbrush, snowberry, serviceberry |
| Mountain Swale | Grass/Open Shrub Shrubland | Basin wildrye, polyanthus brome, nodding brome, slender wheatgrass, bearded wheatgrass, Letterman and Columbia needle grasses, sedges, rushes, mountain big sagebrush, rubber rabbitbrush, snowberry, |
| Brushy Loam | Deciduous Shrub/grass Shrubland | Utah serviceberry, oakbrush, snowberry, nodding brome, sedge, slender wheatgrass, western wheatgrass, Letterman and Columbia needle grasses |
| Aspen Woodlands | Deciduous Woodland | Quaking aspen, Utah serviceberry, snowberry, nodding brome, sedge, slender wheatgrass, bearded wheatgrass, Letterman and Columbia needle |
| Dry Exposure | Grassland | Beardless bluebunch wheatgrass, needle and thread, june grass, indian rice grass, fringed sage, buckwheat |

Environmental Consequences of Alternative A, Proposed Action: The proposed grazing use of relatively short duration and at a light stocking rate would be consistent with maintenance and productivity of vegetation communities in the pasture. Plant communities in the pasture would be expected to incur an increase in forbs in their composition because of cattle preference for grasses and sedges.

Environmental Consequences of Alternative B, Permittee's Application: Under this alternative the impacts to upland vegetation would be very similar to those described for Alternative A. The primary difference between this alternative and alternative A would be in the impact to vegetation in the Trapper Creek riparian area. Due to the duration of grazing and the stocking rate proposed, there is increased potential for negative impacts to vegetation in Trapper Creek.

Environmental Consequences of Alternative C, No Grazing Alternative: In a no grazing scenario, vegetation on both the uplands and the Trapper Creek riparian area would advance toward a late seral state over the short and long term.

Mitigation: Continue to perform the Naval Oil Shale Pasture rangeland and riparian monitoring studies.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Plant communities within the pasture are in good health and are expected to remain as such under the proposed action.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The Naval Oil Shale pasture has some houndstongue (*Cynoglossum officinale*) and musk thistle (*Carduus nutans*) which is primarily located on the ridgetops around historic sheep bed grounds. The invasive alien cheatgrass (*Bromus tectorum*) occurs in very isolated instances primarily in association with areas of past unvegetated earthen disturbance on the ridgetops.

Environmental Consequences of Alternative A, Proposed Action: Under this alternative it is expected that there would be little or no change in the amount or distribution of noxious weeds in the pasture from the present situation.

Environmental Consequences of Alternative B, Permittee's Application: Under this alternative it is expected that there would be little or no change in the amount or distribution of noxious weeds in the pasture from the present situation.

Environmental Consequences of Alternative C, No Grazing Alternative: Under this alternative it is expected that there would be little or no change in the amount or distribution of noxious weeds in the pasture from the present situation.

Mitigation: No additional mitigation is recommended.

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. *Sullivantia hapemannii* does occur in the Trapper Creek ACEC on shale ledges above Trapper Creek. It is considered a sensitive species within U.S Department of Agriculture (USDA) and is tracked as a rare species in the State of Colorado; however, it does not have special status plant protection under BLM regulation. Habitat and populations of *Sullivantia hapemannii* are not accessible to cattle and are well-protected in the ACEC and therefore the proposed action would have no direct or indirect effects on the species. Three unique plant associations and habitats are found in the Trapper Creek ACEC and are addressed in the ACEC section below.

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

Environmental Consequences of Alternative B, Permittee's Application: This alternative would have no influence on special status plant species or associated habitats.

Environmental Consequences of Alternative C, 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 action, alternative action, 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 would have no influence on the status of applicable land health standards.

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

Affected Environment: Trapper Creek forms the southern boundary of the Naval Oil Shale pasture and was recently (March 2008) designated an ACEC in part to protect a genetically pure population of Colorado River cutthroat trout. There are also several intermittent drainages, including Gordon Gulch, that flow into Trapper Creek.

There are no threatened or endangered (i.e. listed under the Endangered Species Act) animal species that inhabit the Naval Oil Shale pasture. Trapper Creek provides important habitat for Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*), a BLM sensitive species. The drainages that flow into it may also provide habitat for northern leopard frogs (*Rana pipiens*), another BLM sensitive species.

Livestock grazing can negatively impact habitat for coldwater fish (such as trout) by influencing streamside vegetation, channel morphology, quality of the water column, and erosion of streambanks (Kauffman and Krueger 1984). One of the management objectives for the Trapper/Northwater Creek ACEC is to “minimize direct impacts to streambanks resulting from livestock grazing”. Livestock grazing within the ACEC is to be managed so that “streambank damage does not exceed 10 percent of the stream length”. BLM personnel conducted an assessment on Trapper Creek on 6/17/08 and the creek was found to be in proper functioning condition (PFC). There was no evidence of trampling or trailing damage to any section of the streambank. On 10/1/08, BLM personnel documented a few places where there was trampling and trailing damage to the streambank. Beginning with the 2008 growing season, BLM personnel would begin to estimate the amount of streambank alteration and vegetation communities using a modification of the greenline methodology identified and detailed in the Inter-agency (BLM/USFS) Technical Bulletin Version 5, April 2008 titled: “Monitoring Stream Channels and Riparian Vegetation-Multiple Indicators”.

Environmental Consequences of Alternative A, Proposed Action: Compared to the proposed action as submitted by the permittee, this alternative would have a shorter duration of

use (2 weeks) and number of livestock, and would provide a shift in timing of grazing during the growing season. While this alternative provides for little use during the majority of the growing season in alternate years (e.g. when livestock would not enter the pasture until 8/1), there may still be minimal opportunity for substantial regrowth following grazing (particularly in years when cattle use the allotment until 9/15). Streambanks may be more susceptible to excessive erosion during spring run-off if there are substantial reductions in riparian vegetation (e.g. less than 10 cm of forage stubble height, Clary 1999). However, a site visit on 10/1/08 (livestock were removed in September) revealed that the riparian vegetation was not over-utilized and enough residual vegetation remained so that there was no need for concern about the potential regrowth. It is important to note that trailing, trampling, and shearing damage was observed on Trapper Creek and thus livestock could cause unacceptable levels of streambank alteration before they cause unacceptable levels of forage utilization.

Environmental Consequences of Alternative B, Permittee's Application: As applied for by the permittee, 100 cattle would be permitted to graze the pasture from 7/1-8/30. Livestock would use the pasture for an additional two weeks during the hottest times of the year. An increase in duration of use during the summer months would likely contribute to increased use of riparian areas and drainages as cattle are likely to congregate in these areas (Kauffman and Krueger 1984). Willows are also more susceptible to overgrazing during late summer (Clary 1999).

Environmental Consequences of Alternative C, No Grazing Alternative: Trapper Creek was categorized as being in proper functioning condition under the previous grazing regime (1000 sheep from 6/1-6/30 and then again from 10/9-10/25), thus maintaining quality riparian areas in conjunction with livestock use is possible within this system. However, compared to cattle, sheep are expected to have less of an impact to riparian areas since they are typically herded and would use the allotment during cooler times of the year (e.g. early spring and fall) so they would be less likely to congregate in riparian areas (Kauffman and Krueger 1984). Site visits to Trapper Creek before and after the first season of use by cattle do indicate that livestock are having an impact on the streambank via trampling and shearing. However, it has not been determined whether such use was by authorized livestock or via trespass from the Clough-Alber allotment. No grazing would result in less damage to Trapper Creek and thus less damage to suitable habitat for a BLM sensitive species within an ACEC.

Mitigation: Fences would need to be repaired and maintained to ensure that trespass livestock do not contribute to overutilization of riparian areas.

Trapper Creek will be monitored annually after livestock grazing to ensure that there is minimal damage to the streambank using a modification of the the greenline methodology identified and detailed in the Inter-agency (BLM/USFS) Technical Bulletin Version 5, April 2008 titled: "Monitoring Stream Channels and Riparian Vegetation-Multiple Indicators". If more than 10% of the streambank experiences erosion due to trailing, trampling, or shearing, then management strategies designed to prevent further damage must be implemented prior to the next grazing cycle. Management strategies may include (but are not limited to) fencing the riparian areas to exclude livestock use, changing stocking rates or duration/season of use, or using herding to keep livestock from congregating in riparian areas.

Finding on the Public Land Health Standard for Threatened & Endangered species: Trapper Creek and the drainages that flow into it from the Naval Oil Shale pasture currently meet Public Land Health Standards for riparian systems and thus provide suitable habitat for associated special status wildlife species and other aquatic wildlife. Trapper Creek shows some evidence of streambank damage due to livestock use and will be monitored carefully in the future to ensure that livestock grazing does not contribute to degradation of this riparian system.

MIGRATORY BIRDS

Affected Environment: Representative species that nest in the mountain shrub habitats or Gambel oak thickets include Brewer's sparrow (*Spizella breweri*), green-tailed towhee (*Pipilo chlorurus*), MacGillivray's warbler (*Oporornis tolmiei*), and Virginia's warbler (*Vermivora virginiae*). Aspen stands provide nesting habitat for a variety of species such as broad-tailed hummingbirds (*Selasphorus platycercus*), red-naped sapsuckers (*Sphyrapicus nuchalis*), flammulated owls (*Otus flammeolus*), and violet-green swallows (*Tachycineta thalassina*). Raptors such as red-tailed hawks (*Buteo jamaicensis*) and Cooper's hawks (*Accipiter cooperii*) are also likely to nest in the aspen stands.

There are no specialized or narrowly endemic species known to inhabit the allotment. However, the U.S. Fish and Wildlife Service (USFWS) recognize flammulated owls, red-naped sapsuckers, Virginia's warblers, and Brewer's sparrows as being "birds of conservation concern" (BBC). The BCC list identifies birds that, without conservation actions, may become candidates for listing under the Endangered Species Act.

Environmental Consequences of Alternative A, Proposed Action: The proposed action for this alternative is to permit grazing by 100 cattle and to rotate season of use each year so that grazing occurs from 7/1-8/15 in one year and from 8/1-9/15 in another. This alternative provides the most benefit to nesting birds. First, similar to the application submitted by the permittee, no grazing would occur during the early spring which would provide nesting cover during the early nesting period. Overall use during the breeding season (150 AUMs) would also be less than the permittee's application (200 AUMs). In addition, there would be a rotation employed so that every other year there would be little (15 days) overlap between grazing and the nesting season.

Environmental Consequences of Alternative B, Permittee's Application: Most songbirds return to summer breeding ranges in April, begin nesting in earnest in late May or early June, and have fledged young by mid-August. The permittee's application is to allow grazing by 100 cattle from 7/1-8/30 each year. This alternative would provide some benefit by not grazing during the early spring which would provide for development of the herbaceous understory and cover during the early nesting period. However, that benefit may be negated by an overall increase in use. Compared to the grazing schedule in Alternative A, this alternative would result in a 33% increase of AUMs during the breeding season and would increase the overlap of grazing and nesting in alternate years from 15 days to 46 days. Substantial reductions in effective ground cover during the nesting season may indirectly affect nesting outcomes by increasing the susceptibility of incubating or brooding hens and their clutches to predation or extremes in

temperature or moisture. This impact would be most pronounced for ground nesting species such as Virginia's warblers.

Environmental Consequences of Alternative C, No Grazing Alternative: If no grazing were permitted on the Naval Oil Shale Allotment, there would likely be a notable increase in the cover and height of the herbaceous understory. It is too simplistic to say whether grazing positively or negatively influences migratory birds as a whole. Responses to grazing are highly variable depending on stocking rates, site, and species habitat preferences. If grazing were not permitted, it is likely that some species that require areas with well developed herbaceous cover (e.g. Brewer's sparrow) would become more abundant while other species that prefer to nest in more open habitats (e.g. common poorwill) would become less abundant. Due to the moderate grazing schedule currently in use within the allotment, it is unlikely that ceasing grazing would result in notable differences in abundance or community composition on a landscape scale.

Mitigation: None.

WILDLIFE, AQUATIC

Since northern leopard frogs and Colorado River cutthroat trout are both BLM sensitive species, please refer to the Threatened, Endangered, and Sensitive Animal Species section for a thorough discussion on aquatic wildlife species, potential impacts associated with the proposed action, and a discussion on the Public Land Health Standards for aquatic communities.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The Naval Oil Shale pasture is delineated by the Colorado Division of Wildlife (CDOW) as summer range for both elk (*Cervus canadensis*) and mule deer (*Odocoileus hemionus*). Elk and mule deer typically occupy summer ranges from mid-May through October, depending on snow conditions. On a landscape scale (i.e. data analysis units representing relatively discrete herds), the elk herd is within the population objective set by CDOW. The mule deer herd is substantially lower (almost half) than the population objective. Dusky grouse (*Dendragapus obscurus*), a popular upland game bird, also occurs within the pasture. There are no specialized or narrowly endemic terrestrial wildlife species known to inhabit the pasture.

To minimize wildlife mortality associated with water developments, it is BLM policy that water developments on public lands must have wildlife escape ramps installed. Water developments on the Naval Oil Shale pasture are currently limited to five stock ponds that pose negligible risk to wildlife.

Environmental Consequences of Alternative A, Proposed Action: Under this alternative, livestock would not be present in the pasture during fawning or calving. Dates of use would alter every other year such that cattle would only graze in the pasture for approximately 15 days

during the growing season in alternate years. In addition, overall use (150 AUMs) is less than that of Alternative B (200 AUMs). Reductions in duration and thus overall use during the growing season would likely incrementally increase the availability of herbaceous forage and enhance groundcover for nesting grouse (see comments in Migratory Bird section regarding ground nesting species) and small mammals.

Environmental Consequences of Alternative B, Permittee's Application: Under the proposed action submitted by the permittee, no livestock would be present in the pasture early in the season during big game fawning or calving. Extended duration of use in the Naval Oil Shale pasture would result in a 33% increase in AUMs compared to the current grazing schedule. However, while there is likely direct competition between big game and livestock for forage, both herbaceous plants and woody forage (e.g. bitterbrush) are abundant throughout the pasture.

Environmental Consequences of Alternative C, No Grazing Alternative: It is likely that there would be substantial increases in the cover and height of the herbaceous understory in the absence of grazing on this allotment. It is expected that such changes in vegetation would prompt more of a response from small mammal populations rather than big game populations. Shifts in small mammal community composition would be likely as improved ground cover and litter would favor an increase in species requiring well developed understories (e.g. voles) rather than species tolerating more open understories (e.g. deer mice [*Peromyscus maniculatus*]). Since changes in small mammal communities are expected to be in terms of community composition rather than biomass, it is not expected that removing livestock from the allotment would result in significant increases in the abundance of raptors that prey upon small mammals in grasslands and shrubland (e.g. red-tailed hawks).

Mitigation: None.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The Naval Oil Shale pasture currently meets public land health standards for terrestrial wildlife communities and it is expected that the area would continue to meet standards under any of the proposed cattle grazing schedules. While the mule deer herd is substantially below population objectives, the primary management concern for this herd is intensive energy development, particularly along the I-70 corridor, rather than competition with livestock. The Proposed Action, Alternative A provides the most benefit to big game species, blue grouse, and small mammal populations by decreasing grazing pressure and increasing the vegetation available for cover and forage

CULTURAL RESOURCES

Affected Environment: Range permit renewals are undertakings under Section 106 of the National Historic Preservation Act. Range improvements associated with the allotment (e.g., fences, spring improvements) are subject to compliance requirements under Section 106 and would undergo standard cultural resources inventory and evaluation procedures. During Section 106 review, a cultural resource assessment was completed for each allotment following the procedures and guidance outlined in the 1980 National Programmatic Agreement Regarding the

Livestock Grazing and Range Improvement Program, IM-WO-99-039, IM-CO-99-007, IM-CO-99-019, and IM-CO-01-026. The results of the assessment are summarized below. Copies of the cultural resource assessments are in the WRFO archaeology files.

Two previous cultural resource inventories have been conducted within the allotment, resulting in Class III coverage inventory of 2597 acres or 91 percent of the allotment (Reed and Horn 1995; Tickner, Reed, and Horn 1996). The remaining 9 percent of the allotment consists of slopes over 30%, and no further inventory is necessary for the Naval Oil Shale Pasture of Allotment 06015.

A total of 17 cultural resource properties have been recorded as a result of these inventories. Of these properties, none are determined eligible for listing in the National Register of Historic Places (NRHP). Based on available data, a low potential exists for historic properties in the Naval Oil Shale Pasture (WRFO CRM base maps and GIS data; Compass).

Environmental Consequences of Alternative A, Proposed Action: The direct impacts that occur where livestock concentrate include trampling, chiseling, and churning of site soils, cultural features, and cultural artifacts, artifact breakage, and impacts from standing, leaning, and rubbing against historic structures, above-ground cultural features, and rock art. Indirect impacts include soil erosion, gulying, and increased potential for unlawful collection and vandalism. Continued grazing may cause substantial ground disturbance and cause cumulative, long term, irreversible adverse effects to historic properties, if present.

No known NRHP-Eligible historic properties are located in areas of high livestock concentration, as identified by WRFO Range specialist Mark Hafkenschiel. Three potentially eligible sites (5GF2419, 5GF2422, 5GF2425: historic engravings on trees, all Not Eligible – Field), occur in heavily wooded areas where cattle are unlikely to concentrate.

Environmental Consequences of Alternative B, Permittee's Application: As Alternatives A and B are substantially similar, their respective consequences on cultural resources are nearly identical. The extra ½ month of grazing activities under Alternative B would produce a theoretically greater, though still negligible, impact on historic properties.

Environmental Consequences of Alternative C, No Grazing Alternative: There would be no negative impacts to cultural resources.

Mitigation: If newly-discovered historic properties are reported on the allotment, or if damage or vandalism to any sites on the allotment is reported, BLM will field visit these properties and assess the livestock grazing impacts.

The operator is responsible for informing all persons who are associated with the allotment activities that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts on public lands. If artifacts are discovered during Allotment activities, the operator is to immediately stop activities that might further disturb such materials, and contact the authorized officer (AO). The operator and the authorized officer will consult and determine the best option for avoiding or mitigating archaeological site damage.

PALEONTOLOGY

Affected Environment: The allotment is located in an area generally mapped as containing the formations below, both known to produce scientifically important fossil resources (Tweto 1979, Armstrong and Wolny 1989):

- Green River Formation, Parachute Creek Member—Potential Fossil Yield Classification (PFYC) 5—fossil reptiles (lizards, crocodylians, turtles), bats, insects (including eggs & larvae, scorpion ants, beetles, gnats, and mosquitoes), and plants (including algae reefs, ferns, horse-tails (*Equisteum*), seeds, flowers, fruit, oaks, maples, sassafras, figs, magnolias, etc.).
- Uinta Formation—PFYC 4—Eocene mammals (titanotheres, uintatheres, myacid carnivores, possibly others), reptiles (turtles and crocodylians), fish (vertebrae, spines, and scales, likely including *Lepisosteidae*), gastropods (high-spined and turitellid snails), insect larvae, and plants (leaves, wood, algae, etc.).

Environmental Consequences of Alternative A, Proposed Action: Since in situ fossils are seldom encountered in lowland alluvial areas where cattle tend to concentrate, the potential damage to undisturbed fossil remains is low. Some damage to fossil materials may occur in areas of livestock concentration (around range improvements such as tanks, fence, etc.) and in areas where the resources are located on vertical walls and available for rubbing and scratching activities by the animals. The grazing schedule as outlined in the proposed action, including reduced duration of grazing and reduced intensity of grazing, should have the effect of reducing potential damage to paleontological resources by decreasing the time frame for impacts on any given site and decreasing soil erosion.

Environmental Consequences of Alternative B, Permittee's Application: As Alternatives A and B are substantially similar, their respective consequences on fossil resources are nearly identical. The extra ½ month of grazing activities under Alternative B is expected to produce a theoretically greater impact on fossil resources than Alternative A, though this difference is negligible.

Environmental Consequences of Alternative C, No Grazing Alternative: There would be no new impacts to fossil resources under the No Action Alternative.

Mitigation: If paleontological materials (fossils) are discovered during Allotment activities, the operator is to immediately stop activities that might further disturb such materials, and contact the authorized officer (AO). The operator and the authorized officer will consult and determine the best option for avoiding or mitigating paleontological site damage.

ELEMENTS NOT PRESENT OR NOT AFFECTED: No Wilderness Study Areas, flood plains, or prime and unique farmlands 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.

OTHER 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 |
|--------------------------------|-------------------|----------------------------------|---|
| Visual Resources | X | | |
| Fire Management | X | | |
| Forest Management | X | | |
| Hydrology/Water Rights | | | X |
| Rangeland Management | | | X |
| Realty Authorizations | | | X |
| Recreation | X | | |
| Access and Transportation | X | | |
| Geology and Minerals | | X | |
| Areas of Environmental Concern | | | X |
| Wilderness | X | | |
| Wild and Scenic Rivers | X | | |
| Cadastral | X | | |
| Socio-Economics | | | |
| Law Enforcement | | | |
| Wild Horses | X | | |

HYDROLOGY AND WATER RIGHTS

Affected Environment: The Naval Oil Shale pasture in the Gordon Gulch allotment contains several tributaries that cut through sedimentary rocks creating contact springs. Some of these springs can be very significant to the flows in Trapper Creek and provide water sources for livestock and wildlife. There are several zones that typically have some type of contact springs associated with them. Trapper Creek cuts through shales and there are two zones called the A and B Groove that can contribute significantly to the surface water features. BLM has acquired water rights on Trapper Creek to protect aquatic habitat for cutthroat trout. There are also “hanging gardens” which is vegetation that relies on groundwater resources. These special vegetation areas were one of the resource values that contributed to the ACEC designation for the area.

Environmental Consequences of Alternative A, Proposed Action: Impacts to these contact spring systems could occur where they are accessible by livestock grazing. The cliff area that supports the hanging gardens is unlikely to be impacted by livestock grazing, due to their inaccessibility by cattle. There are some contact springs in tributaries to Trapper Creek and in Trapper Creek that may be impacted by cattle use. Indirect impacts to these contact springs is

unlikely, however direct impact on vegetation near the sources of these springs is likely. Cattle can decrease the vegetation around the source of these springs and in some cases and actually reduce the productivity of these springs due to creating direct physical disturbance to the soils around the spring source and reducing storage of water in vegetation and soil near the spring.

Environmental Consequences of Alternative B, Permittee’s Application: Impacts would be the same as those described for Alternative A.

Environmental Consequences of Alternative C, No Grazing Alternative: Impacts to water resources would not occur under this alternative.

Mitigation: The following should be attached as Conditions of Approval (COAs) to the permit:

If impacts to contact springs in the Gordon Pasture and/or surface erosion are observed near these springs due to cattle use, the operator will notify the BLM. If impacts are observed by the BLM and/or the operator, the permittee will work with the BLM to change grazing practices and/or develop range improvement projects to improve use and reduce impacts to contact springs.

RANGELAND MANAGEMENT

Affected Environment: Grazing use authorized as a result of analysis in last year’s EA on the pasture was as follows:

| Year 1 Livestock Grazing Schedule | | | | | | | |
|--|-------------------------------|------------|---------------|--------------|--------------|------------|------------|
| 06015 | Gordon-Naval Oil Shale | 100 | Cattle | 08/01 | 09/15 | 100 | 150 |

| Year 2 Livestock Grazing Schedule | | | | | | | |
|--|-------------------------------|------------|---------------|--------------|--------------|------------|------------|
| 06015 | Gordon-Naval Oil Shale | 100 | Cattle | 07/01 | 08/15 | 100 | 150 |

Use for the 2009 grazing season would be authorized as listed in Year 2 Livestock Grazing Schedule.

The two Daubenmire canopy cover transects established in 1981 in the Naval Oil Shale pasture were read in the fall of 2007 and show healthy plant communities in mid and late seral stages that are producing near their potential. There is considerable potential to enhance herbaceous production by selective treatment of the mountain big sagebrush on site.

Below is a summary of the pasture grazing capacity for cattle:

| Naval Oil Shale Pasture Grazing Capacity for Cattle | | | | |
|---|---------------------------|-------|-------------|------|
| Soil Mapping Unit Name | Ecological Site | Acres | Acres/AUM | AUMs |
| Irigul channery loam, 9-50%slopes | Loamy Slopes | 379 | 40% Suit/8 | 19 |
| Irigul-Starman channery loams, 5-50%slopes | Loamy Slopes/Dry Exposure | 46 | 80% Suit/10 | 4 |
| Northwater loam, 15-65%slopes | Aspen Woodlands | 291 | 30% Suit/4 | 22 |
| Parachute loam, 25-65%slopes | Brushy Loam | 462 | 40% Suit/ 7 | 26 |
| Parachute-Rhone loams, 5-30%slopes | Mountain Loam | 523 | 60% Suit/4 | 78 |
| Rhone loam, 30-70%slopes | Brushy Loam | 710 | 30% suit/8 | 27 |
| Rock Outcrop-Torriorthents complex, VSteep | None | 120 | 0 | 0 |
| Silas loam, 3-12%slopes | Mountain Swale | 99 | 4 | 25 |
| Totals | | 2323 | | 201 |

Environmental Consequences of Alternative A, Proposed Action: Most ecological sites in the pasture are only 30-60% suitable for cattle due to the steepness of the slopes; this is reflected in the grazing capacity analysis. Cattle are invariably drawn to riparian areas in the hot summer season due to the fact that vegetation in riparian areas at this time of year is both more palatable and has a higher nutritional value than vegetation in upland plant communities. *A moderately light stocking rate as is proposed here and limiting the duration of grazing during the summer period are the most effective means of avoiding cattle use in the Trapper Creek riparian area.*

Environmental Consequences of Alternative B, Permittee's Application: The analysis of forage production indicates that the stocking rate of the proposed action is conservative relative to the amount of forage available on a sustained yield basis. The permittee wants to use the pasture for an additional 15 days beyond that of the proposed action. The proposed action stocking rate is 150 AUMs (Alternative A) vs. 200 AUMs (Alternative B). The proposed action is based on the need to authorize grazing use in a way that would *avoid the negative impact* of cattle use in the Trapper Creek riparian area. The primary method of avoiding that impact is to employ a light stocking rate and limit the duration of grazing. It has been well documented in the literature that cattle grazing during the 'hot season' (summer) has long term negative impacts on riparian sites if it is not carefully managed (Platts, 1989) (Myers, 1989). That potential is further increased by the steep rugged terrain of the Naval Oil Shale Pasture. *In addition, negative impacts from the 2008 authorized grazing use (100 Cattle 8/1- 9/15, 150 AUMs) to the riparian area in the unnamed tributary to Trapper Creek were documented by Bob Lange, 10/31/2008.* Therefore, if a 45 day grazing period may be in question, then a 60 day period is not at all tenable. It is BLM's prerogative to err on the conservative side in order to fulfill its mandate of conservation of renewable resources within a multiple use framework.

Environmental Consequences of Alternative C, No Grazing Alternative: Under a no grazing scenario, 201 AUMs of forage allocated for livestock would not be utilized by livestock.

Mitigation: WRFO rangeland and riparian monitoring studies. If cattle use causes the 10% streambank trampling threshold to be exceeded in the either the unnamed tributary and/or

Trapper Creek, the permittee will be required to immediately remove all cattle from the Naval Oil Shale Pasture so that negative impacts to the riparian area in the tributary to Trapper Creek are avoided.

REALTY AUTHORIZATIONS

Affected Environment: The grazing allotment is located in an area with no previous development. Jurisdiction on the Naval Oil Shale Reserve was transferred to the Bureau of Land Management 06/11/1999. Berry Petroleum holds access road right-of-way COC70487 on BLM Road 1000, which forms the boundary of the grazing permit on the northeast corner. The access road has stipulations concerning use during hunting season and holiday weekends to avoid recreation-energy traffic conflict.

Environmental Consequences of Alternative A, Proposed Action: Issuance of the grazing permit should not impact or be impacted by current use.

Environmental Consequences of Alternative B, Permittee's Application: Issuance of the grazing permit should not impact or be impacted by current use.

Environmental Consequences of Alternative C, No Grazing Alternative: Non-issuance of the grazing permit should not impact or be impacted by current use.

Mitigation: none

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: Trapper Creek was designated an Area of Critical Environmental Concern (ACEC) on March 13, 2008 as part Roan Plateau Resource Management Plan Amendment. The Naval Oil Shale pasture was previously managed by the U.S. Department of Energy as part of the Naval Oil Shale Reserves Number 1. Responsibility for the pasture was transferred to the BLM in December 1997 and the ACEC designation was not included in the 1997 White River ROD/RMP (signed June 1997). The ACEC designation was adopted by the White River Field Office through the planning effort for the Roan Plateau.

The White River Field Office is responsible for management for approximately 1,055 acres of the total 4,810 acres of Trapper/Northwater Creek ACEC. Of that area, approximately 614 acres are managed within the Naval Oil Shale pasture.

Special resources within the Trapper/Northwater Creek ACEC include Colorado River cutthroat trout, hanging gardens, Indian ricegrass shale barrens, and a less common plant association of mountain big sagebrush and Thurber fescue found on the edge of its range. Resources that may be impacted by grazing within the Naval Oil Shale allotment include habitat for Colorado River cutthroat trout within Trapper Creek and special plant communities found on adjacent uplands.

Hanging garden plant communities on the WRFO portions of the ACEC in the proposed action are inaccessible to cattle.

Environmental Consequences of Alternative A, Proposed Action: Please see the Threatened, Endangered, and Sensitive Animal Species section for a discussion of potential impacts of livestock grazing on riparian systems and thus on habitat for trout. This alternative would provide a temporally changing grazing regimen which would provide alternate year grazing outside of the peak growing and flowering season for special plant communities found in the ACEC.

Environmental Consequences of Alternative B, Permittee's Application: Please see the Threatened, Endangered, and Sensitive Animal Species section for a discussion of potential impacts of livestock grazing on riparian systems and thus on habitat for trout. This alternative would provide a static grazing season during the peak growing season for a longer duration and may affect unique upland plant communities in the ACEC, but is unlikely to affect the hanging gardens.

Environmental Consequences of Alternative C, No Grazing Alternative: Please see the Threatened, Endangered, and Sensitive Animal Species section for a discussion of potential impacts of livestock grazing on riparian systems and thus on habitat for trout. A long term exception could occur if livestock removal produced unusual fuel loading and/or worsening noxious weed invasions that would create additional fire and/or competition disturbances in the ACEC.

Mitigation: Ongoing, rangeland and riparian monitoring studies in the allotment should provide mitigation for grazing-induced plant community changes in uncommon plant community associations if present. If monitoring data shows plant seral regression, additional monitoring, and/or protection of ACEC plant resources should be reassessed.

Finding on the Public Land Health Standard for plant communities in the ACEC: Under the proposed action, unique plant communities are expected to remain viable and sustainable at the population and community level.

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts as a result of implementation of the proposed action are not expected to exceed or markedly differ from those analyzed in the White River ROD/RMP and/or the White River Resource Area Grazing Management Environmental Impact Statement.

REFERENCES CITED:

Platts, William S.
1989. Compatibility of Livestock Grazing Strategies with Fisheries *in* Practical Approaches to Riparian Resource Management, An Educational Workshop, May 8-11, 1989; Billings, MT

Myers, Lewis H.

1989. Grazing and Riparian Management in Southwestern Montana *in* Practical Approaches to Riparian Resource Management, An Educational Workshop, May 8-11, 1989; Billings, MT

Armstrong, Harley J. and David G. Wolny

1989. *Paleontological Resources of Northwest Colorado: A Regional Analysis*. Museum of Western Colorado, Grand Junction, Colorado.

Compass: Colorado's On-line Cultural Resource Database. Colorado Office of Archaeology & Historic Preservation. <http://www.coloradohistory-oahp.org/compass/>. Accessed 3/10/2009.

Reed, Alan and Jonathon Horn

1995. Report of the 1995 Cultural Resource Inventory of Naval Oil Shale Reserve Lands, Garfield County, Colorado. Alpine Archaeological Consultants, Montrose, Colorado.

Tickner, Paul, Alan Reed, and Jonathon Horn

1996. Final Report of the Cultural Resource Inventory of Naval Oil Shale Reserve Lands, Garfield County, Colorado. Alpine Archaeological Consultants, Montrose, Colorado.

Tweto, Ogden

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

Clary, W.

1999. Stream channel and vegetation response to late spring cattle grazing. *Journal of Range Management* 52:218-227.

Kauffman, J. and W. Krueger.

1984. Livestock impacts on riparian ecosystems and streamside management implications... a review. *Journal of Range Management* 37: 430-438.

Parsons, C., Momont, P., Delcurto, T., McInnis, M., and M. Porath.

2003. Cattle distribution patterns and vegetation use in mountain riparian areas. *Journal of Range Management* 56:334-341.

PERSONS / AGENCIES CONSULTED: The permittees were contacted on two occasions as follows: Susan Robinson, 2/2009; Larry Robinson, 3/30/2009. In addition, 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. 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.

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, |
| Maggie Marston | Botanist | Areas of Critical Environmental Concern, Threatened and Endangered Plant Species |
| Michael Selle | Archeologist | Cultural Resources, Paleontological Resources |
| Mark Hafkenschiel | Rangeland Management Specialist | Invasive, Non-Native Species, Soils, Wetlands and Riparian Zones, Vegetation , Rangeland Management |
| Heather Sauls | Wildlife Biologist | Migratory Birds, Threatened, Endangered and Sensitive Animal Species, Terrestrial and Aquatic Wildlife. |
| Jim Michels | Fire / Fuels Technician | Fire Management, Wilderness, Access and Transportation, Recreation, Forest Management, Visual Resources |
| Paul Daggett | Mining Engineer | Geology and Minerals |
| Linda Jones | Realty Specialist | Realty Authorizations |

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

DIO-BLM-CO-110-2009-0085-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 issue a proposed decision in offering a grazing permit based on the grazing schedule outlined in the Proposed Action, Alternative A with the addition of the mitigation for specific resources listed below.

MITIGATION MEASURES:

Wastes, Hazardous or Solid

1. 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 in the allotment.

Water Quality, Surface and Ground

2. Range improvements should be implemented to improve grazing conditions in the tributary to Trapper Creek coming from the north just before the confluence with Northwater Creek if after monitoring it is determined to be needed. These range improvements may be drift fences, well development, spring development and/or other methods to reduce concentrated use in this stream channel. Range improvements will be developed with the permittee and will be evaluated in a separate NEPA action.

Wetland Riparian Zones

3. The Trapper Creek and unnamed tributary riparian areas will be monitored in the latter part of the prescribed grazing period or immediately afterward using the greenline protocol as described in BLM Idaho Technical Bulletin 2008-01, (April 2008) to assess the amount of streambank alteration by livestock. Additional vegetation data will also be collected. If more than 10% of the streambank experiences erosion due to trailing, trampling, or shearing, then management strategies designed to prevent further damage must be implemented prior to the next grazing cycle.

Rangeland Management

4. WRFO rangeland and riparian monitoring studies. If cattle use causes the 10% streambank trampling threshold to be exceeded in either the unnamed tributary and/or Trapper Creek, the permittee will be required *to immediately remove all cattle* from the Naval Oil Shale Pasture so that negative impacts to the riparian area in the tributary to Trapper Creek (documented by Bob Lange, 10/2008) are avoided.

T&E Animal Species

5. Fences would need to be repaired and maintained to ensure that trespass livestock do not contribute to overutilization of riparian areas.

Cultural Resources

6. If newly-discovered historic properties are reported on the allotment, or if damage or vandalism to any sites on the allotment is reported, BLM will field visit these properties and assess the livestock grazing impacts.
7. The operator is responsible for informing all persons who are associated with the allotment activities that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts on public lands. If artifacts are discovered during Allotment activities, the operator is to immediately stop activities that might further disturb such materials, and contact the authorized officer (AO). The operator and the authorized officer will consult and determine the best option for avoiding or mitigating archaeological site damage.

Paleontology Resources

8. If paleontological materials (fossils) are discovered during Allotment activities, the operator is to immediately stop activities that might further disturb such materials, and contact the authorized officer (AO). The operator and the authorized officer will consult and determine the best option for avoiding or mitigating paleontological site damage.

Hydrology and Water Rights

9. If impacts to contact springs in the Naval Oil Shale Pasture and/or surface erosion are observed near these springs due to cattle use, the operator will notify the BLM. If impacts are observed by the BLM and/or the operator, the permittee will work with the BLM to change grazing practices and/or develop range improvement projects to improve use and reduce impacts to contact springs.

Areas of Critical Environmental Concern

10. Ongoing rangeland and riparian monitoring studies in the allotment should provide data to substantiate grazing-induced plant community changes in uncommon plant community associations. If monitoring data shows plant seral regression, additional monitoring and/or protection of ACEC plant resources shall be reassessed.

COMPLIANCE/MONITORING: See mitigation listed above.

NAME OF PREPARER: Mark Hafkenschiel

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL:



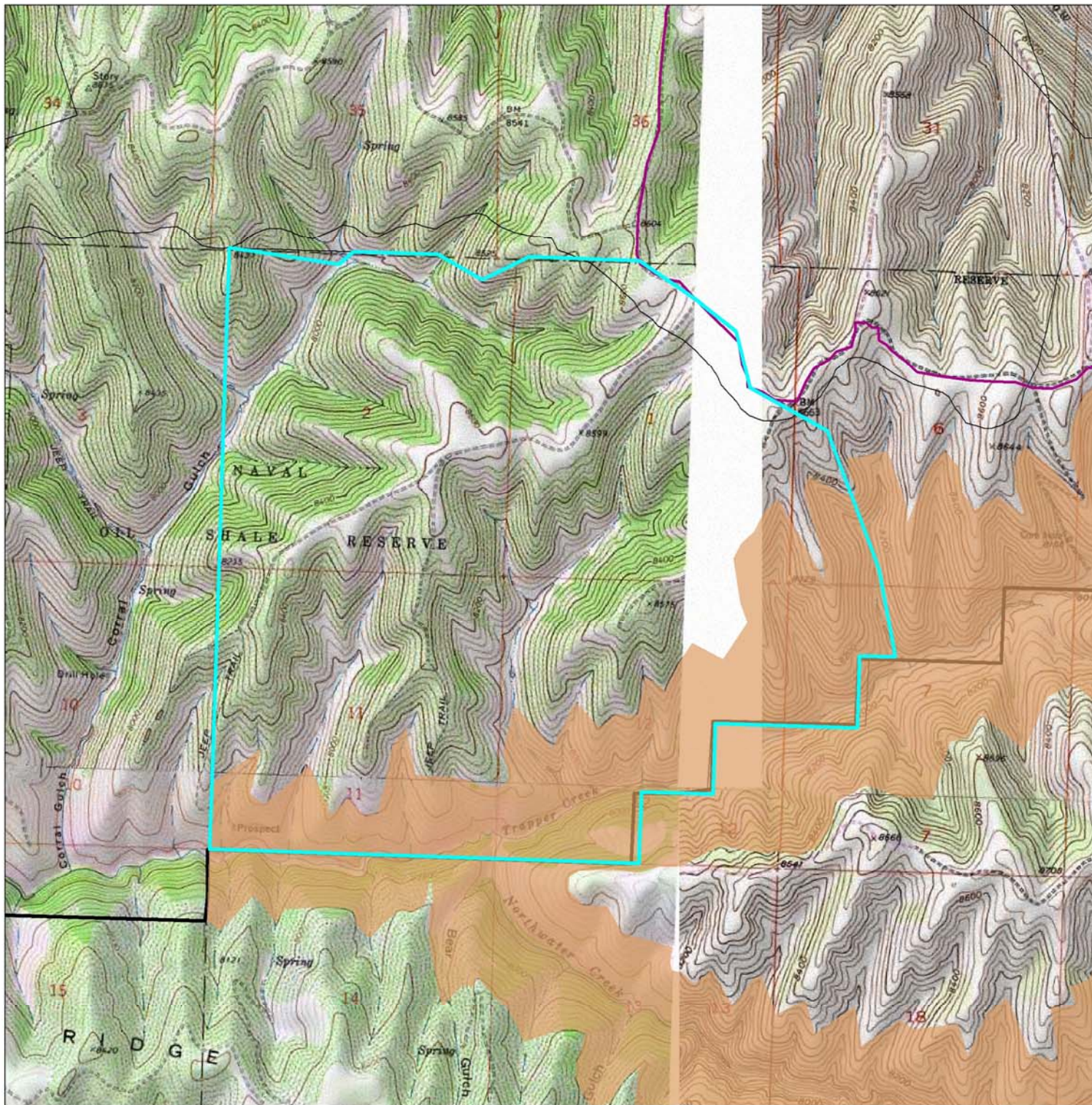
Field Manager

DATE SIGNED:

05/29/09

ATTACHMENTS: Pasture Map of the Proposed Action

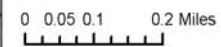
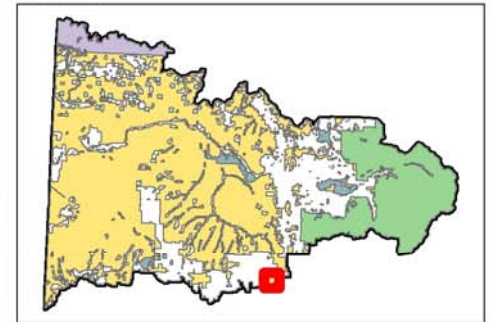
DOI-BLM-CO-2009-0085-EA Naval Oil Shale Pasture



Legend

- Projects: point
- Projects: line
- ACEC
- Projects: polygon
- FieldOffice_Boundary_WRFO

Overview



Sources:
BLM, USGS, CDOW, etc.



Disclaimer:
Although the data presented within this map, and the map itself, have been processed successfully on computers of BLM, no warranty, expressed or implied, is made by BLM regarding the use of this map or the data represented, nor does the fact of distribution constitute or imply any such warranty.