

U.S. Department of the Interior
Bureau of Land Management
Little Snake Field Office
455 Emerson Street
Craig, CO 81625-1129

ENVIRONMENTAL ASSESSMENT

EA-NUMBER: DOI-BLM-CO-N010-2010-0116-EA

PERMIT/LEASE NUMBER: COC 73801

PROJECT NAME: Moffat County Refuge Pit 10 Acre Expansion

LEGAL DESCRIPTION: T. 10 N., R. 103 W. of the 6th PM
Sec. 10, S $\frac{1}{2}$ S $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$

APPLICANT: Moffat County

PLAN CONFORMANCE REVIEW: The proposed action is subject to the following plan:

Name of Plans: Little Snake Resource Management Plan and Record of Decision

Date(s) Approved: April 26, 1989

Results: The proposed action has been reviewed for conformance with this plan (43 CFR 1610.5, BLM 1617.3). The proposed action is in conformance with the objectives for Management Unit 2 (Northern Central).

Remarks: The proposed expansion of the Moffat County Refuge Pit is located within Management Unit 3 (Little Snake Resource Management Plan). The objective of Management Unit 3 is to improve soil and watershed values, increase forage production, and enhance livestock grazing. Public lands are open to leasing of federal and mineral material sales consistent with the management objectives for this unit.

PURPOSE AND NEED FOR PROPOSED ACTION: The purpose and need for the proposed action is to make mineral materials resources available for recovery and beneficial use consistent with the following applicable provisions:

- National Environmental Policy Act of 1969 (NEPA);
- The Materials Act of 1947; (61 Stat. 681, 30 U.S.C. 601 et seq.) as principally amended by:
- The Act of July 23, 1955, Public Law 167 (69 Stat. 367, 30 U.S.C. 601)

- Federal Land Policy and Management Act of 1976 (FLPMA)
- BLM regulations

PUBLIC SCOPING PROCESS: This project is listed on the Little Snake Field Office's NEPA log, posted on the LSFO web site.

BACKGROUND: Moffat County has been operating the 40 acre Refuge Pit since 1989. Sand and gravel produced from the pit are used to surface county roads. Moffat County has submitted an application to increase the size of the permitted area by 10 acres as the present permit would be mined out in the near future. A 112 permit conversion application will be submitted to Colorado Division of Reclamation, Mining and Safety (CDRMS). Issuance of Free Use Permits for mineral materials is consistent with the Resource Management Plan.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

PROPOSED ACTION: The proposed action is to increase the size of the current 40 acre mineral materials permit area by 10 acres to a total area of 50 acres. The increase in permit area would allow for the future production of sand and gravel for road base material to surface county roads in the area. The permit would be issued for a period of 10 years.

NO ACTION ALTERNATIVE: The application for the expansion of the mineral materials permit would be denied and mining of federal sand and gravel at this location would not occur. Moffat County would have to find another source of sand and gravel.

AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES/MITIGATION MEASURES

CRITICAL RESOURCES

AIR QUALITY

Affected Environment: There are five federal Class I areas within 100 kilometers of the Little Snake Resource Management Area boundary, all of which occur in Colorado. There are no federal Class I areas in Utah or Wyoming within 100 km of the LS RMA boundary. There are no non-attainment areas nearby that would be affected by either alternative.

Environmental Consequences, Proposed Action: Activities associated with sand and gravel mining, that may affect air quality, namely dust from excavation and crushing processes and exhaust from mine operation vehicles and heavy equipment, fall below regulated EPA emission standards for the six criteria pollutants of concern (sulfur dioxide, nitrogen oxide, ground-level ozone, carbon monoxide, particulate matter [both PM2.5 and PM10], and lead) and this type of mining activity is not a significant source of these pollutant emissions that do occur in Moffat County.

At a regional scale, atmospheric dust, caused by destabilization of soil as a result of land use

changes coupled with drought conditions, is receiving increased attention for its ability to alter alpine environments. Dust covered snow melts faster because it can absorb more solar energy, which affects snowpack conditions and can result in earlier and faster spring runoff events. The Colorado Plateau has been identified as a primary dust source for several recent alpine dust events on the Western Slope of Colorado. Areas of low annual precipitation, little to no vegetation cover, and an available supply of sediment are of primary concern for mitigation of expanding or new sources of dust.

Although the proposed mine expansion is expected to allow another 10 years of operation, active operation will be project dependent and intermittent in nature. Reclamation of the mined areas will occur contemporaneously with mining of new areas of the pit when possible, which should help keep dust down during dry periods and over the long term. Impacts to air quality caused by the proposed action are considered minimal.

Environmental Consequences, No Action Alternative: There would be no environmental consequences to air quality.

Mitigative Measures: Retain as much vegetative cover as possible during the project and/or reclaiming and covering disturbed areas shortly following excavation. Protect overburden stockpiles from wind and water erosion with temporary seed cover if left in place for more than 180 days or one growing season.

Name of specialist and date: Emily Spencer, 8/18/10

AREA OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: Not Present

Environmental Consequences: Not Applicable

Mitigative Measures: Not Applicable

Name of specialist and date: Gina Robison, 8/16/10

CULTURAL RESOURCES:

Affected Environment: Cultural resources, in this region of Colorado, range from late Paleo-Indian to Historic. For a general understanding of the cultural resources in this area of Colorado, see *An Overview of Prehistoric Cultural Resources, Little Snake Resource Area, Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resources Series, Number 20, *An Isolated Empire, A History of Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resource Series, Number 2 and *Colorado Prehistory: A Context for the Northern Colorado River Basin*, Colorado Council of Professional Archaeologists.

Environmental Consequences, No Action Alternative: Previously undiscovered sites would remain undisturbed, but also undiscovered.

Environmental Consequences: The proposed project, Refuge Pit Expansion, have undergone a Class III cultural resource survey:

MF.LM.NR992

Title:	CLASS III CULTURAL RESOURCE INVENTORY FOR MOFFAT COUNTY ROAD DEPARTMENT REFUGE GRAVEL PIT EXPANSION MOFFAT COUNTY, COLORADO (07-WAS-707)
Author:	MURRAY, SUSAN
Date:	10/30/2007
Contractor:	WESTERN ARCHAEOLOGICAL SERVICES FOR THE BLM LITTLE SNAKE FIELD OFFICE

An archaeological site (5MF.2746) has been discovered and recorded within the northwestern corner of the proposed project area. This site has been officially determined eligible for the National Register of Historic Places.

This site was revisited and reevaluated (10.62.2010/Morton 2010). It was determined that the site does not extend into the area of potential effect for the proposed project. The site boundary is approximately 30 meters west of the proposed pit. A new boundary fence between the proposed pit and the U.S Fish and Wildlife Refuge will serve to protect the site from any adverse effects.

Mitigative Measures:

The following standard stipulations apply for this project:

1. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000. Within five working days, the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again; and
- Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of

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

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

Name of specialist and date: Ethan Morton, 8/30/10

ENVIRONMENTAL JUSTICE

Affected Environment: The proposed action is located in an area of isolated dwellings. Recreation, and ranching are the primary economic activities.

Environmental Consequences, both alternatives: The project area is relatively isolated from population centers, so no populations would be affected by physical or socioeconomic impacts of either alternative. Neither alternative would directly affect the social, cultural or economic well-being and health of Native American, minority or low-income populations.

Mitigative Measures: None.

Name of specialist and date: Louise McMinn, 8/12/10

FLOOD PLAINS

Affected Environment: There are no 100-year floodplains present on public lands within the proposed project area.

Environmental Consequences, both alternatives: None

Mitigative Measures: None

Name of specialist and date: Emily Spencer, 8/17/10

Source: USDA-NRCS Soil Data Viewer version 5.2.0016: <http://soildataviewer.nrcs.usda.gov/>

INVASIVE, NONNATIVE SPECIES

Affected Environment: Invasive species and noxious weeds occur within the affected area. Downy brome (cheatgrass), yellow alyssum, blue mustard and other annual weeds are

common along roadsides and on other disturbed areas. Canada thistle and several species of biennial thistles are known to occur in this area. Halogeton is also present in the affected area, as well as other areas in the western portion of Moffat County. Russian knapweed and hoary cress (whitetop) are additional species potentially occurring near the project area. Other species of noxious weeds could be introduced by vehicle traffic, livestock and wildlife. The BLM, Moffat County, livestock operators, pipeline companies and oil and gas operators have formed the Northwest Colorado Weed Partnership to collaborate efforts on controlling weeds and finding the best integrated approaches to achieve results. Additionally, the BLM is in cooperation with Moffat County's Cooperative Weed Management program to control noxious weeds on nearby public lands. Principals of Integrated Pest Management are employed to control noxious weeds on public lands in the Little Snake Field Office.

Environmental Consequences, Proposed Action: Surface disturbing activities such as the proposed action provide an opportunity for weed spread and establishment. In the proposed action permit the applicant would be responsible for controlling non-native weed species and restoring native vegetation. The largest concern would be for biennial and perennial noxious weeds to establish and not be treated. Once an infestation is detected it could be controlled with various IWM techniques. Land practices and land uses by the applicant and their weed control efforts and awareness would largely determine the establishment and treatment of weed infestations.

Environmental Consequences, No Action Alternative: This alternative would have no effect on current weed infestations or spread.

Mitigative Measures: None

Name of specialist and date: Christina Rhyne, 8/20/10

MIGRATORY BIRDS

Affected Environment: BLM Instruction Memorandum No. 2008-050 provides guidance towards meeting BLM's responsibilities under the Migratory Bird Treaty Act (MBTA) and Executive Order (EO) 13186. The guidance emphasizes management of habitat for species of conservation concern by avoiding or minimizing negative impacts and restoring and enhancing habitat quality. The LSFO provides both foraging and nesting habitat for a variety of migratory bird species. Several species on the USFWS's Birds of Conservation Concern (BCC) List occupy these habitats within the LSFO.

Native plant communities adjacent to the gravel pit are comprised of sagebrush stands with an understory of grasses and forbs. A variety of migratory birds may utilize this habitat type during the nesting period (May through July) or during spring and fall migrations. The project area contains potential nesting and/or foraging habitat for the following USFWS 2008 Birds of Conservation Concern: Brewer's sparrow, sage sparrow, sage thrasher and loggerhead shrike. Quality of habitat in the project area is likely reduced due to the existing gravel pit.

Environmental Consequences, Proposed Action: The Proposed Action would disturb an additional 10 acres of migratory bird habitat. Although this disturbance would be minimal on a landscape level, it would decrease patch size and may degrade habitat on a small scale. Indirectly, habitat effectiveness adjacent to gravel pit would be reduced as a result of noise and human activity. If native vegetation is removed during the nesting season on the 10 acre expansion, there could be negative impacts to migratory bird species through nest destruction or increased stress leading to nest abandonment. Since this will only impact 10 acres and the existing gravel pit is likely reducing habitat use in the project area, the risk of take from this project would be low.

Environmental Consequences, No Action Alternative: The additional 10 acres of migratory bird habitat would not be disturbed.

Mitigative Measures: None

Name of Specialist and Date: Desa Ausmus, 8/19/10

NATIVE AMERICAN RELIGIOUS CONCERNS

A letter was sent to the Eastern Shoshone, Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Ute Tribal Council on May 26, 2009. The letter listed the FY2010 projects that the BLM would notify them on and projects that would not require notification. A follow-up phone call was performed on July 26, 2009. No comments were received (Letter on file at the Little Snake Field Office). This project requires no additional notification.

Name of specialist and date: Ethan Morton, 9/30/10

PRIME & UNIQUE FARMLANDS

Affected Environment: No federally designated Prime and/or Unique Farmlands are present on public lands within the proposed project area.

Environmental Consequences, both alternatives: None

Mitigation Measures: None

Name of specialist and date: Emily Spencer, 8/17/10

Source: USDA-NRCS Soil Data Viewer version 5.2.0016: <http://soildataviewer.nrcs.usda.gov/>

REALTY AUTHORIZATIONS

Affected Environment: The proposed project area is in an area which contains a buried

telephone right-of-way and other realty authorizations.

Environmental Consequences, Proposed Action: Existing buried facilities could be accidentally damaged during project activities. Impacts would be temporary until any damage is repaired.

Environmental Consequences, No Action Alternative: No disturbance to existing buried facilities would occur.

Mitigative Measures: Potential damage to existing rights-of-way would be minimized by the following actions:

- Avoid existing rights-of-way during the project.
- Utilize the “One Call” system to locate and stake the centerline and limits of all underground facilities in the area prior to project initiation.
- Provide 48-hour notice to the owner/operator of all facilities prior to performing any work near existing rights-of-way.

Name of specialist and date: Louise McMinn, 08/12/10

T&E AND SENSITIVE ANIMALS

Affected Environment: There are no ESA listed or proposed species that inhabit or derive important benefit from the project area. The general area provides habitat for greater sage-grouse, a BLM sensitive species and a candidate for ESA listing. Greater sage-grouse potentially utilize sagebrush ecosystems in the general area for nesting. One active lek is located within 3 miles of the existing gravel pit.

Habitat for one additional BLM sensitive species: Brewer’s sparrow, occurs adjacent to the current gravel pit. Brewer’s sparrows are a summer resident in Colorado and nest in sagebrush stands. Nests are constructed in sagebrush and other shrubs in denser patches of shrubs. This species would likely be nesting in the project area from mid-May through mid-July.

Environmental Consequences, Proposed Action:

Greater Sage-grouse

Since the gravel pit has been in production for over 20 years, sage-grouse have either acclimated to the disturbance or are already avoiding the area. Expanding the pit by 10 acres would be unlikely to add additional impacts to grouse in the area. As areas are mined out and reclaimed, habitat conditions for sage-grouse would improve and habitat use may increase. The closest lek is over 3 miles away, and the original permit did not allow surface disturbing activities between 4:00 and 9:00 am during the lekking season. Due to the distance from the lek and the above timing limitation, it is unlikely that the gravel pit is having any influence on lek attendance.

Brewer's Sparrow

Impacts to Brewer's sparrows are described in the Migratory Bird section of this EA.

Environmental Consequences, No Action Alternative: None

Mitigative Measures: No addition mitigative measures are required.

Name of Specialist and Date: Desa Ausmus, 8/19/10

T&E AND SENSITIVE PLANTS

Affected Environment: The proposed pit expansion lies in the vicinity of populations of Gibben's beardtongue (*Penstemon gibbensii*), a BLM sensitive species. This plant inhabits sparsely vegetated shale or sandy-clay slopes. The site does not contain any populations or habitats that would support populations of this species.

There are no federally listed threatened or endangered plant species present within or in the vicinity of the proposed pit expansion.

Environmental Consequences, both alternatives: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim 8/20/10

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no hazardous wastes at this location.

Environmental Consequences, all alternatives: Potential releases of hazardous materials could occur due to vehicular access and crushing and hauling operations. Coolant, oil, and fuel are materials that could potentially be released. The potential for releases of any of these materials is low and if a release were to occur, it would be minimal and highly localized and not result in an adverse impact.

Mitigative Measures: None

Name of specialist and date: Jennifer Maiolo, 8/16/10

WATER QUALITY – GROUND

Affected Environment: The nearest active water well is approximately 1/3 mile from the proposed location and is reported to have a water level of 74 feet. The proposed expansion of the Moffat County Refuge Pit is anticipated to reach a maximum depth of 25 feet.

Environmental Consequences: The proposed action should have no effect to the ground water quality.

Environmental Consequences, No Action Alternative: None

Mitigative Measures: None

Name of specialist and date: Marty O'Mara, 9/24/10

WATER QUALITY – SURFACE

Affected Environment: Surface runoff from the proposed project area would flow primarily into Spitzie Draw, which is tributary to the Green River. All tributaries to the Green River in Colorado, including all wetlands, must support Aquatic Life Cold 2, Recreation E, and Agriculture. There are no water quality impairments or suspected water quality issues for waters influenced by the proposed project area. The operator has no plans to use, appropriate, impound, or intercept any surface or groundwater. There will be no chemical treatment systems on site and no gravel or sand washing will occur.

Environmental Consequences, Proposed Action: Although the proposed mine expansion is expected to allow another 10 years of operation, active operation would be project dependent and intermittent in nature. Reclamation of the mined areas will occur contemporaneously with mining of new areas of the pit when possible. Impacts to water quality caused by the proposed action are considered minimal.

Environmental Consequences, No Action Alternative: There would be no project-related impacts.

Mitigative Measures: Retain as much vegetative cover as possible during the project and/or reclaiming and covering disturbed areas shortly following excavation. Stockpiles should be protected from wind and water erosion with temporary seed cover if left in place for more than 180 days or one growing season. Create berms around the overburden stockpiles to prevent any sediment movement from potentially compromising water quality integrity. When the mine is no longer operational, the disturbed area should be reclaimed to approximate original contours.

Name of specialist and date: Emily Spencer, 8/18/10

Reference: Colorado Department of Public Health and Environment Water Quality Control Commission. 2010. Regulations #33, 37, and 93. <http://www.cdphe.state.co.us/regulations/wqccregs/index.html>

WETLANDS/RIPARIAN ZONES

Affected Environment: There are no streams, wetlands, seeps, or springs on federal lands within or immediately adjacent to the proposed project site.

Environmental Consequences, both alternatives: None

Mitigative Measures: None

Name of specialist and date: Emily Spencer, 8/17/10

WILD & SCENIC RIVERS

Affected Environment: Not Present

Environmental Consequences, both alternatives: Not Applicable

Mitigative Measures: Not Applicable

Name of specialist and date: Gina Robison, 8/16/10

WSAs, WILDERNESS CHARACTERISTICS

Affected Environment: Not Present

Environmental Consequences, Both Alternatives: Not Applicable

Mitigative Measures: Not Applicable

Name of specialist and date: Gina Robison, 8/16/10

NON-CRITICAL ELEMENTS

PALEONTOLOGY

Affected Environment: The geologic formation at the surface is the Tertiary age Browns Park Formation (Tbp) overlain by Pleistocene River – Terrace deposits. Tbp has been deposited mostly north and east of the Uinta Mountains. Maximum thickness is highly variable but is considered to be about a maximum of 500 meters. This formation has been classified a Class Ia formation for the potential for occurrence of scientifically significant fossils.

Environmental Consequences, Proposed Action: Scientifically significant fossils are found abundantly within this formation (Armstrong & Wolney, 1989). The potential for discovery of significant fossils within this formation is considered to be high; however, potential for discovery of fossils through a surface survey on this location is considered low because of the specific facies of the Browns Park Formation. Potential for buried fossils is considered moderate to low. If any such fossils are located here, construction activities could damage the fossils and the information that could have been gained from them would be lost. The significance of this impact would depend upon the significance of the fossil. The proposed action could also constitute a beneficial impact to Paleontological resources by increasing the

chances for discovery of scientifically significant fossils.

Environmental Consequences, No Action Alternative: None.

Mitigative Measures: Ceasing operations and notifying the Field Office Manager immediately upon discovery of a fossil during construction activities will effectively mitigate the potential impact to Paleontological resources. An assessment of the significance is made and a plan to retrieve the fossil or the information from the fossil is developed.

References:

Armstrong, Harley J. and Wolney, David G., 1989, Paleontological Resources of Northwest Colorado: A Regional Analysis, Museum of Western Colorado, Grand Junction, CO, prepared for Bur. Land Management, Vol. I of V.

Miller, A.E., 1977, Geology of Moffat County, Colorado, Colo. Geol. Surv. Map Series 3, 1:126,720.

Name of specialist and date: Marty O'Mara 9/24/10

SOILS

Affected Environment: The proposed project occurs on the following soil types:

Table 1. Soil Summary for the Proposed Moffat County Refuge Pit Expansion

Soil Map Unit (MU) & Soil Name (Acres in Allot.)	Map Unit Setting	Description
MU 191 Tipperary loamy fine sand, 3 to 12% slopes	<u>Elevation:</u> 5,400 – 6,000 feet <u>Mean annual precipitation:</u> 7-10” <u>Ecological Site:</u> Sandy Cold Desert	These toeslope soils are excessively drained with rapid permeability and very low runoff potential. Available water capacity is low and the soil profile is typically loamy fine sand up to 60 inches deep.
MU 210 Willwood-Sheppard, cool complex, 1-12% slopes	<u>Elevation:</u> 5,300 – 6,000 feet <u>Mean annual precipitation:</u> 7-10” <u>Ecological Site:</u> Sandy Cold Desert	These alluvial fan soils are excessively drained with moderately rapid permeability and low runoff potential. Available water capacity is low to very low and the soil profile is typically up to 60 inches deep, composed mostly of loamy fine sand and extremely cobbly sand.
MU 211 Willwood-Tipperary complex, 12- 40% slopes	<u>Elevation:</u> 5,300 – 5,600 feet <u>Mean annual precipitation:</u> 7-10” <u>Ecological Site:</u> Cold Desert Breaks	These terrace escarpment soils are excessively drained with rapid permeability and low runoff potential. Available water capacity is low to very low and the soil profile is typically up to 60 inches deep, composed mostly of loamy fine sand and cobbly/gravelly fine sand.

Data taken from *Soil Survey of Moffat County Area, Colorado (2004)*.

Sand and gravel will be mined at a maximum depth of 25 feet. According to Exhibit D – Reclamation Plan, approximately 8” of topsoil would be removed, stockpiled when necessary, and replaced following mining activities. Two plant species (Ladac alfalfa and western wheat grass) are proposed for used in reclamation. Proposed maximum gradient of reclaimed slopes is 4:1 (horizontal to vertical).

Environmental Consequences, Proposed Action: All soil types are prone to erosion unless close-growing plant cover is maintained. Species identified for reclamation in the plan may not be adequate or suitable for long-term soil stabilization. Intermediate stabilization, such as mulch and tackifier, may be required to improve seed germination rates.

Environmental Consequences, No Action Alternative: There would be no project-related impacts.

Mitigative Measures: Retain as much vegetative cover as possible during the project and/or reclaiming and covering disturbed areas shortly following excavation. Stockpiles should be protected from wind and water erosion with temporary seed cover if left in place for more than 180 days or one growing season. Given the overall dry conditions of the area, during reclamation grading the soil surface should be prepared to hold moisture by creating a rough, uneven surface. A more diverse seed mix is recommended to enhance long-term site diversity and stability. Species suitable for the soils onsite include: needleandthread, Indian ricegrass, bottlebrush squirreltail, shadscale saltbush, Wyoming big sagebrush, sand dropseed, and spiny hopsage (Soil Survey of Moffat County Area, Colorado 2004). Certified weed-free straw/mulch should be used for any stabilization techniques. When the mine is no longer operational, the disturbed area should be reclaimed to approximate original contours.

Name of specialist and date: Emily Spencer, 8/18/10

UPLAND VEGETATION

Affected Environment: The proposed pit expansion is located in a saltbush-greasewood plant community interspersed with big sagebrush. Dominant plants present include greasewood (*Sarcobatus vermiculatus*), shadscale (*Atriplex confertifolia*), Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), winterfat (*Euphorbia lanata*), prickly pear (*Opuntia* spp.), green rabbitbrush (*Chrysothamnus viscidiflorus*), squirreltail (*Sitanion hystrix*), and Indian ricegrass (*Oryzopsis hymenoides*). There is also a considerable amount of the non-native weeds halogeton (*Halogeton glomeratus*) and cheatgrass (*Bromus tectorum*).

Due to the aridity of the site and the low moisture holding capacity of the soils, the overall vigor and productivity of the site is low. Numerous greasewood plants appear dead and perennial grasses are sparse. The annual weeds cheatgrass (cool season) and halogeton (warm season) are major components on the site.

Environmental Consequences, Proposed Action: The proposed action would completely remove approximately ten acres of native vegetation. This removal would be gradual during the ten year period of the permit and could continue further into the future. Since the site is only marginally supporting existing native species, the non-native weeds that are present, cheatgrass and halogeton, would have increased opportunities to establish and persist while providing additional seed sources that would be available for dispersal into the surrounding community.

If required weed control and adequate reclamation practices are implemented and species adapted to this site are seeded, the short term impacts to the adjacent plant communities and the long term impacts to the site itself would be effectively minimized.

Environmental Consequences, No Action Alternative: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim, 8/20/10

WILDLIFE, AQUATIC

Affected Environment: No aquatic wildlife or habitat for aquatic wildlife exists within the Proposed Action area.

Environmental Consequences, both alternatives: None

Mitigative Measures: None

Name of Specialist and Date: Desa Ausmus, 8/19/10

WILDLIFE, TERRESTRIAL

Affected Environment: Native plant communities adjacent to the gravel pit are comprised of sagebrush stands with an understory of grasses and forbs. This vegetation type provides habitat for a variety of big game, small mammals, birds and reptiles. The project area provides winter habitat for mule deer, pronghorn antelope and elk.

Environmental Consequences, Proposed Action: Since the gravel pit has been in production for over 20 years, any wildlife in the area have either acclimated to the disturbance or are already avoiding the area. Expanding the pit by 10 acres would be unlikely to increase impacts or disturbances to wildlife. Activities at the gravel pit are intermittent, so disturbances are not occurring on a daily basis.

Overall, 50 acres of wildlife habitat would be disturbed by the gravel pit. Although this disturbance would reduce habitat quality on a small scale, it would have little impacts to wildlife habitat on a landscape level.

Environmental Consequences, No Action Alternative: None

Mitigative Measures: None

Name of Specialist and Date: Desa Ausmus, 8/19/10

OTHER NON-CRITICAL ELEMENTS:

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fluid Minerals	EMO 9/24/10		
Forest Management	JAM 8/16/10		
Hydrology/Ground			See Ground Water Quality
Hydrology/Surface			
Range Management		JHS 8/20/10	
Realty Authorizations		LM 8/12/10	
Recreation/Transportation		GMR 8/16/10	
Socio-Economics		LM 8/12/10	
Solid Minerals		JAM 8/9/10	
Visual Resources		GMR 8/16/10	
Wild Horse & Burro Mgmt	JAM 8/13/10		
Wildlife, Aquatic	8/19/10		

CUMULATIVE IMPACTS SUMMARY: Past and present uses in the area include ranching, recreation, mining of sand and gravel, and wildlife habitat. In the foreseeable future, the Refuge Pit would operate at the same level it has for the past 20 years, resulting in continued sporadic mining activities and haulage of the material to the road-surfacing sites. The 10 acre expansion area would replace the existing operations and these operations would be on the same scale or smaller scale of the current operations.

STANDARDS:

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal)

STANDARD: The Proposed Action would not jeopardize the viability of any special status animal population. With implementation of mitigation measures, the project would have minimal impacts to sensitive species or their habitats. The Proposed Action would not preclude this standard from being met.

Name of specialist and date: Desa Ausmus, 8/19/10

PLANT AND ANIMAL COMMUNITY (animal) STANDARD: The project area provides habitat for a variety of wildlife species. The project would not jeopardize the viability of any function, or have any discernible effect on animal abundance or distribution at any landscape scale. The Proposed Action would not preclude this standard from being met.

Name of specialist and date: Desa Ausmus, 8/19/10

PLANT AND ANIMAL COMMUNITY (plant) STANDARD: Due to aridity, proximity to existing disturbance and associated sources of weed seed, and historic grazing practices, the site of the proposed pit expansion is not meeting this standard. The proposed action would completely remove the existing native community. If required weed control and reclamation practices are followed, the resulting plant community would meet this standard. The no action alternative would have no effect on this site meeting or not meeting this standard.

Name of specialist and date: Hunter Seim, 8/20/10

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (plant) STANDARD: There are no federally listed threatened or endangered or BLM sensitive plant species present within the area affected by the proposed action. This standard does not apply.

Name of specialist and date: Hunter Seim, 8/20/10

RIPARIAN SYSTEMS STANDARD: There are no riparian or wetland resources identified within the proposed project area. This standard does not apply.

Name of specialist and date: Emily Spencer, 8/18/10

WATER QUALITY STANDARD: The proposed action would continue to meet the public land health standard for water quality. When the pit is no longer operational, the disturbed area would be reclaimed to approximate original contours, topsoil would be redistributed, and adapted plant species would be reseeded. These practices would help to reduce accelerated erosion of the sites. There are no water quality impairments or suspected water quality issues for waters influenced by the project area considered in the proposed action.

Name of specialist and date: Emily Spencer, 8/18/10

UPLAND SOILS STANDARD: The proposed action would not meet the public land health standard for upland soils during the operational life of the proposed pit expansion. However, when the pit is no longer operational, the disturbed area would be reclaimed to approximate original contours, topsoil would be redistributed, and adapted plant species would be reseeded. Implementation of the submitted mining and reclamation plans as well as mitigation measures would return create the opportunity for soil and plant communities to return to a functioning level in the long-term.

Name of specialist and date: Emily Spencer, 8/18/10

PERSONS/AGENCIES CONSULTED: Uintah and Ouray Tribal Council, Colorado Native American Commission, Colorado State Historic Preservation Office.

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The environmental assessment, analyzing the environmental effects of the proposed action, has been reviewed. With the implementation of the attached mitigation measures there is 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.

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts have been disclosed in the EA. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests or the locality. The physical and biological effects are limited to the Little Snake Resource Area and adjacent land.
2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.
3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplain, areas with unique characteristics, ecologically critical areas or designated Areas of Critical Environmental Concern.
4. There are no highly controversial effects on the environment.
5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.
6. This alternative does not set a precedent for other actions that may be implemented in the future to meet the goals and objectives of adopted Federal, State or local natural resource related plans, policies or programs.
7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.
8. Based on previous and ongoing cultural surveys and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice Policy.
9. No adverse impacts to any threatened or endangered species or their habitat that was determined to be critical under the Endangered Species Act were identified. If, at a future time, there could be the potential for adverse impacts, treatments would be modified or mitigated not to have an adverse effect or new analysis would be conducted.
10. This alternative is in compliance with relevant Federal, State, and local laws, regulations, and

requirements for the protection of the environment.

DECISION AND RATIONALE: I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined that the proposed action with the mitigation measures described below will not have any significant impacts on the human environment and that an EIS is not required. I have determined that the proposed project is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures identified below.

Mitigation Measures/Remarks:

It is my decision to implement the project with the mitigation measures identified below.

MITIGATION MEASURES:

1. The following standard cultural stipulations apply for this project:
 1. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000. Within five working days, the AO will inform the operator as to:
 - Whether the materials appear eligible for the National Register of Historic Places;
 - The mitigation measures the operator will likely have to undertake before the identified area can be used for project activities again; and
 - Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony.
 - Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.
2. If cultural or paleontological resources are discovered during operations under this lease, the lessee shall immediately notify the Field Office Manager and shall not disturb such discovered resources until the Field Office Manager issues specific instructions.
 - a. Within 5 working days after notification, the Field Office Manager shall evaluate any cultural resources discovered and shall determine whether any action may be required to protect or to preserve such

discoveries.

- b. The cost of data recovery for cultural resources discovered during exploration operations shall be borne by the lessee, if the lessee is ordered to take any protective measures. Ownership of cultural resources discovered shall be determined in accordance with applicable law
3. In order to protect nesting greater sage-grouse and Columbian sharp-tailed grouse, no surface disturbing activities will be permitted between 4 AM to 9AM from March 15 – May 15.
4. Integrated pest management techniques will be employed to control noxious weeds on disturbed areas at surface facilities and roads and where they have spread onto adjacent lands from these facilities.
5. Retain as much vegetative cover as possible during the project and/or reclaiming and covering disturbed areas shortly following excavation. Stockpiles should be protected from wind and water erosion with temporary seed cover if left in place for more than 180 days or one growing season. Given the overall dry conditions of the area, during reclamation grading the soil surface should be prepared to hold moisture by creating a rough, uneven surface. Create berms around stockpiles of overburden, road base and top-soil to prevent any sediment movement from potentially compromising water quality integrity.
6. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.
7. Avoid existing rights-of-way during the project. Utilize the “One Call” system to locate and stake the centerline and limits of all underground facilities in the area prior to project initiation. Provide 48-hour notice to the owner/operator of all facilities prior to performing any work near existing rights-of-way.

COMPLIANCE PLAN(S):

Periodic compliance inspections will be performed over the life of this project to insure that all mitigation measures are being implemented as required. The inspections will be performed by the Little Snake Field Office’s mining engineer, archeologist and Natural Resource Specialist.

SIGNATURE OF PREPARER:

DATE SIGNED:

SIGNATURE OF ENVIRONMENTAL REVIEWER:

DATE SIGNED:

SIGNATURE OF AUTHORIZED OFFICIAL:

DATE SIGNED: