

DECISION RECORD
BLM ENVIRONMENTAL ASSESSMENT (EA) – WY-070-EA14-198
Campbell County Road & Bridge Department (Campbell County)
Davis Clinker (“Scoria”) Mine, WYW-168448
Bureau of Land Management, Buffalo Field Office, Wyoming

DECISION:

BLM approves Campbell County Road & Bridge Department’s (Campbell County’s) application for its new Davis Clinker (“Scoria”) Mine, Free-Use Permit (FUP), WYW-168448, as described in Environmental Assessment (EA) WY-070-EA14-198, all incorporated here by reference. This project is the result of collaboration between the BLM Buffalo Field Office (BFO) and Campbell County. This project involves the removal of up to, but not exceeding, 300,000 CY of clinker (scoria) from approximately 12 acres of entirely new disturbance. These 12 acres comprise BLM-administered mineral lands, as indicated below. The surface estate is privately-owned, and the disturbance is inclusive of all support infrastructures to include but not limited to the mine, staging area, access road, etc. The scoria will be used Campbell County’s county roads, to keep them passable year-round.

Compliance. This decision complies with:

- Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701); Interior Department Order 3310.
- The Materials Act of 1947 (30 USC 601 et seq.), as amended; 43 CFR 3600 et seq.
- National Environmental Policy Act of 1969 (NEPA) (42 USC 4321).
- Buffalo Resource Management Plan (RMP) and Records of Decision (RODs) 1985, 2001, 2003, 2011.
- Supplement to Memorandum of Understanding No. WY 19 Between the US DOI BLM, Wyoming State Office, and the State of Wyoming DEQ LQD for Management of Surface Mining and Exploration for Mineral Materials (Salable Minerals) on Public Lands; 2013.

The following summarizes details of the approval. The project description and site-specific mitigation measures are found in the EA, WY-070-EA14-198.

County	Feature	TWN	RNG	Sec	Subdivision	Acres
Campbell	Campbell County Road & Bridge Department’s Davis Clinker (“Scoria”) Mine	56 N.	72 W.	34	SW	12.0

Limitations. Approval of this project is dependent on compliance with the attached Special and Standard Stipulations and the approved Campbell County Mine and Reclamation Plan; in the event there is a conflict in between these two, BLM will apply the measure more favorable for successful reclamation as determined by the scientific community and BLM specialists.

THE FINDING OF NO SIGNIFICANT IMPACT. Analysis in the EA, WY-070-EA14-198, found the project comports to findings that this type of proposal has no significant impacts on the human environment or that any significant impacts received thorough analyses in supporting NEPA analyses; see the above EA. BLM incorporates here by reference the FONSI’s, decision records, and records of decision from those analyses named in the EA. An FONSI is required.

COMMENT OR NEW INFORMATION SUMMARY. Public scoping for FUPs is not required by 43 CFR 3600, although BLM will post the decision to its website.

DECISION RATIONALE. The BLM approves the project for the following reasons:

1. BLM and Campbell County added design features and mitigation measures which reduced environmental impacts while meeting the BLM's need:
 - a. BLM approves the FUP as submitted by Campbell County and modified by BLM and Campbell County to remove 300,000 CY of scoria from a total of 12 acres of new disturbance on BLM-administered mineral lands. This approval is contingent upon compliance with other conditions of approval and reclamation;
 - b. To reduce impacts of elevated noise levels from mining and crushing of scoria on nesting GSG, no scoria mining or crushing shall occur between 15 March and 30 June for the life of the project; and,
 - c. To reduce impacts of elevated noise levels from mining and crushing of scoria on nesting raptors, no scoria mining or crushing shall occur between 1 February and 31 July, annually, prior to a nesting survey for the current breeding season, for the life of the project.
 - I. Surveys shall be conducted by a biologist following BLM protocol within 0.5 miles of the project. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to commencement of activities. If an active raptor nest is documented within 0.5 miles of the project, no scoria mining or crushing shall commence until all young have fledged.
 - II. If an undocumented raptor nest is located during project construction or operation, the Buffalo Field Office (307-684-1100) shall be notified within 24 hours.
2. The approved project will not result in any undue or unnecessary environmental degradation and complies with 43 CFR 3604, Free Use of Mineral Materials.
3. The approved project will help meet the nation's mineral materials needs.
4. The approved project will help ensure continued public health and safety by meeting needs for local county road maintenance.
5. The approved project will help stimulate local economies by maintaining workforce stability.
6. The Operator committed to:
 - a. Comply with all applicable federal, state, and local laws and regulations.
 - b. Reclaim the mine to the standards in the WY BLM Reclamation Policy found in Table C-1 to the EA, WY-070-EA14-198.
7. The Operator certified it has posted an acceptable bond.
8. This project is not located in or near, nor will it affect, a floodplain, wetland, or riparian area.
9. The project is clearly lacking in wilderness characteristics as it lacks federal surface.
10. BLM reviewed the 12 extraordinary circumstances and none apply, 43 CFR 46.215.

ADMINISTRATIVE APPEAL. This decision is subject to administrative review in accordance with 43 CFR 3601.80. Request for administrative review of this decision must include information required under 43 CFR 4 and is appealed to the Interior Board of Land Appeals, as provided in 43 CFR 3601.80 and 43 CFR 4. A party adversely affected by a decision of the authorized officer or State Director made pursuant to subpart 43 CFR 3600, et. al., has the right of appeal to the Interior Board of Land Appeals, Office of Hearings and Appeals, pursuant to 43 CFR 4 and 43 CFR 1840.

Field Manager: /s/ Duane W. Spencer

Date: 7/11/14

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)
BLM ENVIRONMENTAL ASSESSMENT (EA), WY-070-EA14-198
Campbell County Road & Bridge Department (Campbell County)
Davis Clinker ("Scoria") Mine, WYW-168448
Bureau of Land Management, Buffalo Field Office, Wyoming**

Based on the analysis of the potential environmental impacts of the proposed action in the attached environmental assessment, I have determined that NO significant impacts are expected and, therefore, an environmental impact statement is not required.

_____/s/ Duane W. Spencer_____
Field Manager

Date: _____7/11/14_____

**BLM ENVIRONMENTAL ASSESSMENT (EA), WY-070-EA14-198
Campbell County Road & Bridge Department (Campbell County)
Davis Clinker (“Scoria”) Mine, WYW-168448
Bureau of Land Management, Buffalo Field Office, Wyoming**

1. INTRODUCTION

1.1. Background

OFFICE: BLM, Buffalo Field Office (BFO), 1425 Fort St., Buffalo, WY, 82834.

TRACKING NUMBER: WY-070-EA14-198.

BLM CASEFILE NO.: WYW-168448.

TITLE OF PROPOSED ACTION: New Free Use Permit (FUP) for Campbell County Road & Bridge Department’s (Campbell County) new Davis Clinker (“Scoria”) Mine.

PROPOSED ACTION: Mine and remove 300,000 cubic yards (CY) clinker (“scoria”) over 10 years’ time from approximately 12 acres of private surface estate with all BLM-administered mineral estate.

LEGAL DESCRIPTION:

County	Feature	TWN	RNG	Sec	Subdivision	Acres
Campbell	Campbell County Road & Bridge Department’s Davis Clinker (“Scoria”) Mine	56 N.	72 W.	34	SW	12.0

APPLICANT:

Campbell County Road & Bridge Department (Campbell County), 1704 4-J Road, Gillette, WY, 82718.

Permit Application and Qualified Permittees

Campbell County submitted to Bureau of Land Management (BLM) Buffalo Field Office (BFO) on February 26, 2014, a Free Use Application and Permit for Vegetative or Mineral Material (FUP) (BLM Form 5510-1). Mineral Materials are also called Salable Minerals. This permit allows the proponent to utilize federal-owned Mineral Materials (such as sand, gravel, clinker, etc.) with no royalty payment due. Proponents that qualify for free-use of federal Mineral Materials include municipalities (such as cities, counties, etc.), or qualified non-profit organizations.

Site Location and Access

The proposed mine site is approximately 36 miles north of Gillette, Wyoming, and US Interstate 90. The main access road leading to the site, an unnamed ranch road (heading southeasterly), comes directly off the junction of Elk Creek Road (County Road [CR] 33) (heading east-west) with Collins Road (CR 23) (heading south)/Hart Road (CR 47) (heading north) approximately 6 miles west Wyoming State Highway 59. A secondary, also unnamed, ranch road (heading east-west), coming off the main access road approximately 0.75 miles from the CR 33-CR 23/47 junction, leads directly to the proposed mine site area, approximately 0.3 miles from the main ranch road. A relatively short (0.10-0.15 mile) access road will need to be built from the secondary ranch road to reach all areas within the mine site. The secondary ranch road will need to be improved to handle haul trucks. This improvement will include the

installation of a culvert where this road crosses a small, unnamed drainage. All roads built or improved as part of the proposed action would be included in the 12 acres of total proposed surface disturbance.

1.2. Need for the Proposal

BLM’s need for the proposal is to fulfill the goals, objectives, and management actions of the 1985 Buffalo Resource Management Plan (RMP), and Revisions (2001, 2003, and 2011). RMP Management Goal MM-8: “The majority of resource area lands, including federally administered surface, minerals, and split estate, are available for mineral exploration and development.” Mineral Materials activities are prohibited in the Fortification Creek, Gardner Mountain, and North Fork Wildlife Study Areas (p. 16 of the 1985 Record of Decision (ROD)). Supported Management Goals from the 2001 Revision include: salable minerals (ROD p. 13); soil resources, including preventing erosion (ROD p. 31); threatened, endangered, and candidate species, and their critical habitats (ROD p. 31-33); vegetation resources (ROD pp. 33-34); and, watershed and wildlife habitat (ROD pp. 35-39). Supported Management Actions from the 2003 Revision focus on: minimizing surface disturbances that promote invasive species; providing adequate reclamation; and, providing for wildlife conservation (2003 ROD, pp. A-19 to A-40).

1.3. Decision to be Made

The BLM will decide whether or not to approve Campbell County’s proposed FUP and Davis Clinker (“Scoria”) Pit project; and if so, under what terms and conditions.

1.4. Scoping and Issues

BLM internally scoped Campbell County’s proposal, along with receiving inputs from the landowner, Campbell County, and the Wyoming State Historical Preservation Office (SHPO). BLM considered the following mandatory issues, and either they do not occur, or will not be adversely affected, in/near the project area:

Environmental justice	Prime or unique farmlands	Flood plains
Hazardous or solid wastes	Invasive, non-native species	Livestock grazing
Native American religious concerns	Noxious weeds	Recreation
Traditional Cultural Properties	Visual resource management	Wetlands and riparian zones
Wild and Scenic Rivers	Wilderness values	Areas of Critical Environmental Concern (ACECs)
Water quality & prime / sole source of drinking water		

2. PROPOSED PROJECT AND ALTERNATIVES

2.1. Alternative A – No Action

The No Action Alternative is that BLM will not issue a Mineral Material FUP for the federally-owned scoria deposit at the Davis Scoria Mine project area. BLM’s selection of this alternative would require the applicant to either use other sources for scoria, or re-submit an application that complies with law, regulations, and the reasonable measures found in the Buffalo RMP. BLM will need to review and provide comments on an application for a different site on federally-owned minerals and/or BLM surface lands, or a resubmission of this application.

2.2. Conformance of Alternative A with Buffalo Resource Management Plan (RMP)

Alternative A (denying approval) might be in conformance with the terms and the conditions of the 1985

Buffalo RMP, and Revisions (approved 2001, 2003, and 2011), and 43 Code of Federal Regulations (CFR) 3600, if unacceptable impacts to resources (including Salable Minerals resources) would occur from the activities associated with this project. Denial of this project must comply with all applicable state and federal laws and regulations.

2.3. Alternative B – Proposed Action (Proposal)

The Proposed Action involves Campbell County's mining and removal of up to 300,000 cubic yards (CY) of clinker (locally called "scoria") over 10 years' time through the issuance of a FUP for Mineral Materials for a new open-pit mine on private surface/BLM-administered federal mineral lands. The proposed total mine area is 12 acres. The surface of nearly the entire 12 acres would eventually be disturbed. Mining is proposed to encompass 10 acres, with the remaining 2 acres for equipment staging areas, roads, and to house stockpiles of topsoil and prepared scoria (see Figures A-1 and A-2). Campbell County will use the scoria for county road surfacing to ensure their safe use year-round for residents, workers, and other travelers. Campbell County would need a new approved FUP for this mine once they have removed the total permitted amount of scoria, and/or the 10 permitted years elapse. Mine reclamation is not anticipated in the 10-year term of this permit. The last FUP before the mine is exhausted will outline the reclamation timeframe and procedures. As this proposed mine site is on private surface lands, reclamation details are according to the Wyoming Department of Environmental Quality (WDEQ) Land Quality Division (LQD), and the surface owner's wishes. This mine will be permitted under WDEQ LQD Permit to Mine #348C.

Mining Activities

Topsoil Removal and Storage. Before mining begins, Campbell County will remove the topsoil covering the scoria. Topsoil at the site varies from 0 to 18 inches. BLM and Campbell County estimate that there is little to no overburden atop the scoria where mining is to occur. Campbell County will use dozers to remove and stockpile the topsoil.

Scoria Mining and Processing. Dozers will be used to remove the scoria and stockpile it for crushing. Blasting is not required at this site. The stockpiled material (the "surge" pile) will then be fed via front-end loaders into the processing plant for crushing and screening. The processing plant will send the material to a primary crusher (a jaw crusher), which will crush the material to a minimum size of 5 inches in diameter. The crushed material is then sent to the screening plant. The desired size material (2 inches in diameter and less) will fall through the screen. This material will then be moved via stacking conveyor to the prepared product stockpile. The oversize material (greater than 5 inches in diameter) will be sent through a secondary crusher, then back to the screen. This process will repeat until all the material is all of the desired size. Any large pieces that cannot be crushed will be set aside as unusable material, and will be placed back into the pit post-mining. The processing plant will run via a portable generator. Dump trucks will haul the prepared scoria off-site, usually for immediate use.

The working "floor" of this open-pit mine (a sub-horizontal surface achieved after a given excavation to a certain depth) will be at about 15 feet below the ground surface. This depth is estimated to be the basal depth of the scoria deposit. Prior to reaching that depth, the mining and processing equipment will sit atop exposed scoria. The processing plant (crushing and screening equipment) is portable, and will sit on the mine floor (except during the first excavation), thus the noise from these operations will be muffled to a great degree. No permanent structures will be built on site. The mine floor will expand over time, as mining progresses, and the portable processing plant will move over time as the particular "face" being mined will be adjusted over time. Campbell County anticipates an average annual production of 30,000 CY, although the actual amount produced in a given year may be greater or lesser

than this, depending upon need.

Occupancy of Site. Mine operations will include topsoil removal/stockpiling, scoria mining, scoria processing, scoria stockpiling, moving the processing plant, and transporting processed scoria off-site. Operations will occur over an average total of 5 to 25 5-day weeks per year. The mine site will be unoccupied except during the above activities. Activities are likely to mainly occur between 6 am to 6 pm, Monday through Friday. Transport of processed scoria off-site will occur sporadically throughout the year, based upon need.

Noise and Dust Control. There will be dust and noise from mining and transport. Water for dust suppression on the mining area, staging area, and roads will be obtained from private or municipal sources, if needed. This water will be transported in and applied using water tanker trucks. The WDEQ Air Quality Division (AQD) has already permitted the activities proposed for this operation under an Air Quality Permit. Exhaust mufflers on all vehicles and generators will reduce project noise. As mining progresses, the depth of the scoria pit will channel noise upward.

Prevention of Erosion and Siltation. Campbell County has a Stormwater Permit and Pollution Prevention Plan in place. Campbell County will control surface runoff by channeling (V-shaped ditches) and/or berming (berms) to direct drainages to desired locations. Temporary vegetation, such as seeding, can reduce or eliminate erosion from stockpiles, berms, and any area threatened by erosional runoff. Other erosion controls that may be used are erosion logs, and silt fencing.

Handling of Toxic, Hazardous, Acid-Generating Substances. No toxic or hazardous materials will be used, or are expected to be generated, during the timeframe of this proposed FUP. All waste generated at this site, including human waste, will be disposed of properly at an off-site designated location. In the event of a spill, or the uncovering of some toxic or acid-generating substance, it will be handled using proper procedures, and all necessary agencies will be advised of the situation. Any and all waste formed in the mine area will be removed and disposed of properly.

Handling of Petroleum Products. All petroleum products (such as diesel fuel, motor oil, hydraulic fluid, brake fluid, etc.) will be kept in a protected area, to eliminate the possibility of groundwater contamination. Most of these products will be stored in containers, and the fueling area will be protected. All oil, lubricant, and fuel containers, as well as containers holding used oil and lubricants, will be stored in containers or a plastic-lined spill containment structure. Campbell County has a Spill Prevention and Pollution Prevention Plan in place.

Physical Safety of Site. Campbell County will berm all highwalls and deep excavations to help keep humans and wildlife from falling into them. A sign relating agency and contact person information will be erected at the mine entrance. Signage may be erected along the public roadway (junction of CR 33-CR 23/47) providing warnings that truck traffic will occur along those roads.

Weeds/Undesired Vegetation. There are no known concentrations of designated or prohibited noxious weeds on lands at the proposed mine site. Campbell County will strive to prevent the spread and/or serious infestation of such vegetation in the mine area through the following practices:

- The minimum amount of surface needed will be disturbed at any time.
- Surface disturbance across the proposed mine site will occur in stages.
- A mixture of quick-growing grasses will be broadcast on all topsoil stockpiles, and select disturbed surface areas, to limit the potential for undesired vegetation infestations.
- Grazing deferrals, selective fencing, and other practices, will be used to limit grazing by domestic

- animals on disturbed (and reseeded) lands, if needed.
- Should undesired vegetation take hold, Campbell County will consult with Campbell County Weed and Pest Agency for suitable control practices.
 - All applications of chemical herbicides will be performed by licensed applicators.

Cultural and Paleontological Resources Protection Plan. Campbell County will report any unanticipated discoveries or findings of any cultural or paleontological resources to the Wyoming State Historic Preservation Office (SHPO) or the Wyoming State Geological Survey (WSGS), respectively. Campbell County will protect any sites of discovery from further disturbance, and consult with SHPO or WSGS to ensure that the resource(s) are properly evaluated and mitigated. These actions will occur before any mine activities in the site(s) of discovery resume.

Reclamation Activities

Table C-1 is provided as reference information, and lists the reclamation requirements of Wyoming BLM.

Timing of Reclamation. Reclamation may occur in those areas of the mine site where the scoria has been exhausted, or are no longer needed. However, just as likely, reclamation may not occur until the mine is entirely exhausted, as it is not a large site; the decision will be made closer to that time.

Backfilling, Recontouring, Grading, and Topsoil Redistribution. The post-mining pit slopes will be contoured to a 3:1 slope, or less, using a dozer. The mine floor will be finish graded to establish a uniform and smooth condition, as needed for reseeded. Once the backfilling, re-contouring, and grading have been completed satisfactorily, the topsoil will be re-spread via a scraper in as even and uniform a fashion as possible. All unusable scoria (fines, low quality material, larger pieces, etc.) will be placed back in the pit prior to re-contouring. Any uncrushable boulders may be placed in the re-contoured pit, or along its' edges, in small groupings at irregular intervals to approximate a natural setting.

Prevention of Erosion and Siltation. Similar practices as those outlined for use in controlling/preventing erosion and siltation during mining activities may also be used during reclamation activities. These practices are especially important if some time elapses between backfilling, re-contouring, grading, and/or topsoil replacement and seeding. Campbell County will use these practices as needed, until WDEQ LQD determines the reclamation to be adequate.

Seeding. After completing topsoil replacement, seeding will proceed in spring or fall, depending on anticipated precipitation and weather. No trees or shrubs are planned to be seeded/planted at this site. Prior to seeding, the seedbed will be prepared using tillage via a disc, harrow, or other similar equipment. Seeding will be accomplished using a drill seeder. The seed mixture, and application rate (in pounds live seed (PLS) per acre), to be used at this location will be determined by WDEQ LQD and the surface owner.

Protection of Newly-Seeded Areas. Areas newly-seeded should receive protection from grazing through either grazing deferrals or fencing. These areas will be protected in this manner for a minimum of 2 growing seasons, or when the WDEQ LQD and the surface owner finds the re-vegetation acceptable.

Water Use. Water will be used during reclamation primarily as a dust suppressant. A water truck will be used to apply water to the access road, stockpiles/staging area, and/or mined pit, as needed. Water will also be used as a dust suppressant during backfilling, recontouring, grading, topsoil redistribution, and

seeding, if needed.

2.4. Conformance of Alternative B with Buffalo Resource Management Plan (RMP)

Alternative B (the proposed activities) conforms to the terms and the conditions of the 1985 Buffalo RMP, and Revisions (approved 2001, 2003, and 2011), and 43 CFR 3600. All activities associated with this project, should it be approved, must comply with all applicable state and federal laws.

3. AFFECTED ENVIRONMENT

The climate is semi-arid, receiving approximately 10 inches of precipitation annually. The elevation of the proposed mine site is about 4,000 feet above sea level. There are no toxic materials or significant drainages present in the area that would be affected by the mining operation. The area is stable and not susceptible to erosional damage. No flooding problems exist in the area. Past and existing land uses in the area of the proposal include ranching, livestock and wildlife grazing, scoria recovery, and oil/gas exploration and development. Post-reclamation land uses in/near the proposed project site will consist of these same activities. Surface disturbances (scoria recovery) have occurred, and are occurring, on other parcels to the north, west, and south of this proposed site. The mine site is on top of a low scoria hill, to the south of somewhat higher scoria hills, and around a deep bend from the nearest residents. The access (ranch) roads are the only existing surface disturbances at/near the proposed mine site.

3.1. Air Quality and Noise

BLM incorporates by reference here the air quality analysis from the adjacent northern Campbell County, Clark 1 Environmental Assessment (EA), WY-070-EA14-045, Section 3.1. Presently, this analysis area's occasional road traffic from ranching and mineral operations creates a light noise signature, similar to that expected from this proposal. The closest residents are the surface owners and other ranchers approximately 1-1.25 miles northeast of the site. The topography means the mine will be out of site from these residents. Sounds from the mine area will also be muffled due to the topography.

3.2. Soils, Vegetation, and Invasive Species

The proposed scoria mine is in an area characterized by low scoria hills/knobs and ridges surrounding the proposed mine site, with more rolling hills to the west covered with sagebrush grasslands. Plants observed in the surrounding area include Wyoming big sagebrush, native grasses, perennial forbs, annual grasses, annual forbs, and lichen. The draws are dominated by native grasses with mixed shrubs. Small stands of ponderosa pine occur on hills and ridges near the site.

3.3. Water Resources

The project area drains via the Corral Creek, which joins North Fork of Elk Creek, then flows to Little Powder River. Corral Creek's headwater draws are 0.25-0.5 miles from the proposed mine site.

3.4. Wildlife

BLM performed raptor and greater sage-grouse (GSG) surveys during the recommended survey periods, and habitat assessment during the on-site inspection. No formal surveys were conducted for any other species. Other resources utilized to determine known existing wildlife resources in the area were wildlife databases compiled and managed by BLM BFO wildlife Biologists, Wyoming Game and Fish Department (WGFD) big game and Greater Sage-Grouse (GSG) maps, and the Wyoming Natural Diversity Database (WYNDD).

The project area is outside of the Core Area and Connectivity Areas for GSG conservation (as outlined in Wyoming State Executive Order 2011-5, "Greater Sage-Grouse core area protection," 2011). No leks occur within 2 miles of the proposed mine; however, marginal nesting and brood-rearing habitat is present near the pit, although topography in the area may influence occupancy.

Big game utilize the area in the vicinity of the project location. The project area contains yearlong range for mule deer. Although the WGFD has not identified any seasonal range for pronghorn, they were noted in the area during the spring 2014 sight visit. Yearlong use is when a population of animals makes general use of suitable documented habitat sites within the range on a year round basis. Animals may leave the area under severe conditions.

Migratory birds are likely to nest within the vicinity of the proposed mine. Habitat in the vicinity of the project area is suitable for use by migratory birds that rely on grass and shrubland habitats. Migratory birds that are also BLM-sensitive that may use the area for breeding and nesting include Brewer's sparrow and the sage thrasher. Raptor species expected to use the area for foraging and breeding include American kestrel, golden eagle, red-tailed hawk, great horned owl, Swainson's hawk, short-eared owl, and prairie falcon.

Suitable raptor nesting habitat for ferruginous hawks is present within 0.5 miles of the proposed disturbance. The BLM biologist surveyed the scoria knobs and ridges within 0.25 miles of the pit, and the area has been surveyed or raptors in support of other federal projects. There are no known raptor nests within 0.5 miles of the pit.

Wyoming BLM has prepared a list of sensitive species on which management efforts should be focused towards maintaining habitats under a multiple-use mandate. The authority for the sensitive species policy and guidance comes from the Endangered Species Act of 1973, as amended; Title II of the Sikes Act, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; the U.S. Department of the Interior Manual 235; and, the BLM Manual 6840 "Special Status Species Management." Table B-1 lists BLM sensitive species that may occur in the project area, and a brief description of the habitat requirements for each species.

No listed or proposed Threatened and Endangered (T&E) species, nor critical habitat, occurs in/near the project area.

3.5. Cultural Resources

In accordance with Section 106 of the National Historic Preservation Act, BLM must consider impacts to historic properties, sites that are eligible for, or listed on, the National Register of Historic Places (NHRP). A Class III (intensive) Cultural Resource inventory was performed for Campbell County's proposed Davis Scoria Mine prior to on-the-ground project work (BFO project no. 70140075). This inventory was performed following the Archeology and Historic Preservation, Secretary of the Interior's Standards and Guidelines (48 CFR 190), and the *Wyoming State Historic Preservation Office Format, Guidelines, and Standards for Class II and III Reports* (2012). The following cultural resources are located in or near the project area:

Site Number	Site Type	NRHP Eligibility
48CA7195	Historic Site	Not Eligible

3.6. Paleontological Resources

The project area is mapped as occurring in the Fort Union Formation, which has a Potential Fossil Yield Classification of 2-3, or low to moderate. Known fossils in the general area are marine invertebrates, such as brachiopods and corals.

3.7. Economics

The present and projected demand for scoria is moderate in the region and it is used primarily for road construction. Numerous potentially mineable scoria deposits occur in Campbell County.

4. ENVIRONMENTAL EFFECTS

4.1. Alternative A – No Action Alternative

Selection of the No Action Alternative would result in no adverse impacts occurring in the area of the proposed mine. All potential impacts to resources (including Salable Minerals resources) within/near the mine site will be avoided by selecting this alternative.

4.2. Alternative B – Proposed Action (Proposal)

If the Proposed Action is approved, the resulting adverse impacts would largely be the temporary loss of vegetation from disturbed areas, and the decrease near the mine site in air and sound quality during mining, processing, and transporting activities. Although vegetation is temporarily disturbed, the site will be re-seeded during reclamation activities and available again for livestock and wildlife forage relatively soon after the mine has been exhausted of material. Reductions in air and sound quality will not be significant, as much of the proposed mine area is out of the line of sight of the nearest roads and residences. In addition, the main activities that will affect air and sound quality (mining and processing) will occur only periodically, and for a relatively short period of time likely only once or twice per year. Although impacts to resources are expected from this project, BLM BFO has made a commitment in the Buffalo RMP to dispose of Salable Minerals (Mineral Materials) in the planning area (includes Campbell County). All impacts to other resources (other than Salable Minerals) from this project will be eliminated, mitigated, or negligible. Short-term use of the site and eventual long-term productivity will not be affected as a result of approving the mining of the scoria deposit.

4.2.1. Air Quality and Noise

The mine will have the direct and indirect effect of making minor, periodic, almost immeasurable increases to the ambient dust in the Campbell County environment. The prevailing winds blow away from the nearest ranch houses, so it's likely that little, if any, dust from the Davis Scoria Mine would reach these ranches. Mine ambient noises will be greatest in the early years of the mine: The secondary ranch road will be improved, the short access road between that ranch road and the site is constructed, vegetation is removed from the mine site, topsoil from the site is salvaged and stockpiled, and mining and processing begins. These levels will average at a lower level over the remainder of its' productive life: Vegetation and topsoil removal will not occur again, mining and processing will occur only periodically (usually up to only once or twice per year) and each occurrence will be of relatively short duration (up to 3 weeks), and the increasing depth of the proposed mine will serve to muffle noise and settle dust. The nearest ranch houses are not in line-of-site of the mine. The undulating terrain and deep, curbed bend between the mine and these ranches will also abate mine noise at the ranch houses. The nearest roads (CR 23, 33, and 47), all within 1 mile of the mine site, will also not receive significantly decreased air and sound quality. There are a number of scoria hills between the mine site and these roads, serving to muffle noise and settle dust before reaching these roads.

4.2.2. Soils, Vegetation, and Invasive Species

Vegetation and soils in the mine site will receive direct and indirect impacts from this open-pit (surface) mine. Stripping the vegetation exposes the soil, subsoil, or bare rock to erosive forces. Stripping the topsoil can result in its' lower productivity for a number of years. However, Campbell County's mine design will reserve the topsoil in a manner that minimizes damage to the soil nutrients and biota. The seasonal vegetation at the site will be destroyed – however, when the topsoil is re-spread over the site, the seeds imbedded in the topsoil are made available to assist mine reclamation. Campbell County's mine design will minimize erosion, and involves monitoring to prompt corrective actions in the event erosion begins to occur. Campbell County has a track record of minimizing the spread of invasive species in and adjacent to their projects, so BLM anticipates minimal direct and indirect effects to spreading weeds from this proposal.

4.2.3. Water Resources

Campbell County's Davis Scoria Mine is expected to have little to negligible direct and indirect effects on Corral Creek. The design features of the mine, as well as routine preventative measures Campbell County employs, are expected to minimize water erosion. The deepest excavation depth of the mine is anticipated to be just 15 feet below the ground surface; this depth is above the water table. Thus, the proposal should have no direct and indirect effect on the area's ground water.

4.2.4. Wildlife

Big Game

Mule deer and pronghorn were noted within the proposed project area. Big game may be displaced from the project area during disruptive activities such as mining and crushing/processing of scoria. A study in central Wyoming reported that mineral drilling activities displaced mule deer by more than 0.5 miles (Hiatt and Baker 1981). A multi-year study on the Pinedale Anticline suggests not only do mule deer avoid mineral activities, but after three years of drilling activity the deer have not become accustomed to the disturbance (Madson 2005). Mule deer are more sensitive to operation and maintenance activities than pronghorn, and, as the Pinedale Anticline study suggests, mule deer do not readily habituate. A study in North Dakota stated "Although the population (mule deer) had over seven years to habituate to oil and gas activities, avoidance of roads and facilities was determined to be long term and chronic" (Lustig 2003). Deer have even been documented to avoid dirt roads that were used only by 4-wheel drive vehicles, trail bikes, and hikers (Jalkotzy et al. 1997).

Migratory Birds and Raptors

Migratory birds and raptors may avoid nesting in proximity of the project, in order to avoid impacts from noise, dust, and human activities. Drilling and construction noise can be troublesome for songbirds by interfering with the males' ability to attract mates and defend territory, and the ability to recognize calls from conspecifics (others of the same species) (BLM 2003). Noise from mining and crushing is expected to cause similar impacts. This is during the breeding season for most migratory birds that inhabit Wyoming. It is likely that those birds currently nesting within the vicinity of the pit may become acclimated to the level of disturbance. Birds that have not previously used the area for nesting may be discouraged from utilizing the habitat and avoid the area.

Twelve acres of vegetation would be removed in order to access the federal minerals, resulting in at least direct migratory bird habitat removal. Direct mortality of a bird or destruction of an active nest due to construction activities could result in a "take" as defined (and prohibited) by the Migratory Bird Treaty Act (MBTA), a nondiscretionary statute, and in turn a violation of the law. See also, FLPMA, Sec. 302(b). Nesting of Brewer's sparrows (a BLM Special Status Species) typically occurs mid-May to mid-

July. Some young fledge in late July. Sage thrashers (a BLM Sensitive Species) may lay a second clutch of eggs as late as mid-July. Lark sparrows in northern latitudes lay eggs from early May to mid-July (information on breeding habits available on the Birds of North America Online website: <http://bna.birds.cornell.edu/bna>). Several species of birds, listed above, are likely to still have eggs or nestlings into July. BLM biologists have observed active Brewer's sparrow nests containing eggs during the last week of June.

The USFWS recommends that timing of activities be addressed in the project planning stages for those projects in which migratory birds may be present, in order to prevent the removal or destruction of an active nest which could result in an MBTA violation.

To reduce the likelihood of a "take" under the MBTA, the BLM biologist recommends that vegetation removal occur outside of the breeding season for the greatest quantity of BLM sensitive passerines (May 1- July 31) where suitable nesting habitat for sagebrush obligates is present. This restriction would apply to habitat removal, unless a nest search (within approximately 10 days of surface disturbance planned May 1-July 31) is completed. If surveys will be conducted, the operator will coordinate with BLM biologists to determine protocol. The nest search will consist of areas where vegetation will be removed or destroyed.

Nests initiated after the first week in July may be destroyed by construction after August 1st. A timing limitation does nothing to mitigate loss and fragmentation of habitat. Suitability of the project area for migratory birds will be negatively affected due to habitat loss and fragmentation and proximity of human activities associated with mining.

Greater Sage-Grouse

The project is consistent with existing land uses and is consolidated in an area where those land uses are already occurring. The project will not likely alter any existing migration corridors used by sage-grouse that use nesting habitat to the west of the project.

Research shows that hens are sensitive to noise from oil and gas drilling operations when selecting a location for nesting, and they may therefore be sensitive to noise from other activities such as mining and crushing of gravel (Holloran et al. 2005, Holloran et al. 2007, Aldridge and Boyce 2007, Walker et al. 2007, Doherty et al. 2008, WGF 2009). Sage-grouse are likely to continue to avoid the area.

BLM Sensitive Species

Table 1 lists BLM sensitive species that occur within the Buffalo Field Office, a brief description of their habitat, whether the species is likely to occur in the project area, effects of the proposed project on the species, and the rationale for that determination.

4.2.5. Cultural Resources

No historic properties will be impacted by the proposed project. Following the 2006 *State Protocol Between the Wyoming Bureau of Land Management State Director and The Wyoming State Historic Preservation Officer*, Section VI(A)(1), BLM electronically notified the Wyoming State Historic Preservation Officer (SHPO) on May 27, 2014, that no historic properties exist within the area of potential effect (APE). If any cultural values (sites, features or artifacts) are observed during operation, they will be left intact and the Buffalo Field Manager notified. If human remains are noted, the procedures described in Appendix L of the PRB FEIS must be followed. Further discovery procedures are explained in Standard COA (General)(A)(1).

4.2.6. Paleontological Resources

None of the marine invertebrates (such as brachiopods and corals) that may occur in the rocks in the mine area are of special significance. The BLM thus anticipates the proposal will not have any direct or indirect impacts on the area's paleontological resources. Therefore, no residual effects to paleontological resources are expected, and no mitigation or avoidance is imposed.

4.2.7. Economics

There will be no adverse direct or indirect effects on the local economy from permitting the proposed 12-acre mining operation – there will, however, be moderate positive effects. Existing sources of manpower and equipment are currently employed by Campbell County, and will continue to be employed as a result of approval of this project. Campbell County will experience reduced transportation time and costs for county road projects in the northern part of the county, as scoria can be hauled from a closer source than is currently available. In addition, there are numerous positive benefits as Campbell County will utilize the scoria to maintain the year-round usability of county roads: workers and ranchers can perform their necessary operations; tourists can travel these roads; government workers can perform their necessary field work; and, residents can reach their places of work, or shop, and get back home safely.

5. MITIGATION AND MONITORING, AND RESIDUAL IMPACTS

5.1. Mitigation

A timing limitation on scoria mining and crushing operations, which produces elevated noises, will be implemented to reduce potential impacts to nesting GSG hens. A timing limitation does not mitigate affects to wintering GSG that may use the area, however. Suitability of the project area for GSG will be negatively affected due to proximity of activities to wintering habitat adjacent to the mine.

- 1. To reduce impacts of elevated noise levels from mining and crushing of scoria on nesting GSG, no scoria mining or crushing shall occur between 15 March and 30 June for the life of the project.**

Impacts to nesting raptors will be mitigated by implementing a seasonal timing restriction on surface disturbing activities, including mining and crushing scoria. Timing limitations during the nesting season protect nesting raptors from surface disturbing activities. However, loading and hauling of scoria can still occur during the breeding season and may cause raptors to avoid nesting in the area.

- 2. To reduce impacts of elevated noise levels from mining and crushing of scoria on nesting raptors, no scoria mining or crushing shall occur between 1 February and 31 July, annually, prior to a nesting survey for the current breeding season, for the life of the project.**
 - a. Surveys shall be conducted by a biologist following BLM protocol within 0.5 miles of the project. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to commencement of activities. If an active raptor nest is documented within 0.5 miles of the project, no scoria mining or crushing shall commence until all young have fledged.**
 - b. If an undocumented raptor nest is located during project construction or operation, the Buffalo Field Office (307-684-1100) shall be notified within 24 hours.**

No timing restrictions will be applied specifically to protect migratory bird breeding or nesting. However, where GSG timing limitations are applied, nesting migratory birds will also receive protection.

Those migratory bird species and individuals that are still nesting when the GSG timing limitations are over (June 30) may be disturbed by mining activities.

5.2. Monitoring

Monitoring will be conducted by BLM and WDEQ staff. The mine area will be monitored until final reclamation of the area is completed.

5.3. Residual Impacts

Even with a timing limitation, raptors may abandon nests due to alteration in foraging habitats associated with the project. Even with timing limitations on surface disturbing and disruptive activities, ferruginous hawks may be displaced by other activities. Loading and hauling activities that are not prohibited by the timing limitations may degrade habitat quality sufficiently to render the area unsuitable for some raptors. A timing limitation does nothing to mitigate loss and fragmentation of habitat or changes in disease mechanisms. Suitability of the project area for GSG will be negatively affected due to habitat loss and fragmentation and proximity of human activities and noise associated with the project – yet those impacts are within the parameters of the PRB FEIS and ROD.

6. INTERDISCIPLINARY TEAM PREPARERS, AND INTERAGENCY REVIEWERS

This document was prepared by Kerry L. Aggen, Geologist and Project Lead, BLM Buffalo Field Office. Individuals and agencies consulted prior to the issuance of the proposed FUP include:

Name	Agency / Duty	Name	Agency/Duty
Kurt King	WDEQ LQD Sr. Environmental Analyst	Christopher Sheets	BLM Biologist
Ardeth Hahn	BLM Archaeologist	John Kelley	BLM NEPA Coordinator
Kerry Aggen	BLM Geologist, Project Lead		

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Figure A-1. Map showing location and access to Campbell County's proposed Davis Clinker ("Scoria") Mine (WYW-168448). Map provided to BLM by Campbell County.

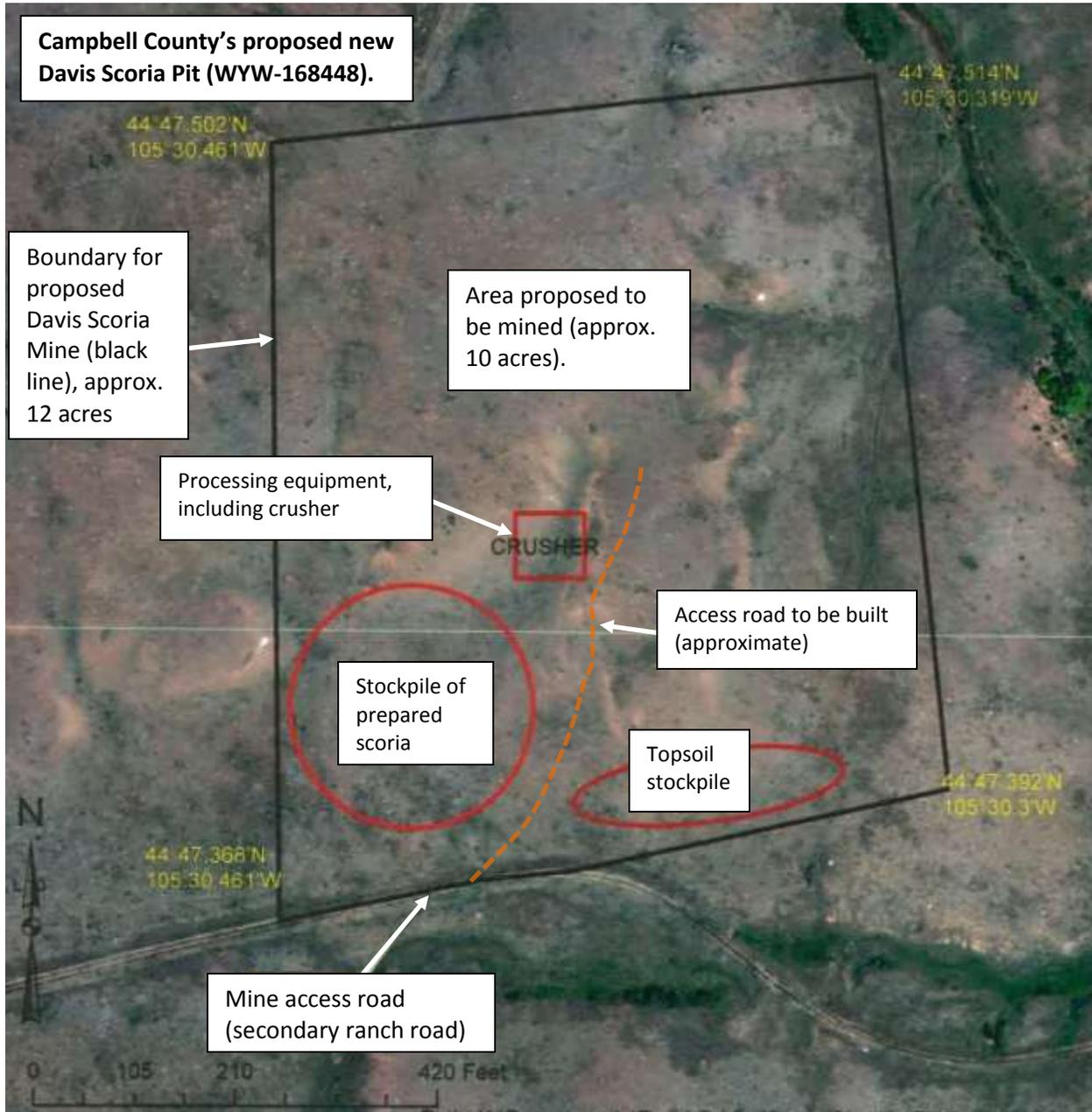


Figure A-2. Panorama showing proposed site and layout of Campbell County's Davis Scoria Mine (WYW-168448). Area proposed to be mined comprises approximately 10 of the 12 acres, and is roughly outlined by light gray dashed line. Area proposed to be used for staging, including housing both the topsoil stockpile and stockpile of prepared scoria comprises approximately 2 acres, and is roughly outlined by light orange dashed line. Much potentially usable scoria occurs in this area, including the site proposed here to be mined by Campbell County, as well as several other potential areas to the east (left, and out of photos), and other areas nearby to the south and west (all out of photos, except part of the scoria hill from which photos were taken). Photos taken looking NW through NNW from slightly higher scoria hill SE of proposed mine site, on April 23, 2014, by Kerry L. Aggen.

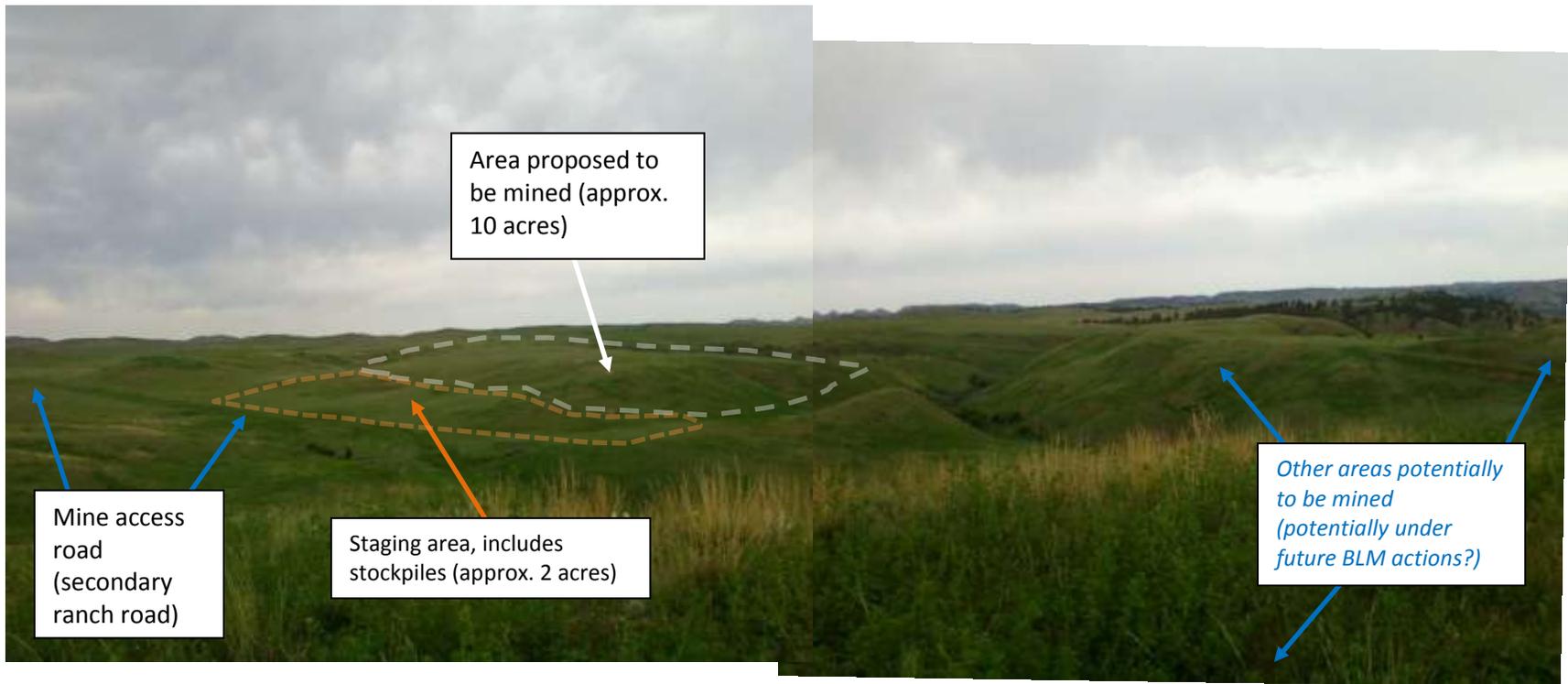


Table B-1. Summary of Special Status (Sensitive) Species, Habitat, and Project Effects Potentially in the Analysis Area.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
<i>Endangered</i>				
Black-footed ferret	Black-tailed prairie dog colonies or complexes > 1,000 acres.	NP	NE	Block Cleared.
Blowout penstemon	Sparsely vegetated, shifting sand dunes.	NP	NE	Habitat not present.
<i>Threatened</i>				
Ute ladies'-tresses orchid	Riparian areas with permanent water.	NP	NE	Habitat not present.
<i>Proposed</i>				
Northern Long-eared Bat	Conifer and deciduous forest, caves and mines.	NP	NE	The project area is outside the species' range, and the species is not expected to occur. Only known to occur in extreme Northeast WY (mainly Crook and Weston counties, very limited in northern Campbell County).
<i>Candidate</i>				
Greater Sage-grouse	Basin-prairie shrub, mountain-foothill shrub.	K	MIIH	Habitat present.
<p>Project Effects: LAA - Likely to Adversely Affect. NE - No Effect. NLAA – May affect, but Not Likely to Adversely Affect individuals or habitat. MIIH - May Impact Individuals or Habitat, but will not likely contribute to a trend towards Federal listing or a loss of viability to the population or species (candidate). WIPH - Will Impact Individuals or Habitat with a consequence that the action may contribute to a trend towards Federal listing or cause a loss of viability to the population or species (candidate).</p> <p>Presence: K - Known, documented observation within project area. S - Habitat Suitable and species suspected to occur within the project area. NS - Habitat suitable, but species is Not Suspected to occur within the project area. NP - Habitat Not Present and species unlikely to occur within the project area.</p>				

Table C-1. Reclamation Requirements, Wyoming BLM.

The following Reclamation Requirements apply to all surface disturbing activities, including BLM initiated activities, and must be addressed in each reclamation plan. These requirements also must be met prior to release of the bond and/or the reclamation liability. Where these Reclamation Requirements differ from other applicable federal, laws, rules, and regulations, those requirements supersede this policy. State and/or local statutes or regulations may also apply.

1. Manage all waste materials:

- a. Segregate, treat, and/or bio-remediate contaminated soil material.
- b. Bury only authorized waste materials on site. Buried material must be covered with a minimum of three feet of suitable material or meet other program standards.
- c. Ensure all waste materials moved off-site are transported to an authorized disposal facility.

2. Ensure subsurface integrity, and eliminate sources of ground and surface water contamination:

- a. Properly plug all drill holes and other subsurface openings (mine shafts, adits, etc.).
- b. Stabilize, properly back fill, cap, and/or restrict from entry all open shafts, underground workings, and other openings.
- c. Control sources of contamination and implement best management practices to protect surface and ground water quality.

3. Re-establish slope stability, surface stability, and desired topographic diversity:

- a. Reconstruct the landscape to the approximate original contour or consistent with the land use plan.
- b. Maximize geomorphic stability and topographic diversity of the reclaimed topography.
- c. Eliminate highwalls, cut slopes, and/or topographic depressions on site, unless otherwise approved.
- d. Minimize sheet and rill erosion on/or adjacent to the reclaimed area. There shall be no evidence of mass wasting, head cutting, large rills or gullies, down cutting in drainages, or overall slope instability on/or adjacent to the reclaimed area.

4. Reconstruct and stabilize water courses and drainage features:

- a. Reconstruct drainage basins and reclaim impoundments to maintain the drainage pattern, profile, and dimension to approximate the natural features found in nearby naturally functioning basins.
- b. Reconstruct and stabilize stream channels, drainages, and impoundments to exhibit similar hydrologic characteristics found in stable naturally functioning systems.

5. Maintain the biological, chemical, and physical integrity of the topsoil and subsoil (where appropriate):

- a. Identify, delineate, and segregate all salvaged topsoil and subsoil based on a site specific soil evaluation, including depth, chemical, and physical characteristics.
- b. Protect all stored soil material from erosion, degradation, and contamination.
- c. Incorporate stored soil material into the disturbed landscape.
- d. Seed soils to be stored beyond one growing season, with desired vegetation.
- e. Identify stockpiles with appropriate signage.

- 6. Prepare site for revegetation:**
 - a. Redistribute soil materials in a manner similar to the original vertical profile.
 - b. Reduce compaction to an appropriate depth (generally below the root zone) prior to redistribution of topsoil, to accommodate desired plant species.
 - c. Provide suitable surface and subsurface physical, chemical, and biological properties to support the long term establishment and viability of the desired plant community.
 - d. Protect seed and seedling establishment (e.g. erosion control matting, mulching, hydro-seeding, surface roughening, fencing, etc.)

- 7. Establish a desired self-perpetuating native plant community:**
 - a. Establish species composition, diversity, structure, and total ground cover appropriate for the desired plant community.
 - b. Enhance critical resource values (e.g. wildlife, range, recreation, etc.), where appropriate, by augmenting plant community composition, diversity, and/or structure.
 - c. Select genetically appropriate and locally adapted native plant materials based on the site characteristics and ecological setting.
 - d. Select non-native plants only as an approved short term and non-persistent alternative to native plant materials. Ensure the non-natives will not hybridize, displace, or offer long-term competition to the endemic plants, and are designed to aid in the re-establishment of native plant communities.

- 8. Reestablish complementary visual composition:**
 - a. Ensure the reclaimed landscape features blend into the adjacent area and conform to the land use plan decisions.
 - b. Ensure the reclaimed landscape does not result in a long term change to the scenic quality of the area.

- 9. Manage Invasive Plants:**
 - a. Assess for invasive plants before initiating surface disturbing activities.
 - b. Develop an invasive plant management plan.
 - c. Control invasive plants utilizing an integrated pest management approach.
 - d. Monitor invasive plant treatments.

- 10. Develop and implement a reclamation monitoring and reporting strategy:**
 - a. Conduct compliance and effectiveness monitoring in accordance with a BLM (or other surface management agency) approved monitoring protocol.
 - b. Evaluate monitoring data for compliance with the reclamation plan.
 - c. Document and report monitoring data and recommend revised reclamation strategies.
 - d. Implement revised reclamation strategies as needed.
 - e. Repeat the process of monitoring, evaluating, documenting/reporting, and implementing, until reclamation goals are achieved.