

**United States Department of the Interior
Bureau of Land Management
Royal Gorge Field Office
3028 E. Main Street
Cañon City, CO 81212**

Environmental Assessment

Mineral Materials Competitive Sale in Fremont County, CO

DOI-BLM-CO-200-2011-0092 EA

December, 2012



TABLE OF CONTENTS

CHAPTER 1 - INTRODUCTION.....	3
1.1 IDENTIFYING INFORMATION.....	3
1.2 INTRODUCTION AND BACKGROUND.....	3
1.3 PURPOSE AND NEED	4
1.4 DECISION TO BE MADE.....	4
1.5 PLAN CONFORMANCE REVIEW.....	5
1.6 SCOPING, PUBLIC INVOLVEMENT AND ISSUES	6
CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES.....	6
2.1 INTRODUCTION.....	6
2.2 ALTERNATIVES ANALYZED IN DETAIL	7
2.2.1 Proposed Action.....	7
2.2.2 No Action Alternative.....	19
2.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL.....	19
CHAPTER 3 - AFFECTED ENVIRONMENT AND EFFECTS	21
3.1 INTRODUCTION.....	21
3.1.1 Interdisciplinary Team Review	21
3.2 PHYSICAL RESOURCES.....	24
3.2.1 AIR QUALITY AND CLIMATE	24
3.2.2 SOILS (includes a finding on standard 1).....	25
3.3 BIOLOGICAL RESOURCES	26
3.3.1 WILDLIFE TERRESTRIAL (includes a finding on standard 3)	26
3.3.2 MIGRATORY BIRDS	27
3.4 HERITAGE RESOURCES AND HUMAN ENVIRONMENT.....	29
3.4.1 VISUAL RESOURCES.....	29
3.4.2 WASTES, HAZARDOUS OR SOLID.....	40
3.5 LAND RESOURCES	41
3.5.1 FOREST MANAGEMENT.....	41
3.6 CUMULATIVE IMPACTS SUMMARY	42
CHAPTER 4 - CONSULTATION AND COORDINATION	43
4.1 LIST OF PREPARERS AND PARTICIPANTS	43
4.2 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED	43
Finding Of No Significant Impact	45
 APPENDICES	
A - STATE OF COLORADO PERMIT #M1977-193 AND AMENDMENTS, BLM APPLICATION	
B - STATE OF COLORADO PERMIT #COR340912 AND ASSOCIATED STORMWATER MANAGEMENT PLAN	
C - STATE OF COLORADO AIR PERMIT #95FR695F	
D - GEOTECHNICAL STABILITY EXHIBIT M-193	
E - T.H.E. AGGREGATE SOURCE DRAINAGE STUDY	
F - VISIBILITY ANALYSIS FOR MINERAL MATERIALS COMPETITIVE SALE IN FREMONT COUNTY, CO	
G – BLM RESPONSES TO PUBLIC COMMENTS ON THE DRAFT EA	

CHAPTER 1 - INTRODUCTION

1.1 IDENTIFYING INFORMATION

CASEFILE/PROJECT NUMBER (optional): COC 074982

PROJECT TITLE: Mineral Materials Competitive Sale in Fremont County, CO

PLANNING UNIT: Arkansas River Subregion #1

LEGAL DESCRIPTION: 6th, T18S, R70W, Sections 30 and 31

APPLICANT: Tezak Heavy Equipment Company, Inc. (dba) T.H.E. Aggregate Source

1.2 INTRODUCTION AND BACKGROUND

This Environmental Assessment (EA) has been prepared by the BLM to analyze the application for a mineral materials disposal on federally managed estate in Fremont County, Colorado.

An application was submitted by T.H.E. Aggregate Source (“Tezak”) to the BLM on June 10, 2011, which proposes development of the BLM managed surface and federal mineral estate located directly west of their privately owned and operated quarry. The original application requested a mineral materials disposal consisting of 51.5-acres of BLM, but the proposed action has subsequently been modified to 78.72-acres, as shown on Figures 1 and 2 (see “Alternatives Considered, but Not Analyzed in Detail” section for further explanation). The requested mineral material disposal contract is for approximately 450,000 tons annually for 10 years, with an option to renew. This development is necessary for the increased mineral material needs of the public to be met both locally and regionally. Per 43 CFR 3600, this proposed disposal is required to be analyzed through the appropriate level of NEPA analysis and handled under a competitive sale process. Although Tezak may not be the successful bidder in this mineral materials sale, their proposed mining and reclamation plan, as well as existing operations, are being analyzed in this EA as they provide a reasonable industry standard approach to mining the proposed BLM parcel.

Quarry operations in this area have been taking place since the early 1970s, with Tezak’s existing quarry being in operation on private surface and mineral estate since 1977 (lying approximately 1.5 miles west of Canon City, Colorado). Although the mine originally began operating in 1977, the mine wasn’t purchased by Tezak until 1993. The original mine was permitted on the private estate by the Colorado Division of Reclamation, Mining and Safety (CDRMS) for 30-acres. The permit boundary has since then been amended to 100-acres in 1997 and again in 2000 to 231-acres, with subsequent permitting processes being implemented by Fremont County. The primary products being produced by the existing mine are construction aggregates of granite type rock. This rock is hard and tough and has widespread use as a construction stone. The processed aggregate is used in various types of construction projects including stream bank protection, landscaping, asphalt and concrete products throughout Colorado.

1.3 PURPOSE AND NEED

The purpose of the action is to make federal mineral materials, located just west of Canon City Colorado, available through a competitive sale process. BLM has a multiple-use mission, set forth in the Federal Land Policy and Management Act of 1976, which mandates that we manage public land resources for a variety of uses. These uses include mining, and more specifically in this case, the disposal of mineral materials. One of BLM's priorities for minerals management in Colorado is to make the mineral materials from public land available for energy development and urban growth, including timely processing of applications for purchase of mineral materials for use in exploration and development of renewable and conventional energy mineral resources and infrastructure and community developments.

Per 30 USC Sec. 1602 (01/03/2012), The Congress declares that it is the continuing policy of the United States to promote an adequate and stable supply of materials necessary to maintain national security, economic well-being and industrial production with appropriate attention to a long-term balance between resource production, energy use, a healthy environment, natural resources conservation, and social needs. The Congress further declares that implementation of this policy requires that the President shall, through the Executive Office of the President, coordinate the responsible departments and agencies to, among other measures, 1) identify materials needs and assist in the pursuit of measures that would assure the availability of materials critical to commerce, the economy, and national security and 2) encourage Federal agencies to facilitate availability and development of domestic resources to meet critical materials needs.

It is BLM policy to make mineral materials available in accordance with the Mineral Materials Act, provided adequate measures are taken to protect public land resources and the environment and that damage to public health and safety is minimized (43 CFR 3601.6). Since disposal of mineral materials is discretionary on the part of BLM, no disposals will be made if it is determined by the Authorized Officer that the aggregate damage to public lands and resources would exceed the public benefits that BLM expects from the proposed disposal.

Based on this regulatory structure, the following actions and alternatives will be analyzed:

1. Proposed Action
2. No Action Alternative

BLM will determine if the proposed project will result in no significant impacts (either because none exist or if they do exist, they can be adequately mitigated) during the EA process. Results and any mitigation developed through this environmental assessment and resulting decision document will be forwarded to CDRMS and Fremont County for inclusion into their permitting processes.

1.4 DECISION TO BE MADE

The BLM will decide whether to approve the proposed "Mineral Materials Competitive Sale in Fremont County, CO" project based on the analysis contained in this EA. This EA will analyze the proposal to develop federal minerals that are adjacent to an existing, and privately owned, sand and gravel operation. The subject parcel consists of approximately 78.72-acres of BLM managed land and minerals and is located in the immediate vicinity of two private quarries that are currently in operation west of Canon City, Colorado.

The BLM may choose to:

- a) accept the project as proposed
- b) accept the project with modifications/mitigation
- c) accept an alternative to the proposed project, or
- d) not authorize the project at this time. The finding associated with this EA may not constitute the final approval for the proposed action.

1.5 PLAN CONFORMANCE REVIEW

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

Name of Plan: Royal Gorge Resource Area, Resource Management Plan (RMP)

Date Approved: May 1996

Decision Number/Page: Decision 1-40/Page 2-1-8; Decision 1-41/Page 2-1-8

Decision Language:

1-40 – Areas will be open to mineral entry and available for mineral materials development administered under existing regulations, limited by closure if necessary and special mitigation will be developed to protect values on a case-by-case basis;

1-41 – Areas will be open to mineral entry and available for mineral materials development under standard mineral operating practices.

In January 1997, the Colorado State Office of the BLM approved the Standards for Public Land Health and amended all RMPs in the State. Standards describe the conditions needed to sustain public land health and apply to all uses of public lands.

Standard 1: Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes.

Standard 2: Riparian systems associated with both running and standing water function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods.

Standard 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential.

Standard 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Standard 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado.

Because standards exist for each of these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in Chapter 3 of this document.

1.6 SCOPING, PUBLIC INVOLVEMENT AND ISSUES

SCOPING: The principal goals of scoping are to allow public participation to identify issues, concerns, and potential impacts that require detailed analysis.

Persons/Public/Agencies Consulted: Public outreach was conducted by the following methods:

- 10/02/2012: BLM hosted a meeting with the Fremont County Commissioners
- 10/04/2012: BLM posted this project on the Royal Gorge Field Office NEPA website
- 10/04/2012: BLM issued a news release to the public for a public comment period (10/04/2012 through 11/08/2012) on the Draft EA. This information was published in the following news forums:
 - Pueblo Chieftain on 10/06/2012
 - Canon Current on 10/09/2012
 - Canon City Daily Record on 10/19/2012 and 11/06/2012
 - Florence Shopper on 10/23/2012
 - 1400 KRLN Radio throughout the daily news briefs
- 10/17/2012: Canon City Daily Record ran the legal ad that BLM purchased
- 11/01/2012: BLM presented a summary of the proposed action for a local school persuasive writing project.
- Ongoing coordination between BLM and CDRMS throughout the process

Issues Identified: Refer to Appendix G for BLM responses to public comments on the Draft EA.

CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

Development of the subject BLM parcel will most likely be under the context of an increase in reserves to an existing operation, rather than a new, startup mine. The proposed action involves mineral materials reserves resulting in an additive mine life of approximately 20-25 years. Current projections for the adjacent, privately owned mine indicate projected reserves resulting in a Life of Mine of approximately 30-35 years out from 2012. For example, if this private mine applicant is the successful bidder, the addition of the BLM reserves will result in an increase of Life of Mine from 2042-2047 to 2067. Operations planned for the subject BLM parcel are anticipated to mirror what is being implemented at the adjacent, privately owned mine that has been in production since 1977 (Photos 1 – 3). Information has been consolidated throughout the coordination process between BLM and the applicant, to include the Mine and Reclamation Plan received from the applicant on April 20, 2012, an onsite inspection conducted by BLM on October 20, 2011, and continued written and verbal correspondence between BLM and the applicant.

The proposed development is located in the “Agricultural, Farming & Ranching, Agricultural Forestry and Industrial Zone District” of Fremont County, as is the existing, adjacent mine (with a small portion of the existing mine residing on an industrial area within the limits of Canon City). Other nearby uses include another private aggregate quarry, a power plant, multiple roads and a highway, a college, a Department of Transportation storage yard, water storage tanks, a landscape materials retail yard, wastewater treatment lagoons and a State prison facility. See Photos 4 and 5.

The proposed action will assist in sustaining employment opportunities, as well as provide indirect revenues to both local and regional communities. As this proposal is considered a mineral materials sale, BLM is required to receive fair market value royalties for the material, which will then contribute to the U.S. Treasury General Fund. To provide an understanding of the local benefits this type of operations will contribute to the local economy, below is a summary of the applicant's company contributions from 2009 to date:

- Wages provided to employees (averaging 52 employees/year): \$9,583,968.05
- Sales tax collected and paid to Fremont County: \$17,834.93
- Sales tax collected and paid to Canon City: \$20,594.00
- Real and personal property tax paid: \$289,262.04
- Equipment licensing paid: \$329,947.03
- Aggregate tonnage sold to Fremont County at a reduced rate: 71,580.70 tons

2.2 ALTERNATIVES ANALYZED IN DETAIL

2.2.1 Proposed Action

General

Mining is proposed to commence in 2012 from the southeastern corner of the proposed BLM Mineral Material contract area with surface leveling and bench development work from the top of existing highwall at boundary line 660' west and 660' north of the southeast corner of the proposed contract area. Leveling for mine benches will proceed from the highwall contact working west towards the west boundary of the proposed BLM Mineral Material contract area. The ten acre area of leveling and bench development will likely take place in two or more stages over the next 1-3 years. The southeastern corner of the proposed contract area is anticipated to be accessed from a roadway developed from the Tezak mine property along the central portion of the active mining zone north of the largest highwall face currently exposed along the western boundary of the property with proposed BLM Mineral Material contract area. Bulldozers and excavators will be used to build access roads and level terrain for production drilling. Conventional hardrock surface mining techniques will be employed using percussion drilling equipment to drill 6" holes for bench development of 40' high and 30' wide for final highwall benches. During the active phase of highwall mining, bench heights of 40' and bench widths of 20' will be used. The larger bench widths for final highwall configuration have been suggested to improve machine access if ever necessary to clean excessive rock fall and maintain storm desired drainage patterns along the toe of the mine benches.

Tezak Heavy Equipment typically schedules a few large production blasts rather than many small production rounds. Tonnage of typical production blasts are about 150,000 tons of granitic material, per shot, meaning that production blasting occurs three to eight times per year. The current blasting schedule and specific state of the art non-electric sequentially delayed blasting initiation system will be continued. Blasting patterns of 15'x15' burden and spacing are typically used and loading factors normally run from .25-.35# explosive per ton rock blasted. There have been no complaints or concerns regarding blasting controls at this site over the past number of years. It is a priority for Tezak to maintain and continue the good operating history regarding blasting noise and vibration control during blasting operations. Each round is planned, loaded, and shot by a licensed blaster. All

production rounds are recorded for noise and ground vibration levels and documented for blast lay out and loading pattern.

Once a sufficient area on top has been leveled/benched, drilling operations will commence from the existing highwall face west to a location suitable for shot size and face development. After blasting, rock will be pushed over the highwall face with a bulldozer or carried and dumped over the face utilizing a front-end loader. Rock is then picked up at the large muckpile developed along the base of the highwall and fed with a front end loader into the crushing and screening system located at the pit floor elevation 5660'. Material will be conveyed to various sized aggregate material stockpiles located at the pit floor/truck loadout area.

Mine Bench Details

Final mine bench dimensions will be 40' high and 30' wide, with a 1% grade along lateral bench reaches to nearest side drainage and 1% grade from outer edge of bench to base of next highest bench run. The 40' high rock bench face will be left at 0.25:1, H:V. No rock berms are planned for placement on the bench, although lateral drainage will be maintained along the near-horizontal (1% grade) bench tops to direct surface flow from storm events to the outer portions of the bench system in proximity to main storm flow drainage channels. Maintenance activities along the bench may involve removal of any material that may accumulate over time along the back of the bench top or small slabs of rock that may become dislodged from the rock face. This work will likely be accomplished using a small track hoe or crane with ample reach to remove loose material while maintaining a safe distance from the bench edge.

The first 10 acres (660'x660') of highwall mining in the proposed contract area will result in an east facing highwall along the west boundary of the proposed contract area and a south facing active highwall that will continue to move northwards in time as mining continues north along the 3000' length of the proposed contract area. At final build-out, there will be at least two locations where highwall intersect at 90 degrees. These areas may be left armored with rock talus to promote control of storm-related water flow. The goal is to limit potential for highwall destabilization due to short-term but potentially high-volume surface storm water flow. Rock placement may be utilized in other locations where storm-related surface flow potentials or unstable bedrock zones may be encountered.

Process and Loadout Operations

Rock crushing, screening, sizing, and stockpiling circuits will not change to any significant degree over time from their present configuration, although the plant may be moved closer to the toe of the highwall system as well as relocated at a lower final elevation, projected to be approximately 5550' at lowest pit elevation. This plant will continue to be fed for the most part by front-end loader muck and carry from the muck pile created along the toe of the highwall by blasting and push off or, alternatively, trucks will be loaded out at the muck pile and will dump directly into a feed hopper. Mining operations including: drilling, blasting, crushing, and truck loading are normally scheduled for 5AM - 9PM five days per week. A continuance of the schedule for Saturday operations may be possible should business conditions warrant.

Stormwater Controls

As part of the 1997 amendment conditions for the privately owned mine, the site was reconfigured to direct storm-related surface run-off areas above and west of the mine site from their former south

flow path towards Tunnel Drive and the Arkansas River, across the pit floor area along the base of the highwall north and east towards a series of storm detention ponds constructed along the eastern portions of the permit boundary. These storm control structures have been in place since late 1997 and have successfully operated to keep surface run-off directed away from residential areas along Tunnel Drive as well as the Cañon City Hydraulic Ditch paralleling the Union Pacific railroad tracks running along the north bank of the Arkansas River. The detention ponds will be maintained as they are to handle storm flows that may enter the pit floor area as well as surface water delivered from undisturbed terrain west and above the mining site. Drainage patterns along the base of highwall system and product stockpile area must be maintained to allow storm-derived surface flows to cross the pit floor unimpeded towards the storm flow channel excavated at the northeast corner of the mine site which feeds the detention ponds. These structures will be maintained and kept operational throughout the life of mine.

This amended acreage and increased life of the mine will not necessitate changes to the storm water control system as it currently operates at the privately owned mine site.

Timetable for Mining and Reclamation Activities

2012	Approval of amended mine acreage and initiation of development work at upper elevation of newly contracted area (currently being proposed), southern 10 acres of newly contracted land (currently being proposed).
2012 – 2017	Highwall mining focused on 10 acre (m/l) area at SE corner of the proposed contract area, 660'x660' on side. Mining will progress east to west to western border of proposed contract area.
2017 - 2037	Highwall mining progressing south to north to northern end of the proposed contract area.
2037 – 2067*	Mining of pit floor to 5,550' elevation. Mining of high wall areas to the north, and the pit floor, may be concurrent depending on business needs and costs. Process fines will be used for planting medium in concert with other soil amendments/additions for re-vegetation of the pit floor areas.

**Note that "life of mine" end of mining date may be subject to a considerable variance regarding final mining date depending upon a number of factors that cannot be accurately estimated at this time, such as production demands, rock quality, new market development potentials, etc.*

Equipment and explosives used in conjunction with the current privately owned mine operations that could also be utilized with the proposed development:

Equipment

<u>General Type</u>	<u>Number on Site</u>
Front-End Loaders .5 – 15 yard (.5= Skid Steer)	4

Bulldozers 500 – 700 HP	1
Excavators 1 – 4 yard	2
Motor Grader 150 – 200 HP	1
Haul Trucks 400 – 600 HP (25 – 35 yard)	2 proposed for future
Percussion Drill 100 – 300 HP	2: 1 on site; 1 contracted for production
Water Truck 4000 gal	1
Jaw Crusher w/feeder	1
Cone Crusher	2
Screen Decks	4
Conveyor Systems	15
Trommel Screen	1
Pick-up Trucks	6
Service Trucks	2

Explosives

Primarily ammonium nitrate/fuel oil (ANFO) initiated by ammonium nitrate (AN) activated cast boosters or gels and non-electric delay systems. Estimated annual explosive consumption will range from 50 – 150 tons depending on business demand.

Current Permits

The following is a summary of the permits in place at the Tezak quarry, which are similar to the ones that would apply to the proposed development:

- **Permit #M1977-193 (Appendix A)**
State of Colorado Construction Material Regular (112) Operation Reclamation permit
 - Administered by Colorado Division of Reclamation, Mining and Safety (CDRMS)
 - Permit expiration is Life of Mine

- **Permit # COR340912 and associated Stormwater Management Plan (Appendix B)**
CDPS General Permit for Stormwater Discharges Associated with Sand and Gravel Mining and Processing Authorization to Discharge under the Colorado Discharge Permit System
 - Administered by Colorado Department of Public Health and Environment (CDPHE), Water Quality Control Division
 - Certification expiration is 09/30/2012. However, the permit is administratively continued and remains in effect until the new permit/certification is issued and effective.

- **State of Colorado Air Permits**
Permit # 95FR695F (Appendix C)
 - State of Colorado Construction permit for a sand and gravel operation source, specific to material extraction, handling, stockpiling, hauling and associated conveyors and transfer points
 - Administered by CDPHE, Air Pollution Control Division
 - Permit expires on 10/09/2013

Permit # 09FR1294

- State of Colorado air pollution emission notice (APEN) for a Simplicity Screen stationary source
- Administered by CDPHE, Air Pollution Control Division
- Permit issued on 05/19/2010

Permit # 09FR1296

- State of Colorado APEN for 2 Nordberg Crusher stationary sources
- Administered by CDPHE, Air Pollution Control Division
- Permit issued on 05/19/2010

Permit # 09FR1297

- State of Colorado APEN for a Cedarapids Jaw Crusher stationary source
- Administered by CDPHE, Air Pollution Control Division
- Permit issued on 05/19/2010

Permit # 09FR1298

- State of Colorado APEN for a Pioneer Screen stationary source
- Administered by CDPHE, Air Pollution Control Division
- Permit issued on 05/19/2010

Permit # 09FR1299

- State of Colorado APEN for a JCI Screen stationary source
- Administered by CDPHE, Air Pollution Control Division
- Permit issued on 05/19/2010

- **Mine ID #05-00073**

Per the Federal Mine Safety & Health Act of 1977 each coal or other mine, the products of which enter commerce, or the operations or products of which affect commerce, and each operator of such mine, and every miner in such mine shall be subject to the provisions of this Act.

- Administered by the Mine Safety and Health Administration (MSHA)
- This Mine ID indicates that the mine is registered with MSHA and subject to their regulations regarding the health and safety of the operator’s employees
- Mine ID expiration is Life of Mine

- **Explosive Permits**

Type 1

- Permit is for an individual who possesses and or controls explosive material.
- Administered by the Colorado Division of Labor and Employment, Oil and Public Safety Division
- Permits are held by two different individuals of Tezak, expiring on 05/27/2014 and 07/26/14

Type 2

- Permit is for a corporation or business that purchases explosive material.
- Administered by the Colorado Division of Labor and Employment, Oil and Public Safety Division
- One permit is held by Tezak, expiring on 05/27/2014

Type 3

- Permit is for storage of explosive material.

- Administered by the Colorado Division of Labor and Employment, Oil and Public Safety Division
- One permit is held by Tezak, expiring on 05/27/14

Type 33

- Federal explosives permit
- Administered by the U.S. Department of Justice, Bureau of Alcohol, Tobacco, Firearms and Explosives
- One permit is held by Tezak, expiring on 04/01/2015

- **Permit # CUP 00-1 Tezak Heavy Equipment Company Inc./T.H.E. Aggregate Source Fremont County Conditional Use Permit**

- Permit is for the operation of a sand and gravel mine, including dozing, drilling, blasting, crushing, screening, loading and hauling of granite rock products, concrete recycling, asphalt and ready mix batch plants and on-site housing of business offices.
- Administered by Fremont County, Colorado
- The subject property is located in the “Agricultural, Farming & Ranching, Agricultural Forestry and Industrial Zone Districts”
- Permit expiration is Life of Mine

Reclamation

Reclamation processes have previously been approved by CDRMS and Fremont county for the adjacent, privately owned mine. These same type of reclamation methods will be analyzed and applied to the proposed mining disturbances on the BLM parcel. The *Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials* were used as the main guide in developing the currently approved reclamation plan. As part of the mine and reclamation plan amendment process Tezak was involved with in 1996/1997, a geotechnical stability investigation was completed in order to assess overall stability of the proposed final reclamation highwall configuration (Appendix D).

The primary goal of the final reclamation plan regarding the highwall feature left remaining at the termination of mining is to leave the site with a stable configuration of mine benches that will require minimal risk to the public, mine employees and inspection personnel that may be working near the highwall area in the future. Taking this into consideration it is also the intent to minimize impacts to visual resources, which is why the applicant and the BLM agreed to increase the size of the proposed Mineral Material disposal area, in order to reduce the final contrast between the benches and the adjacent natural landscape.

The approved reclamation plan for the private quarry consists of the following aspects, in order to attain the long range goals of reclamation:

1. A geotechnically stable highwall configuration and surface grading plan, which addresses the control of storm water flows, erosion potentials, and sediment controls which will operate in perpetuity with low maintenance.
2. A site which will blend into neighboring land use as much as possible with final grading features that will protect neighboring land areas by way of diversion and retention of storm flows away from the Tunnel Drive area and direct drainage into the Arkansas River.

3. A stable, self-sustaining, native vegetative mode, where appropriate, which will support wildlife use and open graze use with a minimum of maintenance demand.

These objectives will be achieved through the following key items included in the currently approved reclamation plan for the private mine footprint (a copy of the entire plan can be found in Appendix A):

1. Highwall

- a. The existing plan includes a final highwall design that is based on the compositional banding and zonal planes of migmatitic and metamorphic planes, which strike generally North-South and dip in a generally Eastern attitude at high angles (75 degrees or more). This orientation has resulted in numerous naturally occurring rock faces in the immediate area that approximate a 0.25:1 slope. These natural faces are found to be in excess of 80-feet in some cases. Mining over the past twenty years in the granite area has shown that 0.25:1 slopes in this material are stable. Therefore, the currently approved reclamation plan for the private quarry utilizes final highwall benches that are 40-feet in height with a 0.25:1 (H:V) slope and 20-feet in depth.
- b. To continue to meet the intent of mining laws that require promotion of site stability and impact control, the highwall bench design is being proposed for revision, as follows (which would then also be applicable to the proposed BLM parcel):
 - Final highwall benches will be 40-feet in height with a 0.25:1 (H:V) slope and 30-feet in depth with final drainage of 1% to toe of bench base and 1% grade to lateral surface flow run-offs at intersections of benches with natural drainage channels. This overall lower final slope (1:1) vs. (0.75:1) will increase the Factor of Safety of the highwall structure as compared to the currently accepted slope, where Factor of Safety was calculated to range 3 and higher.
 - This proposed highwall configuration meets standard engineering practices of maximum slope stability, minimization of risk of fall of ground or personnel and effective management of surface run-off during storm events that might otherwise compromise human, animal, or environmental impact including excessive sedimentation or other water quality concerns. Re-vegetation of the mine benches are not being considered in the final reclamation plan due to concerns regarding soil instability during storm events, accessibility and safety of personnel.

2. Floor

- a. Although the goal is to reclaim as you go, the main pit area is not planned for revegetation until near to the life of the mine, due to the fact that the mine pit will be in continuous use as product stockpile, process and loadout area.
- b. At the time of final reclamation, topsoil materials will be transported to the main pit floor from neighboring lands owned by the mine operator and will be applied at depths of 12"-18". This soil material will be amended with organic materials to achieve a plant medium that will support native vegetation. An initial application of inorganic fertilizer of Nitrogen at 100 pounds/acre minimum and Phosphorus at 80 pounds/acre is anticipated prior to seeding. The seed mixture will be composed of the following species:
 - Needle and thread grass
 - Blue grama grass
 - Side oats grama

- Sand dropseed grass
- Red three-awn
- Indian ricegrass
- Winterfat
- Mountain mahogany
- Four-wing saltbush
- Tall rabbitbrush
- Brickle bush
- Blackfoot daisy
- Cholla cacti
- One seed juniper
- Pinon pine
- Western wheatgrass
- Intermediate wheatgrass
- Crested wheatgrass

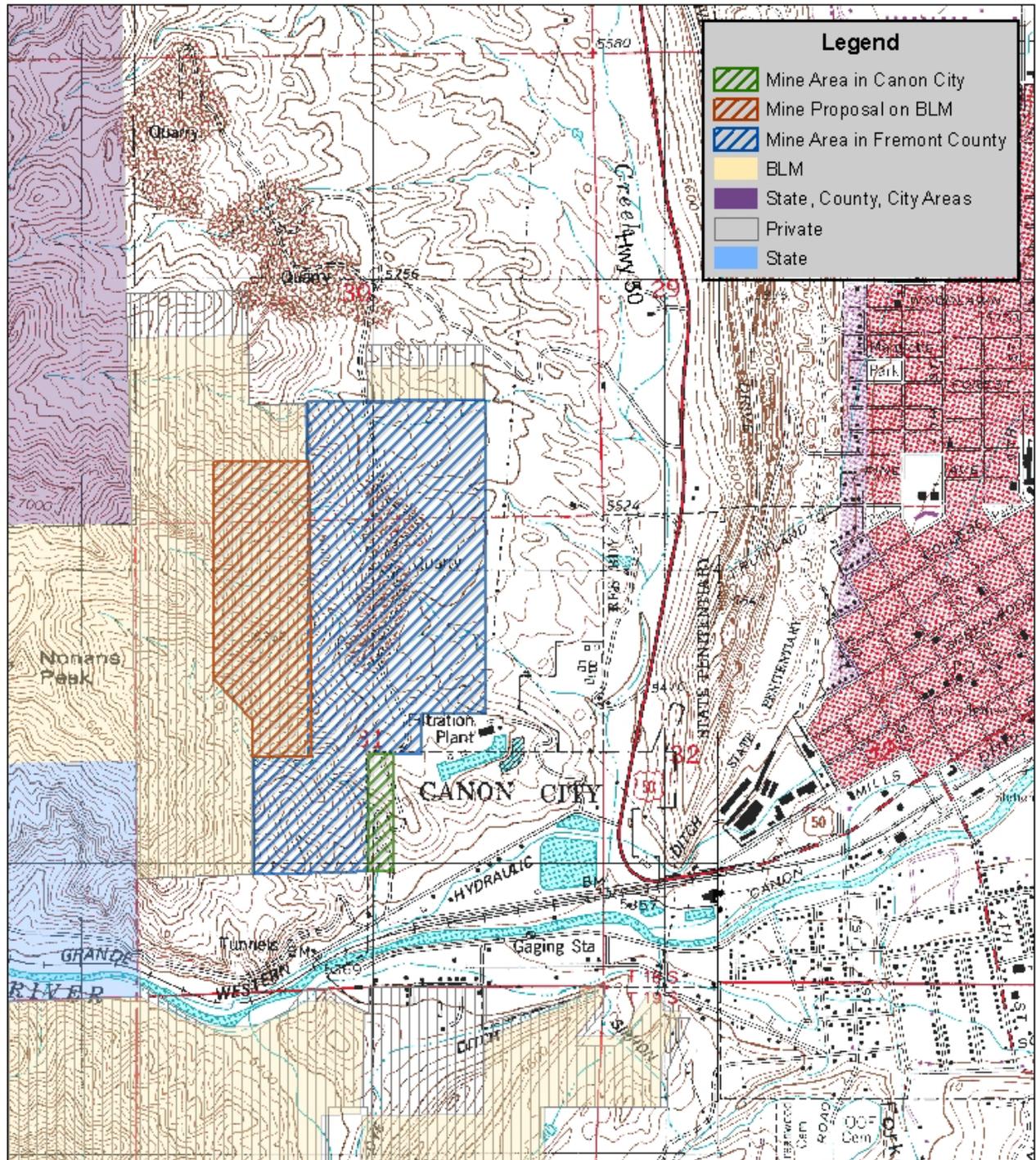
The relative amounts of the species in the mixture will be based on the availability and price at the time planting. The drought resistant native grasses should be the focus of the mixture in respect to the grass species. The seeding effort will be conducted by the appropriate broadcast or drill seeding methods. The seeding and mulching program should be repeated every other year, until a minimum of 25% ground cover is attained over the site.

- c. The proposed post-mining use of open rangeland/wildlife habitat is compatible with surrounding/neighborhood land use of the area.
- d. There is no topsoil incurred at the surface of this mining operation. Topsoiling of the final pit floor will be accomplished with materials from nearby areas owned by the mine operator or will be imported from other sites.

The approved Mining and Reclamation Plan does not specifically address weeds. Therefore discussions arose between BLM and the applicant, which resulted in a protocol for weeds management that will then be implemented on the proposed BLM parcel, and possibly the privately owned portions of the mine site of the applicant, or other successful bidder. This protocol includes the monitoring and treatment of noxious weeds every year during the life of the mine. At the end of the mine life during the mine reclamation period, revegetated areas will be monitored for the presence of plants on the Colorado State Noxious Weed list for a period of five years. A and B list species from the Colorado State Noxious Weed list will be eradicated prior to bond release.

Bond

Currently, the private quarry has a required surety of \$540,215.00 being held by CDRMS for reclamation of these operations, in accordance with the approved plan on file. If the proposed mine development moves forward BLM will require a performance bond for the federal interests, in accordance with 43 CFR 3602.14, of an amount sufficient to meet the reclamation standards provided for in the contract. This process will be conducted in coordination with CDRMS.

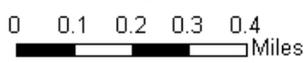
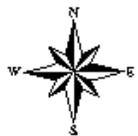


PROPOSED MINERAL MATERIALS DISPOSAL, FREMONT COUNTY

T18S, R70W, Sections 30 and 31

DOI-BLM-CO-2011-0092-EA

Overview Map



NOTE TO MAP USERS
 No warrantee is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of the data layers shown on this map. The official land records of the data providers should be checked or current status on any specific tract of land.

Figure 1

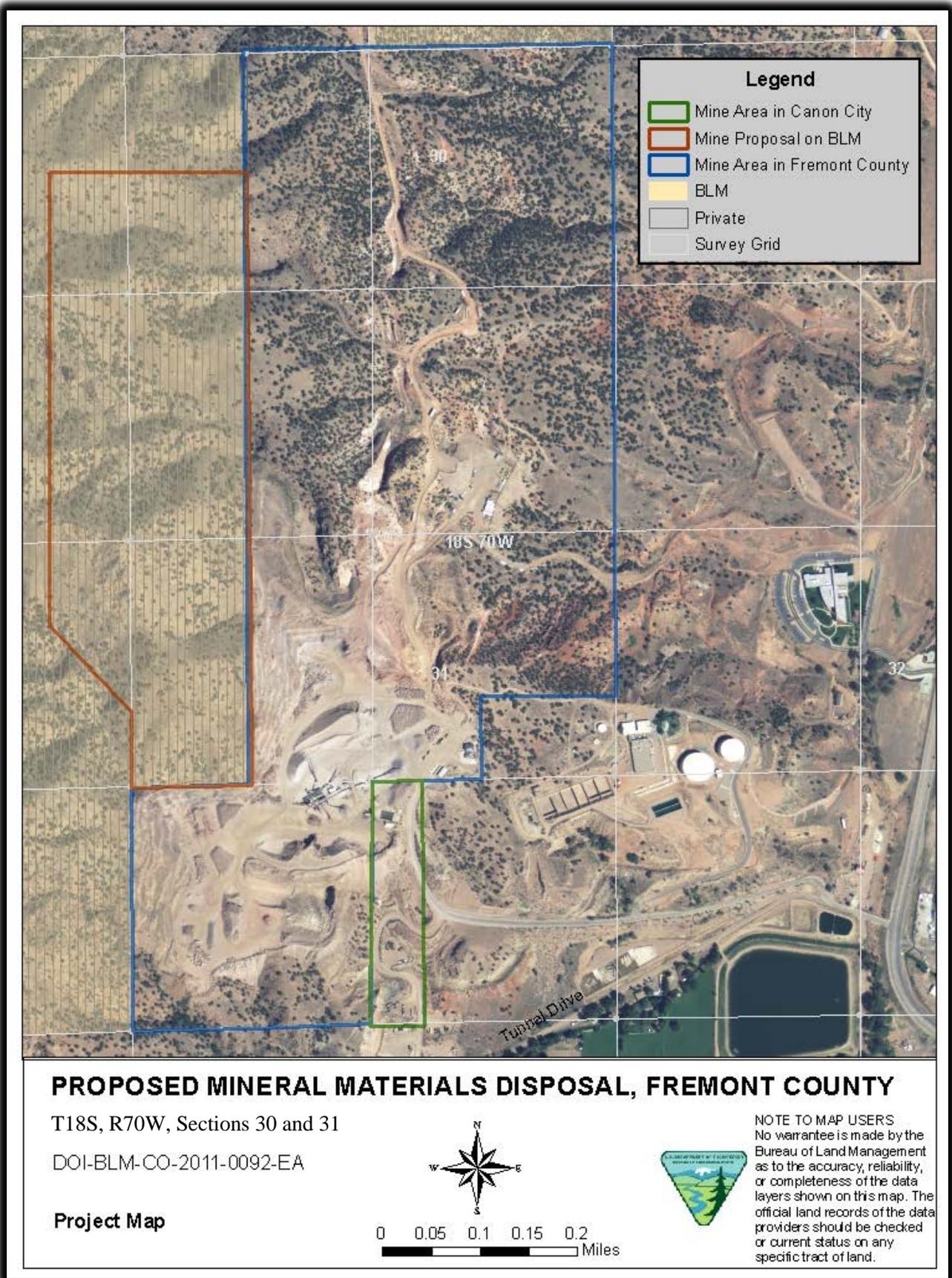


Figure 2

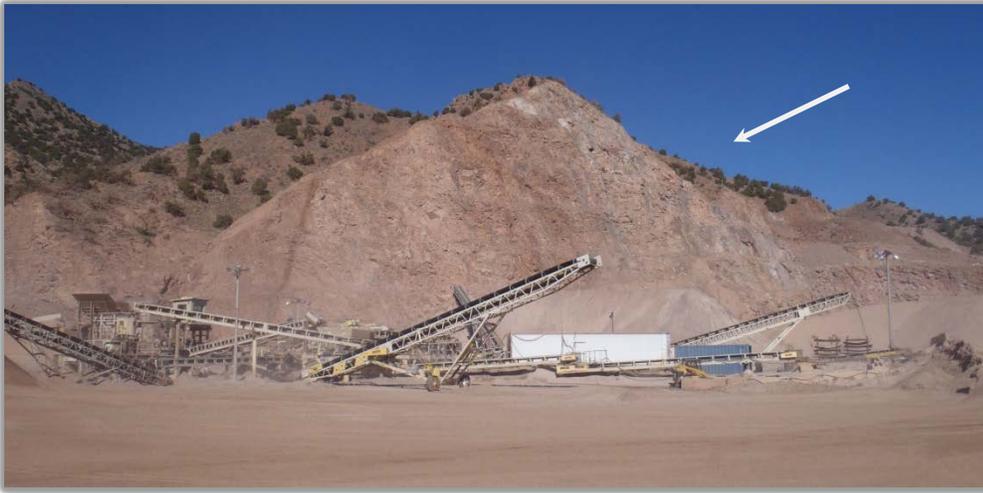


Photo 1: Looking northwest at working face (private surface/mineral estate) of existing mine. BLM managed surface and minerals are represented directly west & noted by the arrow.



Photo 2: Looking northwest, just north of working face (private surface/mineral estate) of existing mine. BLM managed surface and minerals are directly west & noted by the arrow.



Photo 3: Looking southeast at existing mine floor (private surface/mineral estate). The picture is being taken from the eastern edge of BLM managed surface and minerals.



Photo 4 Looking Northwest (red outlined area = proposed BLM parcel, red and green filled areas = existing, closest private mine permit)



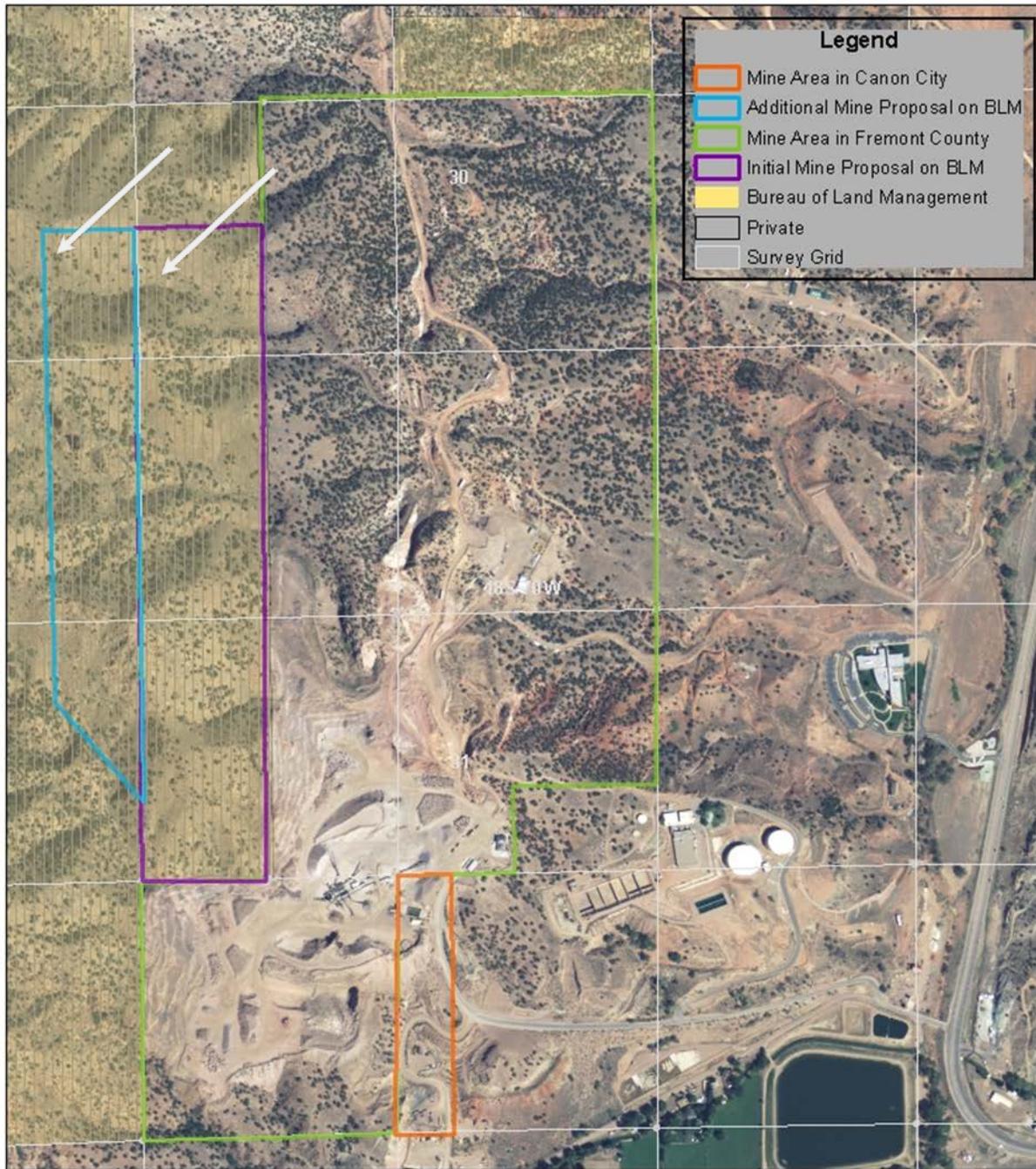
Photo 5 Looking southwest (red outlined area = proposed BLM parcel, red and green filled areas = existing, closest private mine permit)

2.2.2 No Action Alternative

The applicant could continue operating the currently active quarry within the privately owned interests; however, the overall potential reserves would be more limited and therefore shorten the projected Life of Mine.

2.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

The initial proposal by the applicant for development of the federal minerals on the subject BLM parcel only involved 51.5 acres (Figure 3). However, after reviewing the projections for what the site will look like after final reclamation is complete, the applicant and the BLM agreed to increase the size of the proposed Mineral Material disposal area. In doing this, the final contrast between the benches and the adjacent natural landscape will be less visible from key observation points along Highway 50 and elsewhere. See the “Visual Resources” section for additional discussion on this topic.

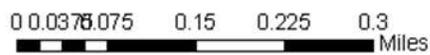
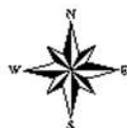


Legend

- Mine Area in Canon City
- Additional Mine Proposal on BLM
- Mine Area in Fremont County
- Initial Mine Proposal on BLM
- Bureau of Land Management
- Private
- Survey Grid

PROPOSED MINERAL MATERIALS DISPOSAL, FREMONT COUNTY

T18S, R70W, Sections 30 and 31



NOTE TO MAP USERS
 No warrantee is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of the data layers shown on this map. The official land records of the data providers should be checked or current status on any specific tract of land.

Figure 3

CHAPTER 3 - AFFECTED ENVIRONMENT AND EFFECTS

3.1 INTRODUCTION

This section provides a description of the human and natural environmental resources that could be affected by the Proposed Action and presents comparative analyses of the direct, indirect and cumulative effects on the affected environment stemming from the implementation of the actions under the Proposed Action and other alternatives analyzed.

3.1.1 Interdisciplinary Team Review

The following table is provided as a mechanism for resource staff review, to identify those resource values with issues or potential impacts from the proposed action and/or alternatives. Those resources identified in the table as potentially impacted will be brought forward for analysis.

<u>Resource</u>	<u>Date Reviewed</u>	<u>Initials</u>	<u>Reason for Dismissal from Analysis</u>
<u>Air Quality</u> <i>Ty Webb</i>	9/27/2012	TSW	See affected environment.
<u>Geology/Minerals</u> <i>Stephanie Carter, Melissa Smeins</i>	9/24/2012	SSC	The proposed mineral materials disposal consists of the same geological Precambrian migmatitic gneiss as the existing quarry directly to the east. The geologic structure and strike and dip of the foliation are also similar between the two locations. Although this proposal would remove a considerable amount of rock material from the BLM parcel, given the mineral occurrences within this acreage the proposed use of mineral material commodities is considered a good use of the resource.
<u>Soils</u> <i>John Smeins</i>	9/24/2012	JS	See affected environment.
<u>Water Quality</u> <u>Surface and Ground</u> <i>John Smeins</i>	9/24/2012	JS	The site is in a dry upland location. All runoff from the site is covered under a State of Colorado storm water discharge permit where all runoff up to the 10 year- 6 hour storm would be contained on site. Runoff from the 100 year-24 hour storm would be routed through appropriately sized channels. No significant impacts to water resources are anticipated. For additional information, reference Appendix E consisting of the drainage study prepared for the subject area in July 2012.
<u>Invasive Plants</u> <i>John Lamman</i>	09/28/2012	JL	No impacts from invasive/Noxious weeds are anticipated, since mitigations are provided in the proposed action's reclamation.
<u>T&E and Sensitive Species</u> <i>Matt Rustand</i>	9/13/2012	MR	Peregrine and Golden Eagles nest within the Royal Gorge; however, the nearest nest is more than three miles away. No known threatened and endangered or sensitive species are present within the action area.
<u>Vegetation</u> <i>John Lamman</i>	09/26/2012	JL	Vegetation and topsoil will be removed from the project area. Replacement of topsoil and native vegetation at the end of the mine life is covered in the reclamation section of the proposed action (also see Appendix A).

<u>Resource</u>	<u>Date Reviewed</u>	<u>Initials</u>	<u>Reason for Dismissal from Analysis</u>
<u>Wetlands and Riparian</u> <i>Dave Gilbert</i>	9/14/2012	DG	Resource is not present because all drainages are ephemeral.
<u>Wildlife Aquatic</u> <i>Dave Gilbert</i>	9/14/2012	DG	Resource is not present because all drainages are ephemeral.
<u>Wildlife Terrestrial</u> <i>Matt Rustand</i>	9/13/2012	MR	See affected environment.
<u>Migratory Birds</u> <i>Matt Rustand</i>	9/13/2012	MR	See affected environment.
<u>Cultural Resources</u> <i>Monica Weimer, Erin Watkins</i>	9/21/2012	EW	Only a single historic site is present in the vicinity of the area of potential effect [see Report CR-RG-12-54(N); CR-RG-13-55 (P)]. Although historic site 5FN.2730 was recorded during the cultural resources inventory, it is not eligible for the National Register of Historic Places. Therefore, no historic properties will be affected by the proposed undertaking.
<u>Native American Religious Concerns</u> <i>Monica Weimer, Erin Watkins</i>	9/21/2012	EW	A consultation with potentially interested Native American tribes has been completed, and no concerns were identified. The BLM contacted the following tribes: Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes of Oklahoma, Cheyenne River Sioux Tribe, Comanche Tribe of Oklahoma, Crow Creek Sioux, Eastern Shoshone, Jicarilla Apache Nation, Kiowa Tribe of Oklahoma, Northern Arapaho Tribe, Northern Cheyenne Tribe, the Ute Tribe, Oglala Sioux Tribe, Rosebud Sioux Tribe, Southern Ute Tribe, Standing Rock Lakota Tribe, and the Ute Mountain Ute Tribe.
<u>Economics</u> <i>Stephanie Carter</i>	09/24/2012	SSC	Removal of rock associated with the proposed mine development on BLM has the potential to affect local social and economic conditions. However, it is anticipated that this impact will mostly be positive due to regional economic contributions and the fact that these type and scale of operations are already ongoing in this location. This is detailed in Section 2.1 Introduction.
<u>Paleontology</u> <i>Melissa Smeins</i>	9/25/2012	MJS	Paleontology not present.
<u>Visual Resources</u> <i>Kalem Lenard</i>	9/17/2012	KL	See affected environment.
<u>Environmental Justice</u> <i>Martin Weimer</i>	9/24/12	mw	The proposed action affects areas that are rural in nature. The parcel is near the town of Canon City, there are, however, no minority or low-income populations in or near the project area. As such, the proposal will not have a disproportionately high or adverse environmental effect on minority or low-income populations.
<u>Wastes Hazardous or Solid</u> <i>Stephanie Carter</i>	09/24/2012	SSC	See affected environment.

<u>Resource</u>	<u>Date Reviewed</u>	<u>Initials</u>	<u>Reason for Dismissal from Analysis</u>
<u>Recreation</u> <i>Kalem Lenard</i>	9/17/2012	KL	Being located directly adjacent to an existing quarry operation on private land combined with the steep slopes of the project area the BLM land identified in the Proposed Action has little recreation value and use so there would be no impacts to recreation. The Visual Resources section describes impacts to visual resources associated with the Proposed Action.
<u>Farmlands Prime and Unique</u> <i>John Lamman</i>	09/24/2012	JL	Resource not present.
<u>Lands and Realty</u> <i>Vera Matthews</i>	09/28/2012	VM	Present but not affected by this action.
<u>Wilderness, WSAs, ACECs, Wild & Scenic Rivers</u> <i>Kalem Lenard</i>	9/17/2012	KL	Not Present.
<u>Wilderness Characteristics</u> <i>Kalem Lenard</i>	9/17/2012	KL	Not Present.
<u>Range Management</u> <i>John Lamman</i>	09/24/2012	JL	The project area is part of the Eight Mile Park Grazing Allotment. The project area is steep with minimal value for livestock forage. Currently there is no authorized grazing on the Eight Mile Park Grazing Allotment. The proposed project will not have any impact to Range Management.
<u>Forest Management</u> <i>Ken Reed</i>	9/27/2012	KR	See affected environment.
<u>Cadastral Survey</u> <i>Tony Mule /Jeff Covington</i>	9/7/2012	JC	The LDR and COS are located in the project folder. These corners should be located and flagged up for their protection. Any BLM monuments destroyed during the mining process will be reestablished at the mining operator's expense when mining is terminated.
<u>Noise</u> <i>Stephanie Carter</i>	09/24/2012	SSC	The proposed mine development will utilize the existing mine's operational protocol and level of effort and no change in current noise levels should result. Currently, noise generation is subject to the county requirements and is monitored through the Fremont County Conditional Use Permit.
<u>Fire</u> <i>Bob Hurley</i>	9/6/2012	BH	The proposed action will not create or elevate risk factors leading to unwanted wildland fire ignition.
<u>Law Enforcement</u> <i>Steve Cunningham</i>	9/24/12	mw for SC	There are no law enforcement issues associated with this action.

The affected resources brought forward for analysis include:

- Air Quality and Climate

- Soils
- Wildlife Terrestrial
- Migratory Birds
- Visual Resources
- Wastes, Hazardous or Solid
- Forestry Management

3.2 PHYSICAL RESOURCES

3.2.1 AIR QUALITY AND CLIMATE

Affected Environment: Air quality in Fremont County, Colorado, is relatively clean in comparison to other counties in the US. The county includes no non-attainment designations for National Ambient Air Quality Standards (NAAQS) criteria air pollutants, as regulated by Environmental Protection Agency (EPA) under the federal Clean Air Act (CAA).

In compliance with the CAA required State Implementation Plan or SIP for clean air, Colorado participates as a member of the Western Regional Air Partnership (WRAP) whose objective is to control regional haze and attain improved visibility goals in Class I areas designated under the CAA for pristine air quality values. A Class I area is a geographic boundary in which visibility is protected more stringently than under the NAAQS and includes national parks, wilderness areas, monuments, and other areas of special national and cultural significance. Colorado has multiple Class I areas managed by the National Park Service and U.S. Forest Service, of which none are located in Fremont County. The Colorado Class I air protection area nearest to the site of the proposed mineral materials disposal in Fremont County is the Great Sand Dunes Wilderness Area in nearby Alamosa and Saguache Counties.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: Mineral material quarries can be potential sources of air emissions, which are generated by different types of processing equipment, support functions and loose soil material. As stated in Section 2.2.1 Proposed Action, the existing privately operated quarry adjacent to the subject BLM parcel has multiple Air Permits under the Colorado Air Pollution Control Division. Air permits similar to these will be required for the proposed development of federal minerals on the subject BLM parcel. The State of Colorado Construction permit for the T.H.E. Aggregate Source sand and gravel operation (Permit #95F695F) includes mitigation measures for dust control that are required to be implemented by the operator. This permit sets limits for visible emission opacity during operations. Some allowance for visible dust is permissible, however, offsite transport of visible dust is typically not.

Protective/Mitigation Measures: The Colorado Department of Public Health and Environment Air Pollution Control Division issues various permits for the operation of a sand and gravel operation. The permit system details the rules and regulations that the quarry must operate under to limit the effects on air quality. Inspections to monitor these conditions are conducted by the operator on a routine basis. In addition, the State of Colorado has inspection and enforcement authority over these

air permit, as well as ensuring compliance with the state statutes specific to air quality control and pollution prevention. Quarry development on the BLM subject parcel will be subject to these State of Colorado requirements, as well as BLM inspection and enforcement actions pursuant to 43 CFR 3600. Compliance with applicable permits and state and federal regulations will be required for any mineral material development conducted on the subject BLM parcel. Specific mitigation included in any State of Colorado permits will be required to be implemented. In addition, the control measures currently included in the Tezak permit are being incorporated as mitigation for the newly proposed mineral material development, in addition to any State of Colorado permit requirements, as the assumption is that similar type of mining and processing will take place on the subject BLM parcel. These are summarized below:

- Adequate soil moisture must be maintained in topsoil and overburden to control emissions during removal. Watering shall be implemented, if necessary.
- Drilling of blast holes shall be controlled by water injection and bag collectors on the drills.
- Emissions from material handling shall be controlled by watering at all times unless natural moisture is sufficient to control emissions.
- Vehicle speed on unpaved roads and disturbed areas shall not exceed a maximum of 20 mph (or less, if stipulated by the Colorado Air Pollution control Division). Speed limit signs shall be posted.
- Vehicle speed on haul roads and service roads shall be restricted to 20 mph (or less, if stipulated by the Colorado Air Pollution control Division). Speed limit signs shall be posted.
- Unpaved haul roads shall be watered as often as needed to control fugitive particulate emissions such that the above guidelines are met.
- Reclamation works and sequential extraction of material shall be initiated to keep the total disturbed areas at any one time to a minimum.
- Material stockpiles shall be watered as necessary to control fugitive particulate emissions. Aggregate materials shall be sprayed with water during material loading into the storage bins or stockpiles.
- Plant entryway, truck service roads, haul roads, and concrete batching areas shall be graveled. Watering shall be implemented if emission guidelines above are not met.

No Action Alternative

Direct and Indirect Impacts: None

Protective/Mitigation Measures: None

3.2.2 SOILS (includes a finding on standard 1)

Affected Environment: The Proposed Action would increase the existing quarry operations in this area, to include 78 acres of public lands. The soils contained in this proposal are the Ustic Torriorthents boulder-Rock outcrop complex 35-90% slopes (approximately 75% of the area) and the Roygorge very gravelly sandy clay loam, 25-50% slopes (approximately 25% of the area). These soils are found on mountain sides with very shallow depths to bedrock ranging from 4-30” and very low water holding capacity. These soils are currently meeting standards for public land health.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: The Proposed Action would disturb and remove almost all soil from 78 acres as mining progresses along the mountain front. In addition, more soil would be impacted on adjacent private lands; however these lands would still be mined regardless of whether or not the proposed action is implemented. During reclamation, top soil would be brought in from an offsite location and used to cover the pit floor to obtain vegetative goals. Overall, the steep, thin soils of the mountainside would be replaced with a large, near vertical bedrock faces and a flat, somewhat vegetated bench.

Protective/Mitigation Measures: None

No Action Alternative

Direct and Indirect Impacts: If no action is taken, the soils at the proposed location would stay as they currently are.

Protective/Mitigation Measures: None

3.3 BIOLOGICAL RESOURCES

3.3.1 WILDLIFE TERRESTRIAL (includes a finding on standard 3)

Affected Environment: The habitat present consists of piñon-juniper/shrub mix. This habitat type is the most prevalent in the resource area. While the number of terrestrial species that occupy this habitat is great, the analysis focuses on mega-fauna that have the potential to be impacted the greatest by the proposed action.

Mule deer populations for this area are currently below Colorado Parks and Wildlife objectives. Being a successional species, deer rely on pre-climax habitat conditions. As the trend since the early 1900s has been towards more stability and approaching climax vegetative conditions, the ability of the habitat to support deer has declined. The primary causes of this trend in habitat conditions are thought to result from the elimination of wildfire from the forests, the encroachment of forest cover in formerly open grassland and shrubland habitats, and the improved soil and range management that has resulted in more stable grasslands. All these factors are to the detriment of the forb and shrub components, which are important parts of the deer diet.

The Merriam's turkey is a fairly common resident in foothills and mesas of southern Colorado. The Merriam's turkey is common in the assessment area in suitable habitat. Merriam's are found primarily in ponderosa pine forests with an understory of Gambel's oak. Tall pines are used during all seasons for roosting. In the assessment area it is often found in foothill shrublands (mountain mahogany) and piñon-juniper woodlands.

Black bear, mountain lion, bobcat and other meso-carnivores among others likely inhabit the project area sporadically. Home ranges of these species can be very large resulting in a small probability of occupancy at any one time.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: Species mentioned above may be seen or their sign identified within the project boundary. Quarry activities have been occurring adjacent and to the north of the project area using similar excavation techniques since the early 1970s. The project action will be the 78.72 acres of ground disturbed by quarry operation and an additional buffer area that will be impacted by noise and human presence. The proposed action will cause an eventual loss of 78.72 acres of existing habitat to excavation. However, as stated above, this area is currently compromised by current quarry operations and has little utility to mega-fauna.

Indirectly habitat will be lost during quarry operation hours due to noise, vehicle traffic and human presence near the boundary of the project area. Indirect losses may be substantially larger than the direct loss (Sawyer et al. 2006). However, the additional acreage is difficult to quantify because species react and adapt differently to anthropogenic features and activity. While the action area is currently being impacted by noise of quarry operations, it is likely wildlife present has become habituated to this impact and modified their activity patterns to nocturnal and crepuscular periods.

Protective/Mitigation Measures: None.

No Action Alternative

Direct and Indirect Impacts: None.

Protective/Mitigation Measures: None.

3.3.2 MIGRATORY BIRDS

Affected Environment: Piñon-juniper habitat supports the largest nesting bird species list of any upland vegetation type in the West, and this habitat type is the most prevalent in the resource area. The richness of the piñon-juniper vegetation type is important due to its middle elevation. Survey tallies in piñon-juniper are similar in species diversity to the best riparian. Several species are found in the piñon-juniper habitat and include: black-chinned hummingbird, gray flycatcher, Cassin's kingbird, gray vireo, piñon jay, juniper titmouse, black-throated gray warbler, Scott's oriole, ash-throated flycatcher, Bewick's wren, mountain chickadee, white-breasted nuthatch, and chipping sparrow.

The following birds are listed on the U.S. Fish and Wildlife Service Birds of Conservation Concern (BCC) – 2002 List for BCR 16-Southern Rockies/Colorado Plateau. These species have been identified as species that may be found in the project area, have declining populations and should be protected from habitat alterations.

The golden eagle is a bird of grasslands, shrublands, piñon-juniper woodlands, and ponderosa pine forests, but may occur in most other habitats occasionally, especially in winter. Nests are placed on cliffs and sometimes in trees in rugged areas, and breeding birds range widely over surrounding habitats. A known nest location occurs five miles to the northwest in the Royal Gorge.

Peregrine falcons in Colorado breed on cliffs and rock outcrops from 4,500-9000 ft in elevation. They most commonly choose cliffs located within piñon-juniper and ponderosa pine zones. These falcons feed on smaller birds almost exclusively, with White-throated swifts and rock doves being

among their favored prey. The nearest known nest occurs more than three miles away within the Royal Gorge.

Prairie falcons nest in scattered locations throughout the state where they inhabit the grassland and cliff/rock habitat types. These falcons breed on cliffs and rock outcrops, and their diet during the breeding season is a mix of passerines and small mammals.

Gray Vireos are piñon-juniper woodland obligates. Gray Vireos usually inhabit stands dominated by juniper or thin stands of pure juniper. They construct nests of dry grasses, plant fibers, stems, and hair, often camouflaging them with sagebrush leaves.

Piñon jays range the semiarid lands of the West. The Colorado Breeding Bird Atlas map shows them south of a diagonal line drawn from the northwest corner to the southeast corner of the state. Piñon jays are piñon and juniper obligates in Colorado and nest commonly at the lower elevations of piñon-juniper woodlands, often where junipers dominate. A few nest in ponderosa pine. They prefer extensive stands far from high human activity.

Black-throated gray warblers are fairly common summer residents in piñon-juniper woodlands across the southwestern half of Colorado. Some surveys show these warblers to be the most frequently encountered birds in the piñon-juniper woodland. Black-throated gray warblers, in Colorado, are piñon-juniper obligates, preferring tall, dense piñon-juniper woodlands.

Virginia's warblers in Colorado nest between 5,000-9,000 feet in elevation. They breed most abundantly in the western quarter of the state, along the eastern slope foothills, and in the upper Arkansas River drainage. Virginia's warblers nest in dense shrublands and on scrub-adorned slopes of mesas, foothills, open ravines, and mountain valleys in semiarid country. They use scrubby brush, piñon-juniper woodland with a well-developed shrubby understory, ravines covered with scrub oak and dense shrublands--especially gambel oak. They also breed in open ponderosa pine savannahs that have a dense understory of tall shrubs.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: Species mentioned above may be seen or their sign identified within the project boundary during any season of the year. Quarry activities have been occurring adjacent and to the north of the project area using similar excavation techniques since the early 1970s. The project action will be the 78.72 acres of ground disturbed by quarry operation and an additional buffer area that will be impacted by noise and human presence. The proposed action will cause an eventual loss of 78.72 acres of existing habitat to excavation. Outside the physical 78.72 acres project area, some species of migratory bird will incur additional habitat loss during quarry operation hours due to noise and human presence while others will not be affected by these activities (Gilbert and Chalfoun 2011). Species richness of newly impacted habitat will decrease as bird species not tolerant to noise will avoid the area (Francis et al. 2009). The additional acreage is difficult to quantify because species react and adapt differently to anthropogenic features and activity. During quarry development, vegetation will be removed and destroyed. If conducted during the nesting season, migratory bird nests will be destroyed, resulting in a "take."

Protective/Mitigation Measures: To be in compliance with the Migratory Bird Treaty Act (MBTA) and the Memorandum of Understanding between BLM and USFWS required by Executive Order 13186, BLM must avoid actions, where possible, that result in a “take” of migratory birds. Generally this is a seasonal restriction that requires vegetation disturbance be avoided from May 15 thru July 15. This is the breeding and brood rearing season for most Colorado migratory birds. The clearing of vegetation during quarry operation will be completed outside these dates to prevent the “take” of migratory bird nests. However, if vegetation clearing is completed prior to the nesting season, quarry operation may occur during the restricted period.

An exception to this timing limitation will be granted if nesting surveys conducted no more than one week prior to surface-disturbing activities indicate no nesting within 30 meters (100 feet) of the area to be disturbed. Surveys shall be conducted by a qualified breeding bird surveyor between sunrise and 10:00 a.m. under favorable conditions. This provision does not apply to ongoing construction, drilling, or completion activities that are initiated prior to May 15 and continue into the 60-day period

No Action Alternative

Direct and Indirect Impacts: None.

Protective/Mitigation Measures: None.

3.4 HERITAGE RESOURCES AND HUMAN ENVIRONMENT

3.4.1 VISUAL RESOURCES

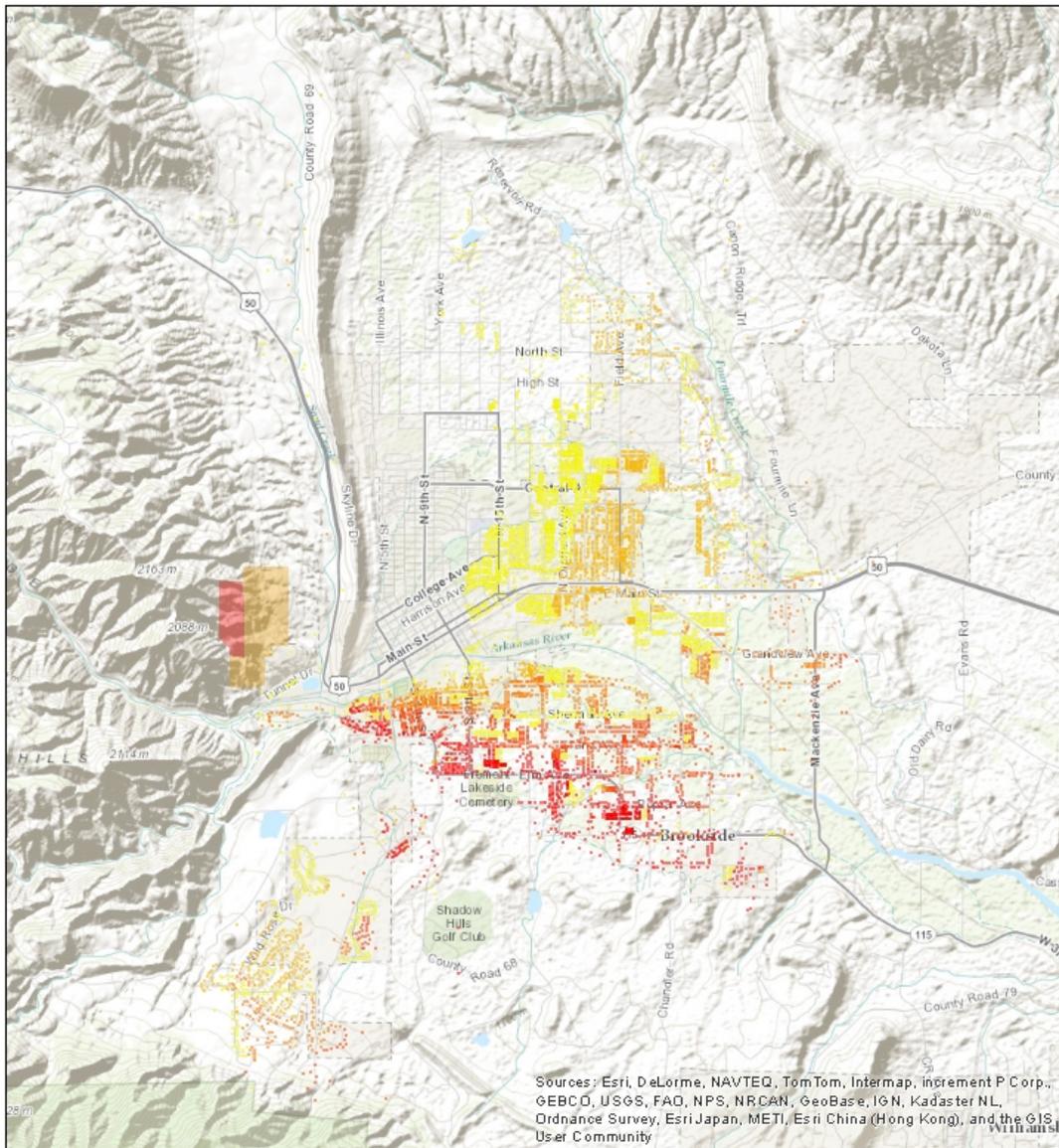
Affected Environment: Visual Resource Management (VRM) classes along with the corresponding VRM Objectives were established in the Royal Gorge Field Office in 1996 with the approval of the Royal Gorge Resource Area Resource Management Plan (RMP). Visual Resource Management objectives corresponding to the various management classes provide standards for analyzing and evaluating proposed projects from selected Key Observation Points (KOPs). Projects are evaluated using the Contract Rating System to determine if it meets VRM objectives established by the RMP. The VRM classes established for the project area is Class II with an objective of retaining the existing character of the landscape and manage for low levels of change that do not attract the attention of the casual observer by repeating the basic elements of form, line, color and texture found in the predominant features of the characteristic landscape.

The development of the quarry operation outlined in the Proposed Action is located approximately .75 miles (1 km) from Highway 50 on the western edge of Canon City, Colorado. This portion of Highway 50 is included in the Gold Belt Scenic Byway. A tourist drive along with recreational trails and a community college are also nearby the project area. Comments received during public scoping indicated that there were concerns regarding visual impacts to the community as a whole. In order to better describe the affected environment a GIS based visibility analysis was conducted to determine the extent that the existing mining operation is visible within the cone of focus consisting of the proposed development (see Appendix F for the full analysis report). Based on this analysis it was determined that out of 11,014 address points that occur within 5 miles of the project area portions of the existing quarry were currently (or will be) visible from 8,326 addresses (see Figure 4). This analysis is based on the height of an average person standing but does not take into account trees and structures that may obscure the view. It can be assumed that the current operation is

actually visible to fewer addresses due to trees and structures. The screening from trees and buildings is especially prevalent in the older neighborhoods both north and south of Hwy 50 where more mature landscaping is present. Addresses further north and south and outside of the view shadow created by the hogback had less viewshed obstructions and can more readily see at least portions of the existing contrast.



Photo 6: View from Highway 50 entering Canon City from the east.



Address Locations with Potential Existing Views of the Quarry Area:
 symbolized by % of the total quarry area potentially visible.

Locations with existing view (Percent of current area visible)
 (Cur. acres visible / 224.34 acres) * 100

- 0% - 4.2%
- 4.21% - 11.97%
- 11.98% - 22.11%
- 22.12% - 33.17%
- 33.18% - 52.43%

Quarry Features

- Current Quarry Area
- Proposed Expansion

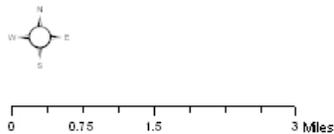


Figure 4

An analysis was also done along Hwy 50 to determine how visible the closest, existing quarry is from the major travel east/west route in the community as opposed to a single observation point. Out of 369 points tested along the highway it was determined that 138 observer points already had views of portions of the adjacent quarry and 231 points the quarry is not currently visible. This does not take into account buildings or trees, but due to the width of the Highway and the east/west orientation these types of objects do not play a large role in screening views of the project area and existing quarry (Figure 5).

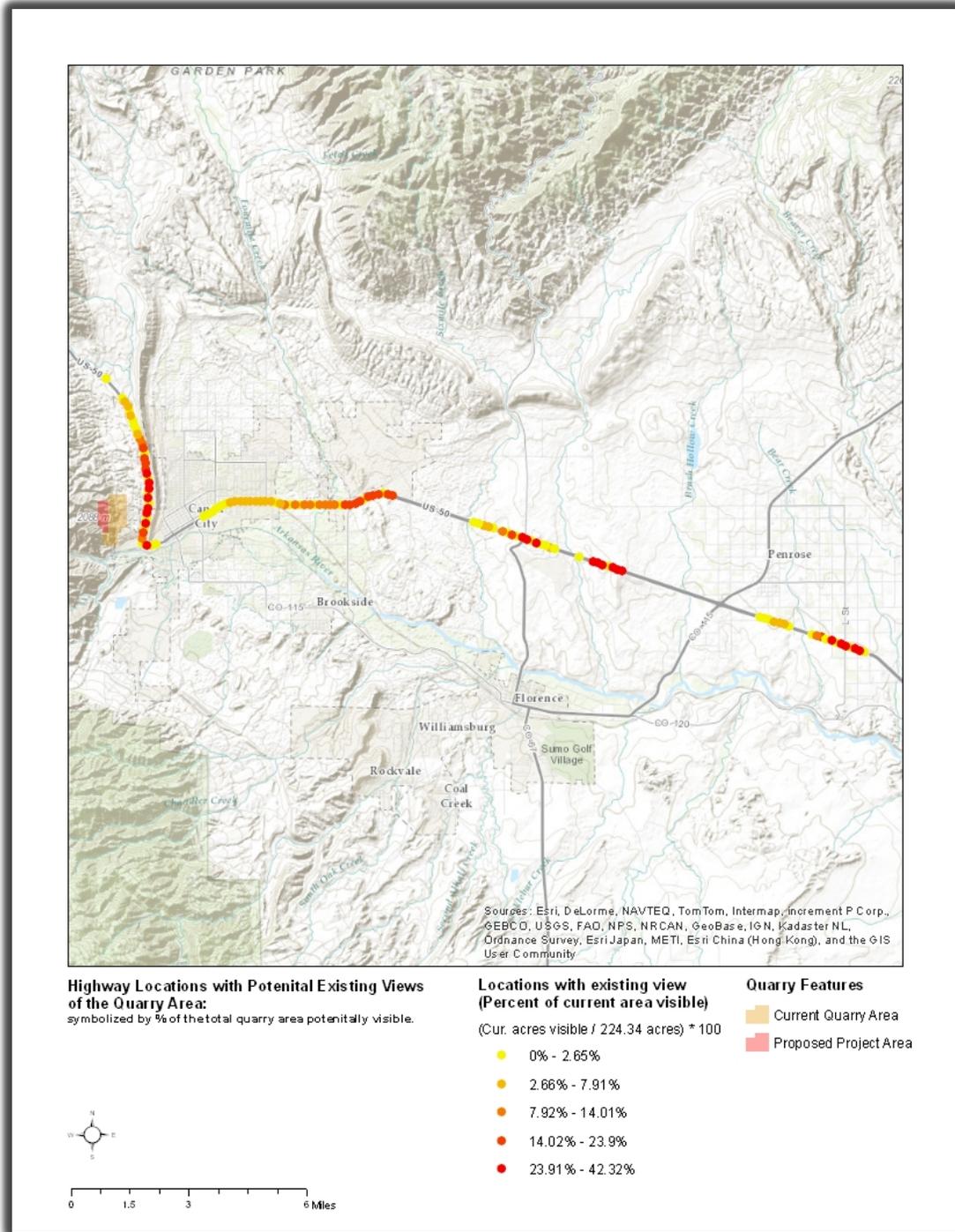


Figure 5

From where the existing quarry is currently visible contrasts occur from the headwall that has strong angular lines along its edges and relatively smooth surface that is comprised of light reds and grays. This is compared to the surrounding natural environment that has softer angular lines from the ridges and drainages and has a rougher texture from topography and vegetation. The contrast in color is mostly associated with the absence of vegetation and not necessarily the color of the headwall (see photo 7). Stockpiles, buildings and other structures and facilities associated with the mining operation are not visible from any of the addresses within the 5 mile radius of the project.



Photo 7 View of Project Area from Highway 50 and Key Observation Point

Environmental Effects

Proposed Action

Direct and Indirect Impacts: As indicated in the affected environment, comments received from the public were primarily concerned with visual impacts to the community as opposed to a specific, single key observation point so a visibility analysis was conducted based on several hundred points along Highway 50, which serves as the major east/west travel corridor, extending across the entirety of Canon City as well as actual address points within a 5 mile radius of the project (Appendix F). Along Highway 50 out of 369 observer points sampled it was determined that 19 observer points cannot see the existing quarry but would be able to see the proposed development on BLM managed lands, or 5 % (Figure 6). These occur primarily east of the intersection with Highway 115 (near Penrose) which is approximately 12 miles from the project area and near the turn to Phantom

Canyon and Florence which is approximately 8 miles away and would be able to see up to 30% of the project area, or 22 acres. One point near the intersection with 10th street would also realize a new visual contrast but only approximately 2% of the proposed project would be visible from this location. Contrasts most readily noticeable would be similar to the contrasts created from the existing quarry including contrasts in line and texture associated with the headwall expansion to the north and color associated with the absence of vegetation. Since the proposed project is located in the same geologic structure as the adjacent quarry contrasts in color associated with the headwall would be minimal. Due to the long distances or relatively small portion of the project visible additional contrasts from the proposed action would most likely not be readily noticeable from the Highway 50 corridor.

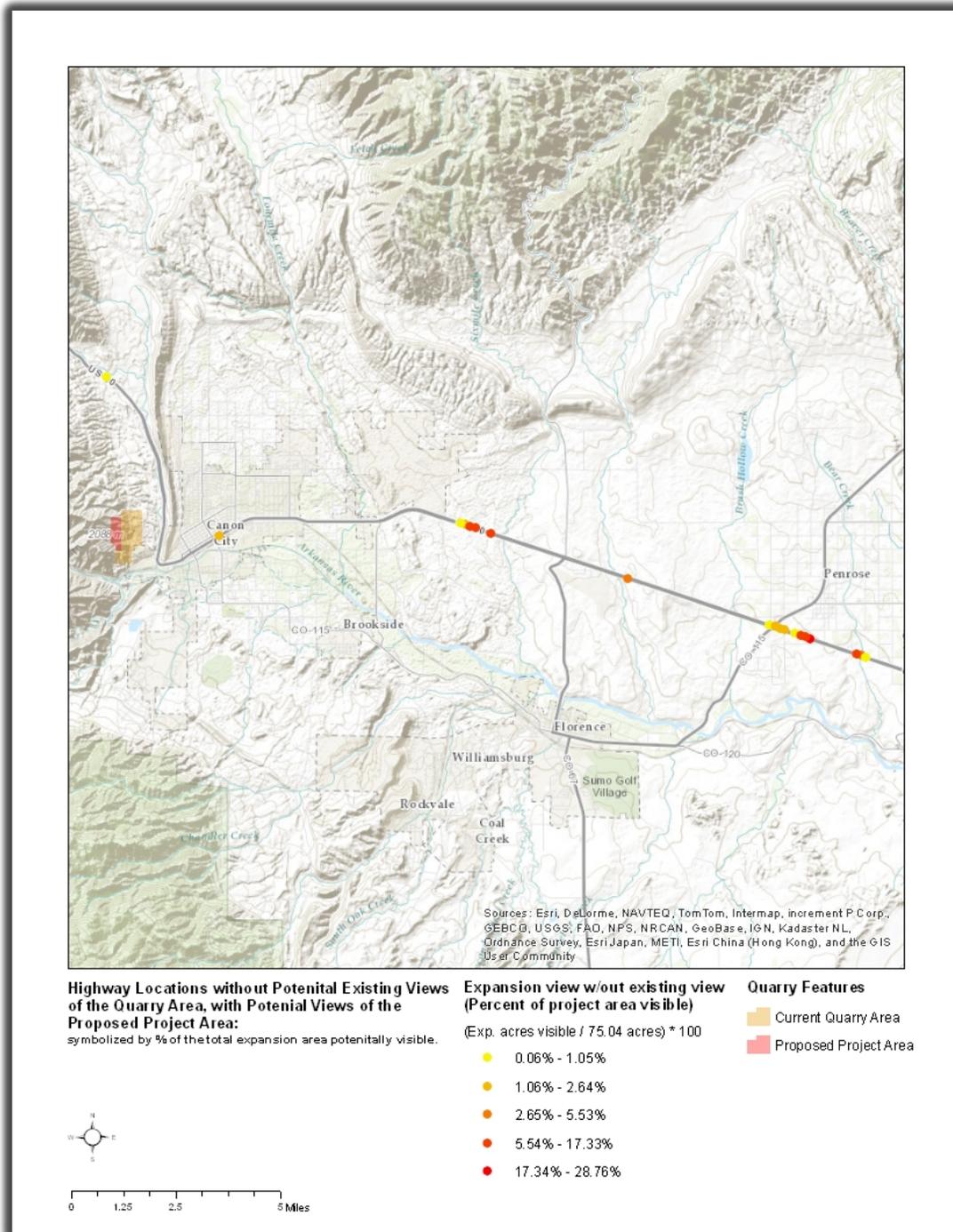
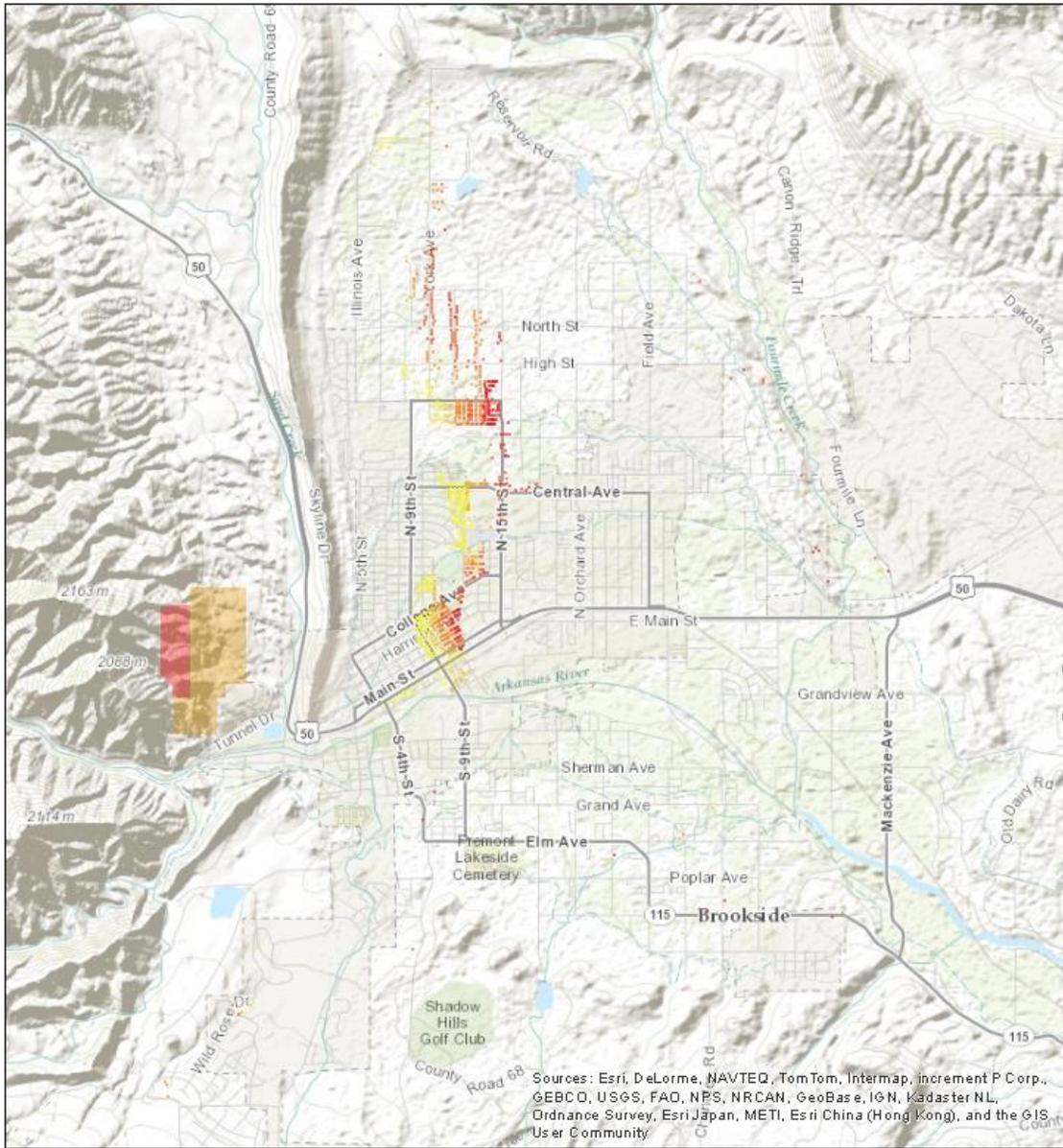


Figure 6

The address point visibility analysis indicated that of the 11,014 known address points that are within a 5 mile radius of the project 1,106 points cannot see the existing quarry but would be able to see the proposed development on BLM managed lands (see Figure 8). In other words 10% of the addresses within 5 miles of the project area would potentially see new contrasts associated with the proposed action. However, due to a limitation in available analysis tools this figure does not take into account trees, buildings, or structures that would obscure views. For instance, the analysis shows that the neighborhood near Canon City High School and St. Thomas Moore Hospital would

see new visual impacts but since this an older high density neighborhood the project area is not readily visible due to obstructions from large trees and buildings. When combined with site visits and local knowledge of on the ground conditions the analysis indicates that the areas near and north of Washington Streets, where there are larger lot sizes and open fields, would realize new contrasts from the proposed action. Other addresses that may incur new contrasts associated with the project occur on the east looking views lots along the ridge above Fourmile Creek (approximately 17 addresses). Approximately 11 addresses in the Dawson Ranch/Wolf Park subdivision may realize new contrasts. Contrasts most readily noticeable by the address point observation locations would be similar to the contrasts created from the existing quarry including contrasts in line and texture associated with the headwall expansion to the north and color associated with the absence of vegetation. Since the proposed project is located in the same geologic structure as the adjacent quarry contrasts in color associated with the headwall would be minimal as evidenced by current conditions.

As with the Highway 50 analysis, the address point analysis also determined the percent of the proposed quarry development that would be visible from these observer points to give readers a better sense as to the extent of disturbance that would actually be visible. From the 1,104 points where viewers would see a new visual contrast approximately 1% to 29% of the proposed development on BLM managed lands would be actually visible (Figure 8). Contrasts most readily noticeable would be similar to the contrasts created from the existing quarry including contrasts in line and texture associated with the headwall expansion to the north and color associated with the absence of vegetation.



Address Locations without Potential Existing Views of the Quarry Area, with Potential Views of the Proposed Project Area:
 symbolized by % of the total expansion area potentially visible.

Expansion view w/out existing view (Percent of project area visible)

(Exp. acres visible / 75.04 acres) * 100

- 0% - 2.13%
- 2.14% - 5.84%
- 5.85% - 10.48%
- 10.49% - 15.85%
- 15.86% - 27.91%

Quarry Features

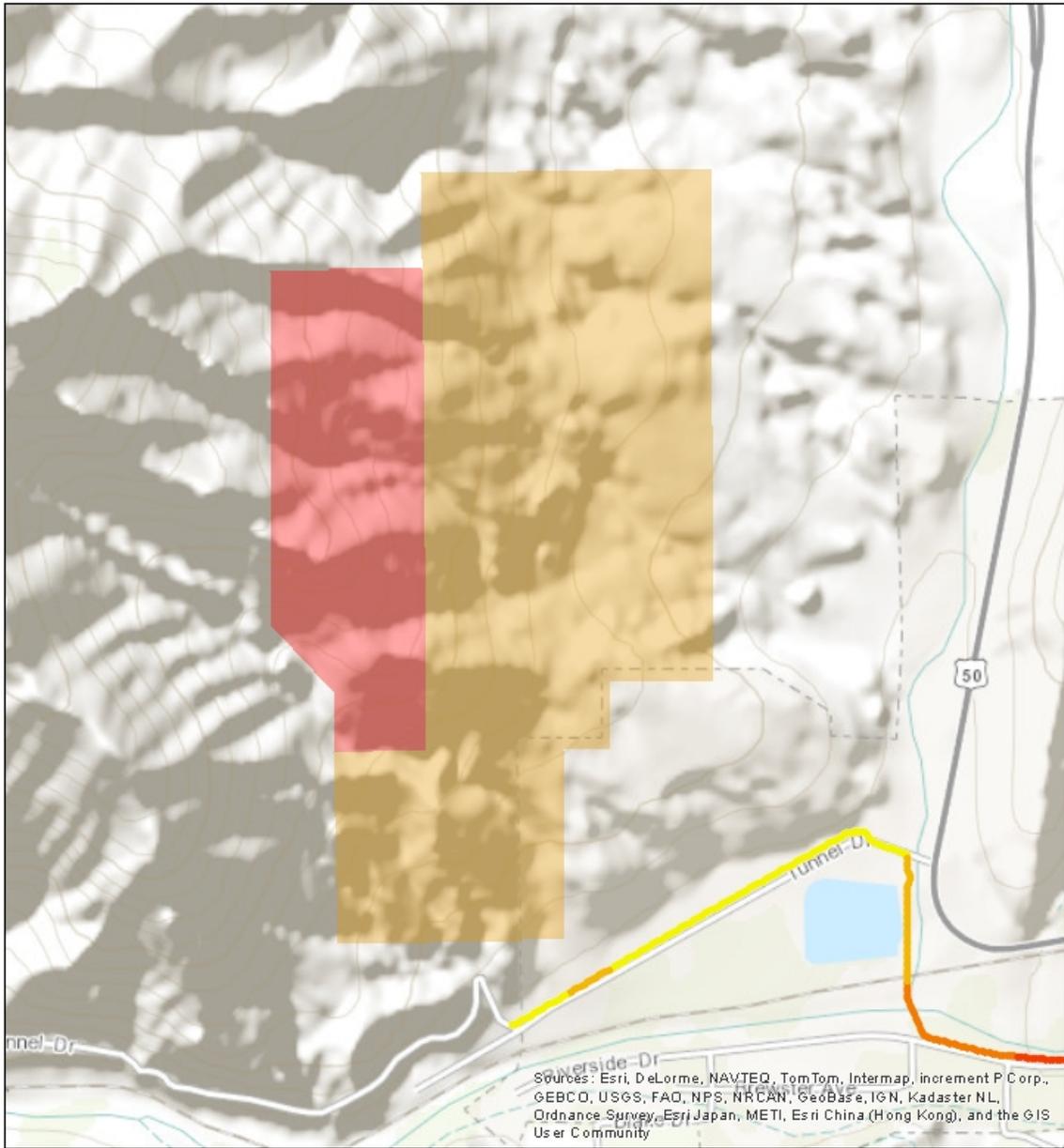
- Current Quarry Area
- Proposed Expansion



0 0.5 1 2 Miles

Figure 7

Several recreation and tourist locations were brought up as concerns during the public scoping process including Skyline Drive and the river walk trail extension to Tunnel Drive. Due to alignment of Skyline Drive along the hogback the entire existing quarry is readily visible including ancillary structures such as building, stock piles and vehicles while one is traveling along the ridgeline. The entirety of the proposed action would also be visible from this location and would further contribute to the existing contrasts already observed including contrasts in line and texture associated with the headwall expansion to the north and color associated with the absence of vegetation. An analysis similar to that ran along Highway 50 was also ran for the extension of the river walk trail to Tunnel Drive and analyzed 60 points along the future trail alignment. This analysis indicates that the existing quarry is most likely visible from all 60 of these locations and can see from 6% to 68% of the current operation (trees and structures were not able to be taken into account). Therefore there would most likely be no new contrasts associated with the proposed action as viewed from the future trail extension.



Skyline/Riverwalk Locations with Potential Existing Views of the Quarry Area:
 symbolized by % of the total quarry area potentially visible.

Locations with existing view (Percent of current area visible)

(Cur. acres visible / 224.34 acres) * 100

- 0.01% - 5.74%
- 5.75% - 14.82%
- 14.83% - 26.77%
- 26.78% - 42.14%
- 42.15% - 67.45%
- ◇ No view

Quarry Features

- Current Quarry Area
- Proposed Project Area

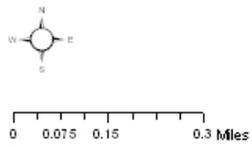


Figure 8

Given the context of the site and the abundance of existing modification to the landscape, including an existing mine with a large headwall and plans for expansion to the north on private land, another existing privately owned quarry to the north, power plants, a prison, fences, roads, and utility lines the impacts from the project area would be largely drowned out. As identified above less than 10% of actual addresses would readily notice a new visual contrast and with taking into account trees and buildings the new contrasts would most likely only be visible from a much smaller percentage of addresses in isolated neighborhoods. As viewed from Highway 50 new contrasts would most likely not be readily realized due to visibility of the existing quarry and the long site distances that new contrasts would be visible from. Casual observers attention while traveling west on highway 50 near this intersection would be focused on the abundance of visual “noise” present in the area that is typical for a commercial district including signs, buildings, and street lights. As travelers approach the west edge of town and move beyond the hogback and the commercial and industrial centers they would most likely begin to notice the existing quarry and proposed project. This particular viewshed has existing contrasts associated with the headwall on private land and light tan cylinders present in the foreground. The proposed action would further contribute to the existing contrasts in this area and create weak contrasts from the existing landscape and man-made modifications and would therefore meet VRM management objectives for this area.

Protective/Mitigation Measures: None

No Action Alternative

Direct and Indirect Impacts: Currently the area has a high level of man-made features and modifications to the landscape that have impacted visual resources in the area. The visibility analysis indicates that of the 369 observation points along Highway 50, the existing quarry is currently visible from 138, or 37%, of these. Of the 11,014 address points analyzed the existing quarry is visible from 8,326, or 75%, of these. This doesn't take into account trees or other obstructions so this figure is much higher than reality and the areas where the existing quarry is most currently visible is from the Dawson Ranch and Wolf Park neighborhoods where they are out of the hogback view shadow, have large lots, and do not have large trees obscuring long distant views. The No Action Alternative would not improve nor detract from the visual resources in this area and the expansion of the headwall north would still occur on private land. Impacts would be similar to that of the proposed action except for the development of the headwall higher up the hillside that introduced a larger area that contributes to contrasts from the natural environment would not occur.

Protective/Mitigation Measures: None

3.4.2 WASTES, HAZARDOUS OR SOLID

Affected Environment: It is assumed that conditions associated with the proposed project site, both surface and subsurface, are currently clean and that there is no known contamination. A determination will be made by the operator prior to initiating the project, if there is evidence that demonstrates otherwise (such as solid or hazardous wastes have been previously used, stored, or disposed of at the project site).

Environmental Effects

Proposed Action

Direct and Indirect Impacts: Possible contaminant sources associated with the mining operations are:

- Storage, use and transfer of petroleum, oil and lubricants
- Explosives
- General hazardous substances, chemicals and/or wastes

Protective/Mitigation Measures:

- If drums are used, secondary containment constructed in accordance with standard industry practices or governing regulations is required. Storage and labeling of drums should be in accordance with recommendations on associated MSDS sheets, to account for chemical characteristics and compatibility.
- Appropriate level of spill kits need to be onsite and in vehicles.
- The project proponent will be responsible for adhering to all applicable local, State and Federal regulations in the event of a spill, which includes following the proper notification procedures in BLM's Spill Contingency Plan.
- No treatment or disposal of wastes on site is allowed.

Nothing in the analysis or approval of this action by BLM authorizes or in any way permits a release or threat of a release of hazardous materials (as defined under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations) into the environment that will require a response action or result in the incurrence of response costs.

No Action Alternative

Direct and Indirect Impacts: None.

Protective/Mitigation Measures: None.

3.5 LAND RESOURCES

3.5.1 FOREST MANAGEMENT

Affected Environment: The forest type found in the project area is piñon pine and one seed juniper which is typically called piñon/juniper woodlands. The woodlands in this area are not considered extremely dense and fairly open when compared to most piñon and juniper stands found in the field office. The trees found in the project area are hardy, drought-tolerant trees and well suited to the project landscape. Forest management recommendations to ensure optimum tree health include providing adequate spacing, water, and avoiding wounding of the trees. Due to the terrain and access in the project area, this forest is highly unlikely to ever receive any intensive forest management.

There is an on-going piñon IPS bark beetle outbreak in this region of the Royal Gorge Field Office. If thinning is done well in advance of the outbreak it can improve individual tree vigor and their ability to repel IPS beetle attacks. However, the cutting trees or removing trees during the flight period is likely to attract IPS beetles to the area and exacerbate the tree mortality through the release of terpenes.

Environmental Effects

Proposed Action

Direct and Indirect Impacts: 79 acres will be deforested or void of trees for many years. Once the site is reclaimed and seeded, trees are likely to slowly become reestablished on the site.

Protective/Mitigation Measures: 1 month before any ground disturbing activities commence the RGFO forester shall be notified, provided access to the BLM lands, and complete an estimate of the volume of the trees to be removed. The mining operator shall purchase the amount of firewood estimate by the forester at the rate of \$10/cord. The cutting or removal of the trees from the site must be conducted outside of the flight period, from November through March, to avoid exacerbating the bark beetle situation.

No Action Alternative

Direct and Indirect Impacts: None, the forest condition shall remain unchanged from existing condition.

Protective/Mitigation Measures: None

3.6 CUMULATIVE IMPACTS SUMMARY

Geologic and Mineral Resources: Currently, there are approximately four other quarries within a 5-mile radius that produce sand and gravel type commodities. However these operations, along with Tezak, appear to be targeting a majority of the material for internal uses in conjunction with work they are conducting on a regional scale, rather than only selling the commodity outright on a retail market. The long term needs for construction materials involved with highway projects, buildings, etc. within southern Colorado will continue to remain, although the demands may exhibit some small-scale fluctuations based on economic conditions within a given timeframe.

Soils: The proposal lies in the Sand Creek watershed. This watershed is affected by many different ongoing and historic activities including quarries, grazing, housing, and roads. The proposed development of the quarry on the subject BLM parcel would result in an additional 78 acres of soils on public land being taken out of production. In addition, the quarry would still expand on private lands to the east. Given the proximity to the city, it can be expected that this watershed will continue to be heavily impacted by further development in the future.

Wildlife and Migratory Birds: The project area is adjacent to an existing quarry, expanding the impact of this activity. Nearby are many anthropogenic features that impact wildlife: a municipality, railway, a tourist attraction (Royal Gorge), a major highway, etc. The landscape surrounding the project area is not pristine habitat; however, it is habitat nonetheless. Grazing use by domestic livestock occurs on public and private land within the area. Livestock grazing and other activities such as mining and logging have occurred in the area for over one hundred years. Within the last fifteen to twenty years, recreation and residential development has increased markedly resulting in increased road and trail densities. All of these factors result in cumulative impacts to wildlife habitat.

Forest Management: The proposed action will result in the loss of trees or deforestation on 79 acres within the Royal Gorge Field Office. It is believed by most forest experts that the piñon and juniper woodlands have greatly expanded their historic range over the past 100 years and have become denser than historic conditions, which should offset the loss of trees from this site. Due to access, terrain and location the loss of the trees from this site will have no future impacts to forest management.

Visual Resources: The proposed action will create contrasts with the surrounding natural environment and contribute to the overall visual impacts currently occurring in the area. Multiple quarries in the area along with industrial and municipal development have created strong contrasts with the surrounding natural environment in color, shape, line and texture degrading the overall scenic qualities of the area. Given the interest in minerals in the the various geologic formations in this area it is anticipated that this type of development will continue in the future further impacting visual resources. The proposed action contributes to this overall impact and further degrading of visual resources.

CHAPTER 4 - CONSULTATION AND COORDINATION

4.1 LIST OF PREPARERS AND PARTICIPANTS

Please see Interdisciplinary Team Review list for BLM Participants.

4.2 TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED

Colorado Division of Reclamation, Mining and Safety
Fremont County

The BLM contacted the following tribes: Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes of Oklahoma, Cheyenne River Sioux Tribe, Comanche Tribe of Oklahoma, Crow Creek Sioux, Eastern Shoshone, Jicarilla Apache Nation, Kiowa Tribe of Oklahoma, Northern Arapaho Tribe, Northern Cheyenne Tribe, the Ute Tribe, Oglala Sioux Tribe, Rosebud Sioux Tribe, Southern Ute Tribe, Standing Rock Lakota Tribe, and the Ute Mountain Ute Tribe.

CHAPTER 5 - REFERENCES

Bureau of Land Management (BLM). 1995. Proposed Resource Management Plan and Final Environmental Impact Statement. Royal Gorge Resource Area. Canon City, Colorado.

Bureau of Land Management. 1996. Royal Gorge Resource Area Resource Management Plan and Record of Decision. Canon City District. Canon City, Colorado.

Bureau of Land Management. 2008. H-1790-1 National Environmental Policy Handbook. Washington, D.C.

Colorado Mined Land Reclamation Board. 1995. Mineral Rules and Regulations for the Extraction of Construction Materials. Denver, Colorado.

Colorado Division of Reclamation, Mining and Safety. Document Management System. Database on the website.

Finding Of No Significant Impact (FONSI)

DOI-BLM-CO-200-2011-0092 EA

Based on review of the EA and the supporting documents, I have determined that the project is not a major federal action and will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects from any alternative assessed or evaluated meet the definition of significance in context or intensity, as defined by 43 CFR 1508.27. Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project as described below.

RATIONALE:

Context:

The proposed mineral material disposal is located on approximately 78-acres of BLM, west of the town of Canon City in Fremont County and is surrounded by other industrial uses and residential area within the town of Canon City to the east. This parcel predominately consists of steep and rocky terrain, lying within a dry, upland located Arkansas River watershed.

Extensive mining is still occurring in the area of this subject parcel, primarily on exposed outcrops north and east of the subject BLM location. The minerals associated with this parcel are open to the Public Land Laws, which include the Mineral Materials Act of 1947.

The area is very diverse and includes grazing lands, mining operations, industrial facilities, businesses and residential areas along a main access corridor from Canon City west to Salida, along Highway 50. The addition of this mineral material disposal would have a negligible cumulative impact to the area's air quality, noise or negative alteration of social environments.

Intensity:

Impacts that may be beneficial and adverse: Through the environmental analysis, it has become apparent that adverse impacts to the human and natural environment can be managed and mitigated.

Below is a summary of the identified impacts and associated mitigation for each of the resources areas:

- There will be minor affects to air quality, which includes the potential for fugitive dust emissions. Mitigation measures are addressed in the decision record.
- There will be minor affects to visual resources. The proposed action would further contribute to the existing contrasts in this area, as well as create weak contrasts from the existing landscape and man-made modifications. The proposed action would therefore meet VRM management objectives for this area.
-

Below is a summary of the benefits associated with this proposed action:

- Possible sale of aggregate to Fremont County at a reduced rate.
- Local jobs created and/or sustained in Fremont County.
- Real and property tax and sales tax being paid to local governments.
- Equipment licensing paid to local government.
- Fair market value royalties for the material will contribute to the U.S. Treasury General Fund.
- Mineral resources extracted for use in a variety of local and regional markets, such as construction projects, stream bank protection, landscaping, asphalt and concrete products.
- Benefits to the local economy through the purchase of inputs to production associated with the proposed action.

Public health and safety: The proposed action will not have significant impacts to air or water quality. In addition, physical safety is addressed during the mining operations through administrative and engineered controls outlined within this EA and mandated by MSHA (Mining, Safety and Health Administration).

Unique characteristics of the geographic area: The EA evaluated the area of the Proposed Action and determined that no unique geographic characteristics such as: wild and scenic rivers, prime or unique farmlands, areas of critical environmental concern or designated wilderness areas or wilderness study areas were present.

Degree to which effects are likely to be highly controversial: The potential for controversy associated with the effects of the proposed action on resource values is low. There is no disagreement or controversy among ID team members or reviewers over the nature of the effects on the resource values on public land by the proposed action.

Degree to which effects are highly uncertain or involve unique or unknown risks: The mining of mineral materials has occurred in this area throughout the past few decades and although the potential risks involved can be controversial, they are neither unique nor unknown. The proposed operation consists of industry standard practices, resulting in impacts that would normally be expected from an activity being accomplished in compliance with current standards and regulations and based on sound practices. There is low potential of unknown or unique risks associated with this project due to the nature of the proposed operation and similar mining activity already occurring in the area.

Consideration of whether the action may establish a precedent for future actions with significant impacts: There are no aspects of the current proposal that are precedent setting and implementation of the proposed project will be in accordance with standard practices that are consistent with other allowable operations involving BLM managed surface.

Consideration of whether the action is related to other actions with cumulatively significant impacts:

Currently, there are approximately four other quarries within a 5-mile radius that produce sand and gravel type commodities. However these operations, along with the adjacent Tezak quarry, appear to be targeting a portion of the material for internal uses in conjunction with work they are

conducting on a regional scale rather than only selling the commodity outright on a retail market. The long term needs for construction materials involved with highway projects, buildings, etc. within southern Colorado will continue to remain, although the demands may exhibit some small-scale fluctuations based on economic conditions within a given timeframe.

Scientific, cultural or historical resources, including those listed in or eligible for listing in the National Register of Historic Places: Only a single historic site is present in the vicinity of the area of potential effect [see Report CR-RG-12-54(N); CR-RG-13-55 (P)]. Although historic site 5FN.2730 was recorded during the cultural resources inventory, it is not eligible for the National Register of Historic Places. Therefore, no historic properties will be affected by the proposed undertaking. A consultation with potentially interested Native American tribes has been completed, and no concerns were identified. The BLM contacted the following tribes: Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes of Oklahoma, Cheyenne River Sioux Tribe, Comanche Tribe of Oklahoma, Crow Creek Sioux, Eastern Shoshone, Jicarilla Apache Nation, Kiowa Tribe of Oklahoma, Northern Arapaho Tribe, Northern Cheyenne Tribe, the Ute Tribe, Oglala Sioux Tribe, Rosebud Sioux Tribe, Southern Ute Tribe, Standing Rock Lakota Tribe, and the Ute Mountain Ute Tribe.

Threatened and endangered species and their critical habitat: Peregrine and Golden Eagles nest within the Royal Gorge; however, the nearest nest is more than three miles away. No known threatened and endangered or sensitive species are present within the action area.

Any effects that threaten a violation of Federal, State or local law or requirements imposed for the protection of the environment: The proposed action conforms with the provisions of NEPA (U.S.C. 4321-4346) and FLPMA (43 U.S.C. 1701 et seq.) and is compliant with the Clean Water Act and The Clean Air Act, the National Historic Preservation Act, The Endangered Species Act and The Migratory Bird Treaty Act (MBTA).

NAME OF PREPARER: Stephanie Carter

SUPERVISORY REVIEW: Jay Raiford

NAME OF ENVIRONMENTAL COORDINATOR: /s/ Martin Weimer

DATE: 12/20/12

SIGNATURE OF AUTHORIZED OFFICIAL:

/s/ Keith E. Berger
Keith E. Berger, Field Manager

DATE SIGNED: 12/20/12

APPENDICES:
ATTACHMENTS:

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ROYAL GORGE FIELD OFFICE**

DECISION RECORD

**Mineral Materials Competitive Sale in Fremont County, CO
DOI-BLM-CO-200-2011-0092-EA**

DECISION: It is my decision to authorize the Proposed Action as described in the attached EA. The proposal is to receive a mineral materials contract for 450,000 tons annually for 10 years, with an option to renew. The proposed action involves mineral materials reserves resulting in an additive mine life of approximately 20-25 years.

The proposed quarry development area is located on a portion of a BLM parcel, just west of the town of Canon City. The 78.72 acres proposed for disposal are located adjacent to an existing quarry located on private estate and within the “Agricultural, Farming & Ranching, Agricultural Forestry and Industrial Zone District” of Fremont County.

Per the applicant, mining is proposed to commence in 2012 from the southeastern corner of the proposed BLM Mineral Material contract area with surface leveling and bench development work from the top of existing highwall at boundary line 660’ west and 660’ north of the southeast corner of the proposed contract area. Rock crushing, screening, sizing, and stockpiling circuits will be utilized with this mine plan. Periodic blasting techniques will be utilized for progression of the working face, which would be advanced west and then north on the subject BLM parcel.

The southeastern corner of the proposed contract area is anticipated to be accessed from a roadway developed from the adjacent Tezak mine property along the central portion of the active mining zone north of the largest highwall face currently exposed along the western boundary of the property with proposed BLM Mineral Material contract area.

RATIONALE: This mineral materials disposal will develop federal sand and gravel resources. Extensive mining currently exists in the area of this subject parcel, primarily within along the Highway 50 corridor, due to attainable access. The minerals associated with this parcel are open to the Public Land Laws.

The area is very diverse and includes grazing lands, mining operations, industrial facilities, businesses and residential areas along a main access corridor from Canon City west to Salida, along Highway 50. The addition of this mineral material disposal would have a negligible cumulative impact to the area’s air quality, noise or negative alteration of social environments.

MITIGATION MEASURES\MONITORING:

Air Quality and Climate

- Compliance with all applicable State and Federal regulations.
- Adequate soil moisture must be maintained in topsoil and overburden to control emissions during removal. Watering shall be implemented, if necessary.
- Drilling of blast holes shall be controlled by water injection and bag collectors on the drills.

- Emissions from material handling shall be controlled by watering at all times unless natural moisture is sufficient to control emissions.
- Vehicle speed on unpaved roads and disturbed areas shall not exceed a maximum of 20 mph (or less, if stipulated by the Colorado Air Pollution control Division). Speed limit signs shall be posted.
- Vehicle speed on haul roads and service roads shall be restricted to 20 mph (or less, if stipulated by the Colorado Air Pollution control Division). Speed limit signs shall be posted.
- Unpaved haul roads shall be watered as often as needed to control fugitive particulate emissions such that the above guidelines are met.
- Reclamation works and sequential extraction of material shall be initiated to keep the total disturbed areas at any one time to a minimum.
- Material stockpiles shall be watered as necessary to control fugitive particulate emissions. Aggregate materials shall be sprayed with water during material loading into the storage bins or stockpiles.
- Plant entryway, truck service roads, haul roads, and concrete batching areas shall be graveled. Watering shall be implemented if emission guidelines above are not met.

Migratory Birds

- To be in compliance with the Migratory Bird Treaty Act (MBTA) and the Memorandum of Understanding between BLM and USFWS required by Executive Order 13186, BLM must avoid actions, where possible, that result in a “take” of migratory birds. Generally this is a seasonal restriction that requires vegetation disturbance be avoided from May 15 thru July 15. This is the breeding and brood rearing season for most Colorado migratory birds. The clearing of vegetation during quarry operation will be completed outside these dates to prevent the “take” of migratory bird nests. However, if vegetation clearing is completed prior to the nesting season, quarry operation may occur during the restricted period.
- An exception to this timing limitation will be granted if nesting surveys conducted no more than one week prior to surface-disturbing activities indicate no nesting within 30 meters (100 feet) of the area to be disturbed. Surveys shall be conducted by a qualified breeding bird surveyor between sunrise and 10:00 a.m. under favorable conditions. This provision does not apply to ongoing construction, drilling, or completion activities that are initiated prior to May 15 and continue into the 60-day period.

Visual Resources

- If applicable, it is recommended that the headwall be colored to better blend with the surrounding natural environment depending upon actual headwall color as it is developed.

Wastes, Hazardous or Solid

- If drums are used, secondary containment constructed in accordance with standard industry practices or governing regulations is required. Storage and labeling of drums should be in accordance with recommendations on associated MSDS sheets, to account for chemical characteristics and compatibility.
- Appropriate level of spill kits need to be onsite and in vehicles.

- The project proponent will be responsible for adhering to all applicable local, State and Federal regulations in the event of a spill, which includes following the proper notification procedures in BLM’s Spill Contingency Plan.
- No treatment or disposal of wastes on site is allowed.
- Nothing in the analysis or approval of this action by BLM authorizes or in any way permits a release or threat of a release of hazardous materials (as defined under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations) into the environment that will require a response action or result in the incurrence of response costs.

Forest Management

- 1 month before any ground disturbing activities commence the RGFO forester shall be notified, provided access to the BLM lands, and complete an estimate of the volume of the trees to be removed. The mining operator shall purchase the amount of firewood estimate by the forester at the rate of \$10/cord. The cutting or removal of the trees from the site must be conducted outside of the flight period, from November through March, to avoid exacerbating the bark beetle situation.

PROTEST/APPEALS: This decision shall take effect immediately upon the date it is signed by the Authorized Officer, and shall remain in effect while any appeal is pending unless the Interior Board of Land Appeals issues a stay (43 CFR 2801.10(b)). Any appeal of this decision must follow the procedures set forth in 43 CFR Part 4. Within 30 days of the decision, a notice of appeal must be filed in the office of the Authorized Officer at the BLM Royal Gorge Field Office, 3028 E. Main, Cañon City, Colorado, 81212. If a statement of reasons for the appeal is not included with the notice, it must be filed with the Interior Board of Land Appeals, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203 within 30 days after the notice of appeal is filed with the Authorized Officer.

SIGNATURE OF AUTHORIZED OFFICIAL:

/s/ Keith E. Berger
Keith E. Berger, Field Manager

DATE SIGNED: 12/20/12