Environmental Assessment
DOI-BLM-NV-W010-2013-0012-EA

PERSHING COUNTY ROAD DEPARTMENT FREE USE PERMIT RENEWALS and EXPANSIONS and COMMUNITY PIT DESIGNATIONS

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BLM

Winnemucca District Office/Nevada

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Environmental Assessment

Pershing County Road Department Free Use Permit Renewals and Expansions and Community Pit Designations

1.0 INTRODUCTION

The Bureau of Land Management Winnemucca District Office (BLM) is conducting an Environmental Assessment (EA) to analyze the effect on the human environment of authorizing the disposal of mineral materials from 35 sites located throughout Pershing County, Nevada. Of these 35 sites, Pershing County Road Department seeks new Free Use Permits (FUP) for 5 mineral material sites, and FUP renewals for 28 of the mineral material sites. The remaining two mineral material sites (Humboldt River Ranch and Sonoma Canyon) are being considered for community pit designation only. Of the 33 mineral material sites being analyzed for FUP or FUP renewals, 17 are being analyzed for possible expansion.

This EA also analyzes the effect of the BLM's proposed designation of 34 community pits, including the Humboldt River Ranch and Sonoma Canyon mineral material sites. The remaining mineral material site (Irish American pit) is an existing community pit and is being considered for FUP renewal only.

Pershing County Road Department:

The Pershing County Road Department (PCRD) conducts construction and maintenance on over 1,000 miles of roads in rural Pershing County. The 1,000 miles of roads in Pershing County includes 914 miles of gravel roads and 86 miles of paved roads that require periodic shoulder work and resurfacing. To complete the required maintenance of roads within Pershing County, the PCRD has been mining and removing sand and gravel (mineral materials) from over 40 mineral material sites within the county. The BLM grants free use of the materials to PCRD for road maintenance and construction under the 43 CFR 3604 regulations.

The last time the BLM issued FUPs to the PCRD was in 1998 for a ten-year permit term for 37 permits. Prior to the expiration of these 37 permits in 2008, a one year extension was granted as per 43 CFR 3604.21(b). All FUPs previously granted to PCRD are presently expired with the exception of the Big Five, Butcher Canyon, Dixie Cut-off, Fencemaker, Garavanta, Golconda Canyon, Irish American, Jersey Valley, Pleasant Valley, Rye Patch Reservoir, and Seven Troughs Y mineral material sites. The earliest of these permits will expire in 2014, while the rest will expire in 2016, 2017, and 2020.

PCRD has applied for the renewal of 28 of the previously permitted 37 FUPs. PCRD does not propose to renew the balance of the expired permits at this time. Although the FUPs have

expired, the reclamation and closure process for the mineral material sites, per FUP stipulations, has not been initiated to allow the BLM to evaluate whether or not to keep any of the mineral material sites open for other purposes. PCRD has also requested FUPs from 5 locations that would be new mineral material sites.

Other Users:

The public and other interested parties also have a need of these mineral material sites for various purposes. The BLM allows for the public to purchase mineral materials from the locations at fair market costs under the 43 CFR 3602 regulations utilizing a standard mineral materials contract. Under the present system, the process of authorizing even small sales of sand and gravel may take several weeks. This involves scheduling interdisciplinary meetings, preparation of documents in compliance with the National Environmental Policy Act, contracts, and data processing. The BLM is required to charge the applicant for the costs involved in processing these small, mineral material sales. BLM, other government entities and non-profit organizations may also request FUP for materials under the regulations. These FUP go through a similar review process prior to issuance.

To facilitate the public's need of materials from such locations, the BLM is proposing to designate 34 of the mineral material sites as new community pits. This comprises approximately 703 acres of previously permitted area. One of the mineral material sites being evaluated in this EA has been previously designated as a community pit, and is being recommended for expansion, to allow for future growth.

1.1. Purpose and Need

The purpose of the action is to:

1. Respond to PCRD's application under the 43 CFR 3600 regulations to renew 27 FUPs and authorize 6 new FUPs and;
2. Designate community pit locations**.**

The need for action is driven by BLM's policy to manage public lands in a manner that recognizes the Nation's need for domestic sources of minerals (Federal Land Policy and Management Act of 1976 Sec. 102(12)), to make mineral materials available (43 CFR 3601.6 (a)), and to permit local government entities free use of these materials for qualified purposes (43 CFR 3601.6 (c)).

1.2. Land Use Plan Conformance

The action is in conformance with the Sonoma-Gerlach Resource Area Management Framework Plan (MFP) dated July 9, 1982. Although the action is not specifically addressed, objective M-1

states “Make all public lands and other federally owned minerals available for the exploration and development of mineral and material commodities.” In addition, objective M-3 states “Provide sand, gravel, and other mineral materials as needed for construction purposes to federal, state, local government, private industries, and individuals”.

The action is in conformance with the Resource Management Plan for Black Rock Desert-High Rock Canyon-Emigrant Trails National Conservation Area and Associated Wilderness and Other Lands in Nevada. Record of Decision dated July 2004 in the following decision:

> Saleable Minerals Management Min-5
>
> Gravel pits and rock sources may be permitted, developed and used for the maintenance of roads under the terms of the Mineral Materials Act of 1947, consistent with the NCA Act.

1.3. Relationship to Laws, Regulations and Other Plans

The surface and mineral estates of the proposed material sites are in federal ownership, and are administered by the BLM. BLM's authority to dispose of sand, gravel, and other mineral and vegetative materials that are not subject to mineral leasing or location under the mining laws is the Act of July 31, 1947, as amended (30 U.S.C. 601 *et seq.*), commonly referred to as the Materials Act, and the Federal Land Policy and Management Act of 1976 (FLPMA), as amended.

The Materials Act of 1947 established the foundation of the mineral material sales and free-use program (43 CFR 3600). BLM conducts sales and grants free use of the materials pursuant to these regulations.

The BLM has authorization to establish community pits through 43 CFR 3603.10(a). This subpart states that BLM may make mineral material sales and allow free use under permit from the same deposit within areas designated for that purpose. The public would be able to purchase small amounts of mineral materials from these community pits over the counter, utilizing a permit rather than the more complicated contract process. This would improve the customer service BLM provides in terms of saving time and costs. In the event that a sale from one of the community pits would involve a larger amount of material, or if more than 90 days is needed, then a contract would be prepared.

There are no pre-1955 mining claims on the subject lands. On July 23, 1955, 30 USC 611 specified that common varieties of sand and gravel would no longer be considered valuable mineral deposits and would not be locatable. If there were pre-1955 mining claims present, the BLM would not be able to conduct mineral material disposals from these claims. In the event that existing, or new, mining claims are found to have been located over any of these 35 material

sites a waiver from the claimant would be obtained before authorization of mineral material disposal.

The Department of the Interior issued a Solicitors Opinion on June 9, 1999 concluding that the Secretary may dispose of mineral materials on lands with unpatented mining claims. This was codified in 43 CFR 3601.14.

Nevada State law requires the applicant to conform to air quality regulations (Nevada revised Statutes Chapter 445B and Nevada Administrative Code Chapter 445B).

Implementation of the Proposed Action would in effect reserve the areas for mineral materials extraction. Community pit designations would go on the BLM's master title plats and, while that is in effect, would establish a right to remove the materials superior to any subsequent claim or entry of the lands (43 CFR 3603.11).

1.4. Decision to be Made

The BLM will determine whether to renew 28 FUPs and authorize 6 new FUPs requested by PCRD. The BLM will also determine which material sites should be designated as community pits and which sites are appropriate for expansion.

1.5. Scoping and Identification of Issues

An internal scoping process was conducted in order to determine the scope of this EA. The scoping process began with an interdisciplinary team meeting held at the BLM office in Winnemucca on April 14, 2010. At this meeting, the BLM staff defined issues and made an initial determination of what needed to be analyzed in this EA, data needs, possible alternatives, and public outreach needs.

This meeting was followed by external scoping under which other agencies, organizations, tribes, local governments, and the general public were offered the opportunity to provide feedback regarding issues, concerns, data needs and such things as potential alternatives. This assists the BLM in refining issues, identifying any new issues, coordination needs, and possible alternatives. A letter and map were sent to a mailing list of potentially interested public on April 27, 2010. The scoping letter and map were also posted on the BLM's Winnemucca District National Environmental Policy Act (NEPA) web page (http://www.blm.gov/nv/st/en/fo/wfo/blm_information/nepa0.html).

Based on internal and external scoping, the following issues were identified as concerns from the implementation of the Proposed Action:

- How would fugitive dust emissions be controlled?

- Would any toxic materials be released to the atmosphere as a result of the Proposed Action (i.e. arsenic as a result of crushing)?
- What impact would the Proposed Action cause to cultural resources?
- How would the Proposed Action impact threatened or endangered species or special status species?
- Access:
    - Would PCRD need an easement or Right-of-Way to access any of the mineral material sites?
    - Would the public have free and unhindered access to all of the proposed community pit sites?
- What impact would the mineral material sites have to VRM Class II areas?
- Would the Proposed Action increase habitat fragmentation and, if so, to what degree?

2.0 PROPOSED ACTION

2.1. PCRD New Free Use Permits, Free Use Permit Renewals, BLM Community Pit Designations, and Expansions

The proposed action is to provide mineral materials to PCRD and to public individuals from up to thirty five (35) mineral material sites throughout Pershing County, Nevada.

The BLM would provide mineral materials to PCRD through 33 FUP authorizations. PCRD has previously held FUP authorizations in 28 of the 35 mineral material sites. Five of the 35 proposed mineral material sites would be new FUP authorizations; however, unauthorized gravel pits already exist at each of the 5 locations. Two of the 35 mineral material sites would be designated as community pits only, with no FUP authorizations at this time. The FUP terms would not exceed 10 years.

The BLM would provide mineral materials to public individuals through permit and contract sales out of the designated community pits. Thirty-four of the 35 proposed mineral material sites would be designated as new community pits. The Irish American mineral material site has already been designated as a community pit within Pershing County. All community pits would have signs posted in conspicuous locations that would identify the material site as a community pit and provide information on how to obtain materials.

As part of the proposed action, 17 mineral material sites would be expanded by a combined total of 430.5 acres to provide adequate material for the years to come. The current and previous mineral material site surface disturbance authorization totals approximately 659 acres. The

proposed action would authorize a total of 1,202 acres of surface disturbance, an increase of 543 acres.

As the mineral material resource is exhausted or need for the material is diminished, the mineral material sites would be reclaimed and closed as specified in the stipulations that accompany the FUPs (Appendix I). For more information, refer to the "List of PCRD Free Use Permits and Community Pits" (Table 1) and Figure 1 which shows all of the mineral material sites being evaluated in this analysis. There is also a detailed description of the material sites in Chapter 3 of this document.

2.1.1. Operations

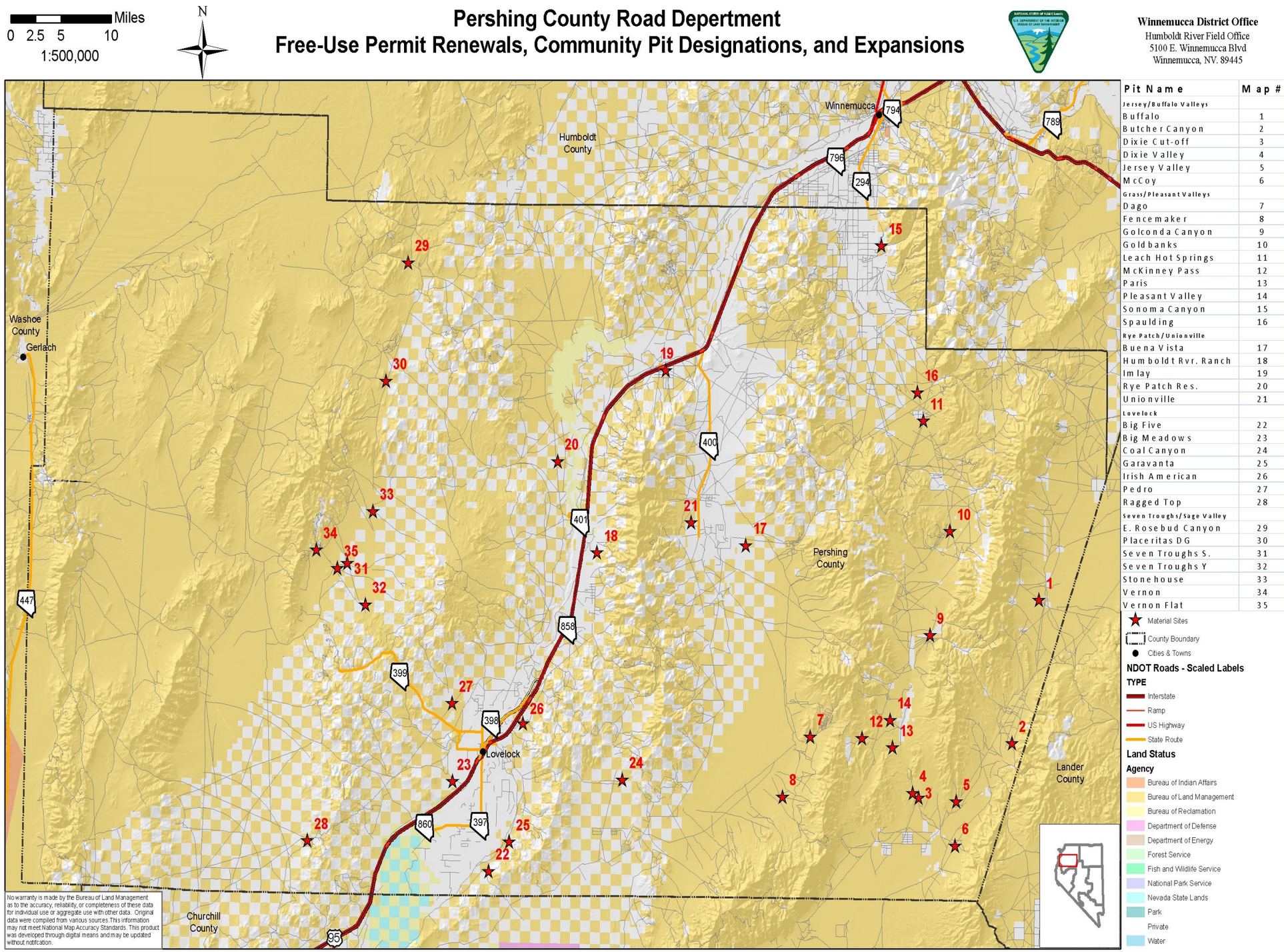
Both Pershing County and the public would strip and stockpile any overburden consisting of topsoil and fines from areas that they intend to remove sand and gravel. Though the entire mixture (overburden plus gravel) is preferred by operators because it acts as a binder, the operator would be required to save the overburden as it is a growth medium used for reclamation and revegetation when the permitted mineral material site areas reach exhaustion. Overburden removal would only be completed when expanding into areas that had not already been pre-striped by prior activities.

A mining and reclamation plan would be prepared for each of the material sites as a prerequisite for establishing community pit designations and renewing the FUPs. Most plans would be fairly uniform; however, each mineral material site may have one or more unique items that are addressed in additional stipulations appended to the Winnemucca District Office Stipulations (Appendix I) that would accompany each FUP and sale contracts for individual material sales. These stipulations would be signed and dated by the person or company purchasing the mineral materials.

In addition, a reclamation fee has been calculated based on the acreage disturbed, and a cost per cubic yard would be charged from every sale from these designated community pits. This charge is itemized on the sales permit and the fees are to be sent into a special reclamation account. Thus individuals with small sales within these community pits would not actually perform the reclamation work. At the final conclusion of mining, when the individual community pits reach exhaustion, these fees are applied to the final reclamation costs.

On the other hand, under contract sales exceeding $2,000, the applicant may be required to provide a performance bond which is based on the calculated value of reclamation costs. In the event the reclamation work was not done, the bond would be forfeited and the funds would be used to hire a contractor to do the reclamation work. In the event that final conclusion of mining occurs while the county is using the mineral material site they will reclaim the site as per the Free Use Stipulations that accompany the individual FUPs (Appendix I).

Figure 1-Proposed material site locations.



The actual mining and removal of the sand and gravel would utilize a variety of heavy equipment including bull-dozers, scrapers, front-end loaders and various sized haul trucks. Bulk fuels and lubricants would be available on site as work is carried out by the county and various public customers. These materials would not be stored on site. Both the county and the public may also use a screening and/or a crushing plant at the sites. This type of equipment is mobile and would move from site to site, such as in the case of the county, as the need arose. All equipment would be removed from the material sites at the conclusion of a material sale as specified in the contracts. The majority of small material sales operators would not use these specialized screening/crushing plants and would simply load from a bank of gravel and remove the gravel to a job site. Over-sized boulders and cobbles may also be stockpiled as it has been determined that the over-sized rocks are a sought after material and consequently are quite saleable. Between operating periods the pit walls would be maintained at a slope ratio not to exceed 2h:1v (horizontal: vertical). Upon final pit exhaustion, the reclamation would consist of burial of all fines and any remaining over-sized material, re-contouring the pit walls to a 3h:1v slope, scarifying the pit floors and access roads, spreading the stockpiled topsoil over the pit area, and seeding the area with an approved Winnemucca BLM seed mixture.

Occupancy of the various FUP mineral material sites is a possibility during actual periods of work activity. The majority of occupancy would only be the presence of a piece of equipment such as a front-end loader or a back-hoe that was left on site during the mining and removal of the material. These activities tend to be of short duration, occurring for a few days or a week in a year, over a contract with perhaps a five year term. Occasionally, a larger piece of equipment such as a screening plant might be left in a mineral material site during a project. These are all portable units and would be removed at the end of a project. Usually a stockpile of processed materials is created which is then drawn from as needed.

The corner boundaries of all community pits would be marked with steel posts. This would reduce expansion into unauthorized areas, and identify the actual physical material location on the ground. All community pits would have signs posted in conspicuous locations that would identify the mineral material site as a community pit and provide information on how to obtain materials.

All of the proposed mineral material sites would be accessed by existing roads. Many of the mineral material sites parallel the county roads, but those that do not, already have existing access roads. Pershing County would not be required to obtain an easement or right-of-way on any of the mineral material sites being proposed for a FUP renewal. No material site would hinder access through the site location.

There are a total of 543 acres of new surface disturbance proposed that would result from the expansion, creation, and designation of 35 mineral material sites. (Map 1) Each material site is discussed below in alphabetical order, within 5 geographical areas that share similar physical environments, from east to west.

Each separate material site is accompanied by a 1:100,000 scale map (Map #a) showing the larger area, a 1:24,000 scale map (Map #b) illustrating a more detailed view of the area, and a 1:10,000 scale aerial photograph (Map #c).

Table 1- List of Proposed PCRD Free Use Permits and Community Pits

Mineral Material Site Name	**Proposed Action**				**Map Number**
	Renew FUP (acres)	**New FUP (acres)**	**Expansion (by acres)**	**Community Pit (acres)***	
Jersey/Buffalo Valleys Geographic Zone					
Buffalo	X (40)			X	**1**
Butcher Canyon	X (5)		X (5)	X	**2**
Dixie Cut-off	X (5)		X (3.5)	X	**3**
Dixie Valley		X (14)		X	**4**
Jersey Valley	X (5)			X	**5**
McCoy	X (40)			X	**6**
Grass/Pleasant Valleys Geographic Zone					
Dago	X (40)		X (2)	X	**7**
Fencemaker	X (5)		X (35)	X	**8**
Golconda Canyon	X (40)			X	**9**
Goldbanks	X (10)		X (12)	X	**10**
Leach Hot Springs	X (5)		X (19)	X	**11**
McKinney Pass		X (3.5)		X	**12**
Paris	X (20)			X	**13**
Pleasant Valley	X (5)		X (6)	X	**14**
Sonoma Canyon				X (30)	**15**
Spaulding	X (5)		X (14)	X	**16**
Rye Patch/Unionville Geographic Zone					
Buena Vista	X (5)		X (56)	X	**17**
Humboldt Rvr. Ranch				X (40)**	**18**
Imlay	X (5)		X (75)	X	**19**
Rye Patch Res.	X (20)			X	**20**
Unionville	X (10)		X (30)	X	**21**
Lovelock Geographic Zone					
Big Five	X (40)		X (20)	X	**22**
Big Meadows	X (80)			X	**23**
Coal Canyon	X (39)			X	**24**
Garavanta	X (62)		X (52)	X	**25**
Irish American	X (5)		X (15)	Existing	**26**
Pedro	X (40)		X (68)	X	**27**
Ragged Top	X (40)		X (15)	X	**28**
Seven Troughs/Sage Valley Geographic Zone					
E. Rosebud Canyon		X (5)		X	**29**
Placeritas DG		X (5)		X	**30**
Seven Troughs S.	X (40)			X	**31**

Seven Troughs Y	X (3)			X	**32**
Stonehouse	X (40)			X	**33**
Vernon	X (5)		X (3)	X	**34**
Vernon Flat		X (15)		X	**35**
Total	28 (659)	5 (42.5)	17 (430.5)	34 (70)	

* The community pit designation is the same size as FUP authorization unless otherwise noted.
**Designation of the Humboldt River Ranch material site as a community pit would be dependent upon obtaining an easement across private land to access the site.

2.1.2. Environmental Protection Measures

The PCRD has committed to the following environmental protection measures to reduce impacts during the construction, operation, and reclamation activities of the Proposed Action. The PCRD would train employees, contractors, and other personnel as to the environmental responsibilities required by state and federal laws.

Air Quality

The PCRD would reduce fugitive dust emissions by implementing best management practices. A water truck would be used to minimize fugitive dust, as necessary.

Cultural Resources

Any cultural resource discovered by the PCRD, or any person working on their behalf, during the course of activities on federal land would be immediately reported to the authorized officer by telephone, with written confirmation. The operator would suspend all operations in the immediate area of such discovery and protect it until an evaluation of the discovery can be made by the authorized officer. This evaluation would determine the significance of the discovery and what mitigation measures would be necessary to allow activities to proceed. The PCRD would be responsible for the cost of evaluation and mitigation. Operations may resume only upon written authorization to proceed from the authorized officer.

Additionally, the PCRD, or any person working on their behalf, would not knowingly remove, disturb, alter, or destroy any scientifically important cultural resources such as a historical or archaeological site, structure, building, object or artifact that qualify for listing on the National Register of Historic Places (NRHP) or have not been evaluated for listing on the National Register.

Invasive, Non-Native Species

The PCRD would be responsible for controlling all noxious weeds and other undesirable invading plant species in the mining area until revegetation activities have been determined to be successful by the BLM authorized officer. The PCRD would be

responsible for contacting the BLM for concurrence with any proposed weed control program prior to application of any chemical treatments for weeds on public lands.

If noxious weeds are identified during periodic monitoring by BLM, PCRD would work collaboratively with BLM to treat identified noxious weed populations within mineral material sites until eradicated. PCRD would quarantine stockpiled materials that are infested with noxious weeds and would not utilize those materials in areas that are free of noxious weeds.

Lands with Wilderness Characteristics

The proposed Dixie Valley mineral material site would not be expanded beyond the existing footprint.

Migratory Birds

PCRD would strive to conduct their mining activities outside of the migratory bird nesting season which runs from March 1 to August 31. Should they find that they can't avoid activity during that time, they would plan ahead and clear the native vegetation in those areas outside of the nesting season to deter birds from nesting there. Vegetation should be cleared only in the footprint of the projected disturbance for that year. For example, the Buena Vista mineral material site should be cleared of only several acres of previously undisturbed habitat at any one time (the projected years need) instead of clearing all 60 acres at once. Once cleared of vegetation, any material taken from the area should be within the area devoid of vegetation. PCRD should take measures to deter weeds and native vegetation from returning to the disturbed area such as applying a BLM approved herbicide or blading the area again as needed.

Should a need for material arise during the nesting season in an area that has not been cleared of vegetation, PCRD or any authorized permit / contract holder, would have a qualified wildlife biologist acceptable to the BLM survey the area just prior to disturbance to insure no nests are present. If nests with eggs or young are found, all mining activity would cease and the BLM should be notified. Once the birds have fledged the mining activity may continue. PCRD would halt operations and notify BLM upon the discovery that birds or active nests have been destroyed for documentation purposes.

Paleontology

In the event that previously undiscovered paleontological resources are discovered in the performance of any surface disturbing activities, the item(s) or condition(s) would be left intact and immediately brought to the attention of the authorized officer of the BLM. If significant paleontological resources are found, avoidance, recordation, and/or data recovery would be required.

Resource Protection

The corner boundaries of all material sites would be marked with steel posts. Additional permit boundary demarcations would be installed on the northern and eastern boundaries of the Big Five Mineral material site, the northern boundary of the Leach Hot Springs Gravel Mineral material site and the northern boundary of the Big Meadows Gravel Mineral material site. This would reduce expansion into unauthorized areas, and identify the material site on the ground.

Stockpiles at the Rye Patch Reservoir mineral material site would be maintained at a height equivalent to the existing stockpiles, and any new stockpiles would not exceed the height of current existing stockpiles.

All material sites with known sensitive resources in the vicinity would be monitored annually for compliance with permit boundaries, etc. Other material sites would be monitored annually, if possible, or at least every two years.

BLM would apply the following protection measures to all sales from designated community pits as standard stipulations (Appendix II). Additional stipulations may apply on a case-by-case basis.

Cultural Resources

Any cultural resource discovered by the contract holder, or any person working on their behalf, during the course of activities on federal land would be immediately reported to the authorized officer by telephone, with written confirmation. The operator would suspend all operations in the immediate area of such discovery and protect it until an evaluation of the discovery can be made by the authorized officer. This evaluation would determine the significance of the discovery and what mitigation measures would be necessary to allow activities to proceed. The contract holder may be responsible for the cost of evaluation and mitigation. Operations may resume only upon written authorization to proceed from the authorized officer.

Additionally, the contract holder, or any person working on their behalf, would not knowingly remove, disturb, alter, or destroy any scientifically important cultural resources such as a historical or archaeological site, structure, building, object or artifact that qualify for listing on the National Register of Historic Places (NRHP) or have not been evaluated for listing on the National Register.

Invasive, Non-Native Species

On a case-by-case basis, the contract holder would be responsible for controlling all noxious weeds and other undesirable invading plant species in the mining area until reclamation activities have been determined to be successful by the BLM authorized

officer. The contract holder would be responsible for contacting the BLM for concurrence with any proposed weed control program prior to application of any chemical treatments for weeds on public lands.

Lands and Realty

BLM would meet with a representative of Paiute Pipeline Co. at the proposed Sonoma Canyon community pit to identify and visually delineate an existing high-pressure gas line near the material site to avoid any possible impacts.

Lands with Wilderness Characteristics

The proposed Dixie Valley mineral material site would not be expanded beyond the existing footprint.

Migratory Birds

The contract holder would strive to conduct their mining activities outside of the migratory bird nesting season which runs from March 1 to August 31. Should they find that they can't avoid activity during that time, they would plan ahead and clear the native vegetation in those areas outside of the nesting season to deter birds from nesting there. Vegetation should be cleared only in the footprint of the projected disturbance for that year. For example, the Buena Vista mineral material site should be cleared of only several acres of previously undisturbed habitat at any one time (the projected years need) instead of clearing all 60 acres at once. Once cleared of vegetation, any material taken from the area should be within the area devoid of vegetation. The contract holder should take measures to deter weeds and native vegetation from returning to the disturbed area such as applying a BLM approved herbicide or blading the area again as needed.

Should a need for material arise during the nesting season (March 1st through August 31st) in an area that has not been cleared of vegetation, the contract holder would conduct a careful visual inspection of habitat in the area to be disturbed prior to any surface disturbance. Nesting activities may include eggs or young present in nest and adult behavioral displays (e.g. dive-bombing, faking injury, won't leave the area, agitated calling, etc.). If nesting activities are identified, the BLM biologist must be notified immediately and appropriate protection measures, which may include avoidance or restriction of activities, would be established.

Paleontology

In the event that previously undiscovered paleontological resources are discovered in the performance of any surface disturbing activities, the item(s) or condition(s) would be left intact and immediately brought to the attention of the authorized officer of the BLM. If

significant paleontological resources are found, avoidance, recordation, and/or data recovery would be required.

Resource Protection

Stockpiles at the Rye Patch Reservoir mineral material site would be maintained at a height equivalent to the existing stockpiles, and any new stockpiles would not exceed the height of current existing stockpiles.

2.2. No Action Alternative

Under the No Action Alternative, PCRD's application for the 5 new FUPs and to renew the 28 FUPs would not be authorized, community pits would not be designated, and none of the mineral material sites would be expanded. The non-issuance of the FUPs would effectively close these mineral material sites. Currently, 11 of the proposed mineral material sites evaluated in this EA are being actively utilized by the PCRD through FUPs that were issued separately from this environmental document. Specifically, these are: Big Five, Butcher Canyon, Dixie Cut-off, Fencemaker, Garavanta, Golconda Canyon, Irish American, Jersey Valley, Pleasant Valley, Rye Patch Reservoir, and Seven Troughs Y mineral material sites. The earliest of these permits will expire in 2014, while the rest will expire in 2016, 2017, and 2020. Under the No Action alternative, these material sites would be utilized within the currently permitted areas of disturbance for the remainder of their permits. The remaining mineral material sites would be reclaimed as specified in the stipulations that accompanied the FUPs.

2.3. Alternatives Considered but Dismissed from Detailed Analysis

No alternatives to the Proposed Action that would meet the Purpose and Need have been identified.

3.0 AFFECTED ENVIRONMENT

3.1. Supplemental Authorities (Critical Elements of the Human Environment)

List of Supplemental Authorities (Critical Elements of the Human Environment**).** To comply with the National Environmental Policy Act, the following elements of the human environment are subject to requirements specified in statute, regulation or executive order and must be considered:

Table 2-Supplemental Authorities

Supplemental Authorities	Not Present	Present Not Affected	Present/ May be Affected	Section found in EA
Air Quality			X	3.1.1.

Supplemental Authorities	Not Present	Present Not Affected	Present/ May be Affected	Section found in EA
Areas of Critical Environmental Concern (ACEC's)	X			
Cultural Resources			X	3.1.2.
Environmental Justice	X			
Floodplains	X			
Invasive, Nonnative Species			X	3.1.3.
Migratory Birds			X	3.1.4.
Native American Religious Concerns			X	3.1.5.
Prime or Unique Farmlands	X			
Threatened and Endangered Species	X			See discussion in section 3.1.6
Wastes, Hazardous or Solid	X			
Water Quality (Surface and Ground)	X			
Wetlands and Riparian Zones	X			
Wild and Scenic Rivers	X			
Wilderness	X			

Table 3-Additional Affected Resources

Resource or Issue	Present/Not Affected	Present/May Be Affected	Section Found in EA
Lands and Realty		X	3.2.1.
Lands with Wilderness Characteristics		X	3.2.2.
Minerals (Geology and Mineral Materials)		X	3.2.3.
Paleontology		X	3.2.4.
Recreation		X	3.2.5.
Social and Economic Values		X	3.2.6.
Soils		X	3.2.7.
Special Status Species		X	3.2.8.
Vegetation Resources		X	3.2.9.
Visual Resource Management		X	3.2.10.
Wildlife		X	3.2.11.

3.1.1. Air Quality

Air quality in Pershing County is generally good. Climate is arid, characterized by warm, dry summers and moderately cold winters, precipitation mainly occurs in the winter and spring. Dust from barren agricultural fields, burned areas, or barren lands (playas) can contribute dust to the atmosphere for short periods during strong wind events. Wildfires in or outside the area, agricultural burns, or prescribed fires occasionally emit particulate matter (smoke) into the air, producing short-term deterioration of air quality.

Air quality in Pershing County is regulated by the Environmental Protection Agency (EPA) and the Nevada Division of Environmental Protection, Bureau of Air Pollution Control (BAPC) and Bureau of Air Quality Planning. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation.

EPA uses monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify those areas with air-quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are "non-attainment," "attainment," and "unclassified." "Unclassified" is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards.

Based on the 6-digit Hydrologic Unit Code, the proposal is located within portions of the following hydrographic basins: Black Rock Desert Basin; Carson Basin; Central Nevada Desert Basins; Humboldt River Basin; and the Truckee Basin (the project area does not include Washoe County, portions of which may not be within EPA air quality attainment). Hydrographic basins are also used as air basins. These basins are considered "unclassified" relative to attainment of the federal air quality standards. Existing air quality is typical of largely undeveloped regions of the Western United States with limited sources of pollutants.

With respect to fugitive emissions, PCRD is to control fugitive dust emissions from surface disturbance using the "best practical methods", which generally include watering and revegetation. Under the Proposed Action and No Action Alternatives, processed gravel, stockpiles, road ways, and mineral material sites could be sources of fugitive dust.

3.1.2. Cultural Resources

All 35 mineral material sites have undergone Class III cultural resource inventories (see Table 3) that have encompassed all of the existing and proposed expanded acreage of the mineral material sites. Sixteen cultural resource sites have been recorded within the boundaries of the proposed mineral material sites. Fourteen of these have been determined to be ineligible to the NRHP and two are unevaluated. The map plot for one of the unevaluated sites, 26Pe28, falls within the Big Five mineral material site project area. This site could not be relocated. The site, recorded in 1950, most likely was misplotted or possibly has been destroyed. The second unevaluated site, CrNV-02-393, falls within the proposed Goldbanks mineral material site boundary. This very small (2 flakes) site was previously completely collected and no trace of the site was found

during the recent CR2-3140 inventory. Additionally, one NRHP eligible site CrNV-02-9995, is located in the vicinity of the Leach Hot Springs Gravel Mineral material site. Two sites, CrNV-02-134 and CrNV-02-1904, which have not been evaluated for the NRHP, are located in the vicinity of the Big Five Gravel Mineral material site. Also, segments of the California National Historic Trail (CrNV-02-3305) are located approximately .6 miles from the Rye Patch Reservoir mineral material site and Big Meadows proposed permit areas. While these segments of the trail have not been evaluated for the National Register of Historic Places, they have been rated as Class 2 segments utilizing Oregon California Trail's (OCTA's) trail rating system. OCTA defines Class 2 trail segments as follows: "The trail retains elements of its original character, but shows use by motor vehicles, typically as a two-track road overlaying the original wagon trail. There is little or no evidence of having been altered permanently by modern road improvements, such as widening, blading, grading, crowning, or graveling (Trail Mapping Committee 2002:13)."

Table 4 Cultural Resource Inventories/Sites

Mineral Material Site or Community Pit	Inventories	Sites	NRHP Eligibility
Big Five	CR2-34,-3140	CrNV-22-10086 26Pe28* CrNV-02-1904*** CrNV-02-134*** CrNV-02-3305***	Not Eligible Unevaluated Unevaluated Unevaluated Unevaluated segment
Big Meadows	CR2-34,-3140	CrNV-22-10087	Not Eligible
Buena Vista	CR2-3048, -3140	None	
Buffalo	CR2-879, -3140	None	
Butcher Canyon	CR2-2979, -3140	None	
Coal Canyon	CR2-117	None	
Dago	CR2-879, -3140	None	
Dixie Cut-off	CR2-3140	None	
Dixie Valley	CR2-3140	None	
E. Rosebud Canyon	CR2-3140	CrNV-22-1088	Not Eligible
Fencemaker	CR2-2805, -3140	None	
Garavanta	CR2-111, -3140	CrNV-22-11744	Not Eligible
Golconda Canyon	CR2-75, -3140	CrNV-02-333** CrNV-02-334, CrNV-02-529	Not Eligible Not Eligible, Not Eligible
Goldbanks	CR2-76, -3140	CrNV-22-6658 CrNV-02-393**	Not Eligible Unevaluated
Humboldt River Ranch	CR2-2900	None	
Imlay	CR2-461, -2432, -2791,-3140	CrNV-22-5408, CrNV-22-10089	Not Eligible, Not Eligible
Irish American	CR2-2400, -2502, -	CrNV-22-5577	Not Eligible

Mineral Material Site or Community Pit	Inventories	Sites	NRHP Eligibility
	2789, -3140		
Jersey Valley	CR2-2984	None	
Leach Hot Springs	CR2-388, -2532; -3132	CrNV-22-6658, CrNV-02-9996***	Not Eligible, Eligible
McCoy	CR2-879, -3107, -3140	None	
Pedro	CR2-3127, -121, -2964, -498	None	
McKinney Pass	CR2-468, -3140	None	
Paris	CR2-879, -3140	None	
Placeritas DG	CR2-3140	None	
Pleasant Valley	CR2-3140	None	
Ragged Top	CR2-879,-499,-3140	None	
Rye Patch Reservoir	CR2-2206, -3140	CrNV-22-3989 CrNV-02-3305***	Not Eligible Unevaluated Segment
Seven Troughs South	CR2-879, -3140	None	
Seven Troughs Y	CR2-2976	None	
Sonoma Canyon	CR2-118, -2820, -3140	None	
Spaulding Canyon	CR2-3125	None	
Stonehouse	CR2-879, -3140	None	
Unionville	CR2-3126, -2806	None	
Vernon	CR2 -3140, 2276	CrNV-22-10090	Not Eligible
Vernon Flat	CR2-879, -3140	None	

*Not relocated
**Site previously completely collected and no additional cultural artifacts noted
***Outside of proposed mineral material site boundaries

3.1.3. Invasive, Non-Native Species

Several laws authorize control of noxious weeds on public land under the BLM's administrative jurisdiction (e.g., The Federal Insecticide, Fungicide and Rodenticide Act of 1972, Federal Noxious Weed Act of 1974, FLPMA (1976), and the Public Rangelands Improvement Act of 1978). In addition, Nevada Revised Statutes, Chapter 555.05 defines "noxious weeds" and mandates land owners and land management agencies to control noxious weeds on lands under their jurisdiction. "Noxious" weeds refer to those plant species which have been legally designated as unwanted or undesirable. This includes national, state and county or local designations.

The Nevada Department of Agriculture maintains a Nevada Noxious Weed List. The noxious weed species that have been identified in Pershing County that have a significant potential to occupy the proposed mineral material site expansions are Scotch thistle (*Onopordum*

acanthium), a Category B weed, Russian knapweed (Acroptilon repens), a Category B weed, Perennial pepperweed (Lepidium latifolium), a Category B weed, Saltcedar (Tamarix spp.), a Category B weed, and hoary cress (*Cardaria draba*), a Category C weed. Category B weeds are "established in scattered populations in some counties of the state; actively excluded where possible, actively eradicated from nursery stock dealer premises; control required by the state in areas where populations are not well established or previously unknown to occur". Category C noxious weeds are defined by NAC 555.010 as "weeds that are generally established and generally widespread in many counties of the State."

Nevada has listed 47 non-native invasive plant species that require control. Of these 47 species, 14 species have been identified in the Winnemucca District.

3.1.4. Migratory Birds

All birds in the Humboldt River Field Office are considered neotropical migratory birds except for the gallinaceous (upland game) birds (California quail (Lophortyx californicus), sage-grouse (Centrocercus urophasianus), chukar partridge (Alectoris chukar), gray partridge (Perdix perdix), and the mountain quail (Oreortyx pictus)). Migratory birds may be found in and adjacent to any of the proposed project areas as either seasonal residents or as migrants.

Migratory birds are protected and managed under the Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et. seq.) and Executive Order 13186. Under the MBTA nests (nests with eggs or young) of migratory birds may not be harmed, nor may migratory birds be killed. Executive Order 13186 directs federal agencies to promote the conservation of migratory bird populations.

Most of the vegetation communities on these proposed project areas are characterized by salt desert shrub and/or sagebrush species. Migratory birds associated with these vegetative community may include: black-throated sparrow (Amphispiza bilineata), brewer's blackbird (Euphagus cyanocephalus), Brewer's sparrow (Spizella breweri), Western burrowing owl (Athene cunicularia), canyon wren (Catherpes mexicanus), gray flycatcher (Empidonax wrightii), green-tailed towhee (Pipilo chlorurus), loggerhead shrike (Lanius ludovicianus), rock wren (Salpinctes obsoletus), sage sparrow (Amphispiza belli), sage thrasher (Oreoscoptes montanus), western meadowlark (Sturnella neglecta) and horned lark (Eremophila alpestris) (Great Basin Bird Observatory, 2003).

The Western burrowing owl, loggerhead shrike, and Brewer's sparrow are BLM designated sensitive species and are discussed in Section 3.2.8. Special Status Species. Most of these species require a diversity of plant structure and herbaceous under-story. Good diversity provides sufficient habitat for nesting, foraging, and cover.

3.1.5. Native American Religious Concerns

Numerous laws and regulations require the BLM to consider Native American concerns. These include the NHPA, the American Indian Religious Freedom Act of 1978 (AIRFA), Executive Order 13007 (Indian Sacred Sites), Executive Order 13175 (Consultation and Coordination with Tribal Governments), the Native American Graves Protection and Repatriation Act (NAGPRA), the Archaeological Resources Protection Act (ARPA), as well as NEPA and FLPMA. Order No. 3317, issued in December 2011, updates, expands and clarifies the Department of Interior's policy on consultation with Native American tribes. The BLM also utilizes H-8120-1(General Procedural Guidance for Native American Consultation) and National Register Bulletin 38 (Guidelines for Evaluating and Documenting Traditional Cultural Properties (TCPs).

The goal of consultation is for the BLM to identify specific traditional/cultural/spiritual sites, activities, and resources important to Native Americans, and limit, reduce, or possibly eliminate any negative impacts. The AIRFA and EO 13007 apply to sites used for religious ceremonies or sacred sites. These authorities do not specify criteria for determining whether a project would affect such places. For purposes of the analysis in this EA, a project effect on sites used for religious ceremonies and sacred sites is considered substantial if it restricts access to such sites; impedes the exercise of ceremonies at such sites in some way or form; or affects the physical integrity of such sites. TCPs, which may or may not be sacred sites, have similar substantial project effects thresholds, plus damage to the setting or physical integrity of the TCP.

Pershing County is within the traditional territories of the Northern Paiute and the Shoshone. The area is traditionally used by Northern Paiute Bands of the Aga′ipañinadökadö ("Fish Lake Eaters") and/or Moadökadö ("Wild Onion Eaters"), Atsaküdökwa tuviwarai ("Red Butte Dwellers"), Kamödökadö ("Jack-rabbit Eaters"), Kidütökadö ("Woodchuck Eaters"), Makuhadökadö and/or Pauida tuviwarai (meaning unknown), Sawawaktödö tuviwarai and/or Sawakudökwa tuviwarai ("Sagebrush Mountain Dwellers"), Tagötöka ("Tuber Eaters"), Tasiget tuviwarai ("Between Dwellers"), and Yamosöpö tuviwarai ("Half-moon Valley Dwellers"). The area is also traditionally used by the Shoshone (Stewart 1939). Traditionally the areas of the Proposed Action would be utilized by the Northern Paiute and Shoshone for hunting and plant gathering.

At the planning stage of the proposal, a consultation meeting was held with the Fallon Paiute and Shoshone Tribe in July of 2011. Letters were sent on May 4, 2012, notifying the following tribal governments of the proposed action: Battle Mountain Band, Fallon Paiute and Shoshone Tribe, Fort McDermitt Paiute and Shoshone Tribe, Lovelock Paiute Tribe, and Pyramid Lake Paiute Tribe.

3.1.6. Threatened and Endangered Species

A list of federally listed, proposed or candidate species was requested from the U.S. Fish and Wildlife Service (Service) for the analysis areas on October 26, 2012. A response from the Service was received on December 3, 2012. Based on coordination with the Service, the Greater

sage-grouse was the only federally listed, proposed, or candidate species present within the area of analysis.

The Greater sage-grouse was determined to be a candidate species in 2010, but its listing has been precluded by other species. Impacts to Greater sage-grouse are analyzed in Section 3.2.8. Special Status Species.

Since no threatened or endangered species have been identified in the project areas, this resource is dismissed from further analysis.

3.2. Additional Affected Resources

In addition to the Supplemental Authorities, the following resources may be affected by the Proposed Action and No Action alternative: lands and realty, lands with wilderness characteristics, geology and minerals, paleontological resources, recreation, social values and economics, soils, special status species, vegetation, visual resource management, and wildlife.

3.2.1. Lands and Realty

Each material site is located entirely on public land managed by the BLM. Land uses surrounding these sites include mining, rangeland management, recreation, and for wildlife habitat. There are currently twenty ROWs in Pershing County that may be within or adjacent to proposed material sites. These ROWs were issued for roads, transmission power lines, electrical substation, water pipelines, a water plant, gas pipelines, telephone lines, and material sites (LR2000). The material site ROWs were issued to the Nevada Department of Transportation (NDOT). One of the NDOT ROWs is adjacent to the proposed Imlay mineral material site expansion and access to the NDOT site crosses the proposed expansion boundary. The other NDOT material site is located near the Big Meadows mineral material site, but there would be no conflict between the site boundaries.

PCRD has obtained easements for the Rye Patch Reservoir and Unionville material sites for access across private land. BLM would need to obtain an easement to access the proposed Humboldt River Ranch community pit, if designated. Access to each of the remaining material sites is by existing county-maintained roads.

3.2.2. Lands with Wilderness Characteristics

Four mineral material sites are located adjacent to or within the Fencemaker Wilderness Characteristics Area (WCA).

As described in the Wilderness Act of 1964 (PL 88-577), naturalness occurs when an area generally appears to have been affected primarily by the forces of nature with the imprint of humans substantially unnoticeable. Wilderness character conditions tend to be more qualitative in nature, measuring the overall landscape and naturalness of an area as a result of changes to

levels of recreational activities, development, and surrounding land use trends. Indicators that can quantitatively be measured include changes to route designations, including the number of unauthorized trails, the number of encounters with other users, and anticipated facility development. Human-caused sights and sounds outside the inventory area should not automatically lead to a conclusion that the area lacks wilderness characteristics.

Areas that offer solitude should provide "outstanding" opportunities for individuals to avoid sights, sounds, and evidence of other people in the inventory area. Factors influencing solitude may include natural screening, such as vegetation or topography, or the opportunity for a person to find a secluded spot. Unconfined recreational experiences focus on undeveloped recreational activities or those that do not require facilities or motorized equipment.

During the Winnemucca District Resource Management Plan public scoping period, a public advocacy group identified the Fencemaker Area as possessing wilderness characteristics. This citizen-proposed area was evaluated by the Nevada Wilderness Coalition, the Pershing County Checkerboard Lands Committee, and BLM staff. The Nevada Wilderness Study Area Notebook (BLM 2001) was used as a basis for the evaluations. In general, the remote and rural natures of the unit have helped to protect its potential wilderness characteristics. Wilderness characteristics, such as roadlessness, naturalness, and areas that offer solitude and opportunities for primitive, unconfined recreational experiences were evaluated. Protection of the wilderness characteristics of WCA units is recommended wherever feasible under BLM Manual 6320 Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process.

The Dixie Valley Material Site (Map 4) T26N, R38E, sections 11 and 12 is located entirely within the Fencemaker Wilderness Characteristics Area.

The Dago Material Site (Map 7) T27N, R37E, sections 18 and 19 is located near the northern edge of the Fencemaker Wilderness Characteristics Area. The primary mineral material site is located across a road from the WCA, no portion of the proposed maximum mineral material site boundary overlaps the WCA.

The Paris Material Site (Map 13) T27N, R38E, section 21 is located on the northern edge of the Fencemaker Wilderness Characteristics Area. The primary mineral material site is located between the road and the WCA, but does not overlap the WCA.

The McKinney Pass Material Site (Map 12) T27N, R37E, section 24 is located on the northern edge of the Fencemaker Wilderness Characteristics Area. No portion of the mineral material site or proposed expansion overlaps the WCA.

3.2.3. Minerals (Geology and Mineral Materials)

The mineral materials analyzed in this EA are derived from two principle sources: geomorphologic features related to ancient Lake Lahontan, such as ancient gravel beaches, and gravel point bars; and alluvial fans. Only a few sites are related to more recent fluvial processes.

DESCRIPTION OF EXISTING MATERIAL SITES

JERSEY/BUFFALO VALLEYS GEOGRAPHIC ZONE

Buffalo Material Site (Map 1) T29N, R40E, section 24

This mineral material site has been primarily used by PCRD and is located on the west edge of the Buffalo Valley playa on the Buffalo Ranch Road. The elevation of this site is approximately 4720 feet. The deposit is located within a poorly sorted alluvial fan. The coarse gravel is moderately rounded, and contains abundant fine silt and clays. Vegetation consists of sagebrush, shadscale, and greasewood with occasional grasses. The county was first issued a FUP in 1983, from an existing unauthorized gravel material site. The material site boundary has been "relocated" on the maps to rectify a plotting error from previous FUPs. Approximately 5% of the current project area has surface disturbance related to past mining activities.

Butcher Canyon Material Site (Map 2) T27N, R40E, section 21

This medium sized mineral material site has been principally used by PCRD and Ormat Nevada Inc. (Ormat), for their geothermal activities. Ormat has a road maintenance agreement with PCRD. The mineral material site is located on the eastern edge of the Jersey Valley at an elevation of approximately 4680 feet. The deposit of sand and gravel appears to be located within an alluvial fan. The material is medium to small in size and is somewhat rounded; it is also moderately sorted with a considerable amount of clay and silt. Vegetation consists of some sagebrush, rabbitbrush, and minor grasses. Approximately 65% of the current project area has surface disturbance related to past mining activities.

Dixie Cut-Off Material Site (Map 3) T26N, R38E, section 13

The FUP for the Dixie Cut-off mineral material site was issued to PCRD in 2001. The mineral material site is located on the east flank of the Sou Hills, at the northern end of Dixie Valley. The mineral material site is at an elevation of approximately 3800 feet. The material is small in size and is somewhat angular; it is also moderately sorted with a considerable amount of clay and silt. This material may have been worked by the Pleistocene Lake Lahontan. Vegetation consists of sagebrush, shadscale, rabbitbrush and grasses. Approximately 10% of the proposed project area has surface disturbance related to past mining activities.

Dixie Valley Material Site (Map 4) T26N, R38E, sections 11 and 12

This would be a new FUP authorization from an unauthorized material site that has been used in the past without a permit. It is located on the east flank of the Sou Hills, at the northern end of Dixie Valley, approximately 0.75 miles from the proposed Dixie Cut-off mineral material site. This mineral material site is at an elevation of approximately 3800 feet. The material is small in size and is somewhat rounded; It is also moderately sorted with a considerable amount of clay and silt. The deposit appears to be fluvial, and may have been worked by the Pleistocene Lake

Lahontan. Vegetation consists of sagebrush, shadscale, rabbitbrush and grasses. Approximately 5% of the proposed project area has surface disturbance related to past mining activities.

Jersey Valley Material Site (Map 5) T 26N, R39E, section 15

This mineral material site has been used by Ormat Nevada Inc. as well as by PCRD. The site is partially located on an alluvial fan on the south end of the Tobin Range at an elevation of approximately 3920 feet. Vegetation is primarily sagebrush-grassland. The material is small in size and is somewhat rounded. It is also moderately sorted with a considerable amount of clay and silt. The material may have been re-worked by old Pleistocene Lake Lahontan. Approximately 30% of the current project area has surface disturbance related to past mining activities.

McCoy Material Site (Map 6) T25N, R39E, section 3

This site has been used mostly by PCRD and is situated on the east side of the Jersey Valley, and off the west flank of the Augusta Mountains, at an elevation of approximately 4800 feet. The site is developed in an alluvial fan. The material is small to medium sized gravel that is somewhat bedded and is moderately clean of clay and silt fines. Vegetation consists primarily of sagebrush, shadscale, forbs, and grasses. Approximately 10% of the current project area has surface disturbance related to past mining activities.

GRASS/PLEASANT VALLEYS GEOGRAPHIC ZONE

Dago Material Site (Map 7) T27N, R37E, sections 18 and 19

This small shallow mineral material site is developed in the headwaters of a large dry drainage, on the west flank of the Stillwater Range near McKinney Pass, at an elevation of approximately 4500 feet. This site has been used exclusively by PCRD. Material consists of small sized, clean, gravel and inter-bedded sand. Vegetation consists of a mixture of greasewood, forbs and grasses. Approximately 5% of the current project area has surface disturbance related to past mining activities.

Fencemaker Material Site (Map 8) T26N, R36E, section 14

This medium to coarse sized gravel mineral material site is located off the Dago–McKinney Pass road on the northwest flank of the Stillwater Range, at an elevation of approximately 4340 feet. The origin of the gravels are ancient beach gravels of the glacial age Lake Lahontan depositional features. The material is coarse, well-rounded and is relatively devoid of fines. The area has burned in the past and is covered with cheatgrass and mustard. Prior to being burned, the vegetation consisted primarily of sagebrush, forbs, and grasses. PCRD is the principal user of this mineral material site. Approximately 15% of the current project area has surface disturbance related to past mining activities.

Golconda Canyon Material Site (Map 9) T28N, R39E, section 6

This is a small mineral material site that consists primarily of small to medium sized, moderately sorted material. The principle user is PCRD and they often screen the material to provide good road base. This site is located within Pleasant Valley, on the west flank of the Tobin Range at an elevation of approximately 4620 feet. Vegetation consists of a mixture of sagebrush, rabbitbrush, shadscale, cheatgrass, and a few other grasses. Approximately 10% of the current project area has surface disturbance related to past mining activities.

Goldbanks Material Site (Map 10) T30N, R39E, section 21

This mineral material site is located along the eastern edge of the Goldbanks Hills and is probably related to an alluvial fan feature at an elevation of approximately 4800 feet. The vegetation is primarily sagebrush with minor grasses. It contains small to medium sized gravel that is poorly sorted and contains abundant fines. This gravel source appears to be fairly thin. The PCRD has been the principal user. Approximately 10% of the current project area has surface disturbance related to past mining activities.

Leach Hot Springs Material Site (Map 11) T31N, R38E, section 1

The principal user of this mineral material site has been PCRD; however there have been public sales as well. The material appears to be related to an alluvial fan from the west flank of the Sonoma Range. The material is fairly coarse and contains a lot of fines. This mineral material site is located at an elevation of approximately 4660 feet and vegetation consists mostly of sagebrush and grasses. PCRD has screened a lot of material and there is a large over-size, stock pile at the site. Approximately 80% of the current project area has surface disturbance related to past mining activities.

McKinney Pass Material Site (Map 12) T27N, R37E, section 24

This would be a new material site FUP authorization from an existing disturbance. It is located at an elevation of approximately 4755 feet. The material is fairly coarse, and poorly sorted, and appears to be a fairly thin deposit. The material appears to be fluvial in origin. Vegetation consists of a mixture of sagebrush, rabbitbrush, shadscale, cheatgrass, and a few other grasses. Approximately 10% of the proposed project area has surface disturbance related to past mining activities.

Paris Material Site (Map 13) T27N, R38E, section 21

This is a small, isolated mineral material site located on the east side of the Pleasant Valley between the Sou Hills and the Tobin Range at an elevation of approximately 4200 feet. PCRD has used the site for construction and maintenance of the local roads. The gravel is small, contains quite a bit of fine material and occurs in relatively thin layers. It appears that the material is originating from the east flank of the East Range as an alluvial fan deposit, however

there could be some effect from Lake Lahontan depositional processes as well. Vegetation consists primarily of sagebrush and grasses. Approximately 5% of the current project area has surface disturbance related to past mining activities.

Pleasant Valley Material Site (Map 14) T27N, R38E, section 9

This is an old gravel material site that has been used exclusively by PCRD, as it is fairly isolated with respect to residents. The material consists of moderately well sorted, small to medium gravel that appears to be related to a fairly large, broad, shallow, drainage basin. The mineral material site is located at an elevation of approximately 4200 feet and the vegetation is mostly sagebrush and grasses. Approximately 10% of the current project area has surface disturbance related to past mining activities.

Sonoma Canyon Material Site (Map 15) T34N, R38E, section 20

This is a small gravel material site located on the west side of the Sonoma Range along Grass Valley Road at an elevation of approximately 4660 feet. The small community of Sonoma Springs is approximately one mile to the south. PCRD and the BLM have used this material, which is small to medium in size, fairly well sorted with moderate contained fines. This is an alluvial fan deposit related to Sonoma Creek. Vegetation consists of mostly sagebrush and cheatgrass. The material site boundary has been "relocated" on the maps to rectify a plotting error from previous FUPs. Approximately 15% of the current project area has surface disturbance related to past mining activities.

Spaulding Material Site (Map 16) T32N, R38E, section 24

This recent material site has been used solely by PCRD and is composed of medium to large sized material. The county screens the material and a large over-size stock pile has resulted from the screening process. The material appears to be related to an alluvial fan from the west flank of the Sonoma Range. The material appears only moderately sorted and seems to have a fair amount of contained sand and fines. Vegetation consists of some sagebrush with various grasses. This mineral material site is located at the south end of the Grass Valley at an elevation of approximately 4600 feet. Approximately 15% of the current project area has surface disturbance related to past mining activities.

RYE PATCH/UNIONVILLE GEOGRAPHIC ZONE

Buena Vista Material Site (Map 17) T30N, R36E, section 30

Several individuals have apparently used this material site for years before it was authorized. The material site is located on the west flank of the East Range within the Buena Vista Valley at an elevation of approximately 4160 feet. It appears to be some sort of a gravel bar or gravel spit feature related to Pleistocene Lake Lahontan lacustrine sedimentation. The material is composed of medium sized, clean, well rounded gravel. Vegetation consists of sagebrush and grasses.

Approximately 40% of the current project area has surface disturbance related to past mining activities.

Humboldt River Ranch Material Site (Map 18) T30N, R33E, section 34

This site was originally proposed as a community pit in 1993, after a trespass. It was planned to serve the needs of the community around the Humboldt River Ranch rural housing development. There is a very small disturbance where the original trespass was reclaimed. The proposed material site is located off the west flank of the Humboldt Range on an outer fringe of an alluvial fan, at an elevation of approximately 4390 feet. There is a vegetation mix of sagebrush, rabbitbrush and cheatgrass. The material is not well sorted and tends to contain a lot of fine materials and is composed mostly of limestone. Approximately 5% of the proposed project area has surface disturbance related to past mining activities.

Imlay Material Site (Map 19) T32N, R34E, section 10

This is a fairly large existing material site located within a half mile of Imlay. NDOT has a 70 acre Material Site Right of Way immediately adjacent to the south. They did fairly extensive testing and the gravel is medium in size and is relatively clean, mostly composed of limestone. The material appears to be related to an alluvial fan that has been reworked by Lake Lahontan fluvial processes. PCRD has used this site almost exclusively. Vegetation is mostly sagebrush and grasses. This site is at approximately 4240 feet elevation. Approximately 35% of the current project area has surface disturbance related to past mining activities.

Rye Patch Reservoir Material Site (Map 20) T31N, R32E, section 24

This material site has been used exclusively by PCRD. The site is located on the east flank of the Trinity Range, and on the west side of the Rye Patch Reservoir at an elevation of approximately 4200 feet. The material is composed of fine to medium gravels that appears to be related to a large alluvial fan from the Poker Brown Wash. Ancient Lake Lahontan fluvial processes have reworked the wash materials. Sagebrush and grasses are the vegetative type. Approximately 20% of the current project area has surface disturbance related to past mining activities.

Unionville Material Site (Map 21) T30N, R35E, section 18

This material site is located on an alluvial fan feature from the Buena Vista creek. The material is composed of fairly large cobbles to medium sized, well rounded, moderately well sorted gravel. Most material is heavily caliche coated. PCRD has been the principal user of this site and they frequently use a screening plant, thus there is a large stockpile of over-sized material available. The site is located on the east flank of the Humboldt Range and on the west side of the Buena Vista Valley about two miles north east of Unionville at an elevation of approximately 4520 feet. Vegetation consists of a greasewood/sagebrush, and grass community. Approximately 30% of the current project area has surface disturbance related to past mining activities.

LOVELOCK GEOGRAPHIC ZONE

Big Five Material Site (Map 22) T25N, R31E, section 14

The material in this mineral material site is fairly small, clean, and well sorted gravel and fragments of angular meta-siltstones, and fine grained quartzites. The deposit appears to have formed by ancient Lake Lahontan waters pounding upon the scree coming off steep cliffs of the West Humboldt Range. Sparse sagebrush and grasses are the vegetative type. PCRD and several non-profit groups have been the primary users. The site is located on the east side of the Lovelock Lower Valley, and on the western flanks of the West Humboldt Range at an elevation of approximately 4000 feet. Approximately 25% of the current project area has surface disturbance related to past mining activities.

Big Meadows Material Site (Map 23) T26N, R31E, section 8

This mineral material site was recently opened-up by PCRD and is located in the Lovelock Upper Valley; it was previously named the Indian Graveyard Pit. The material consists of sand and fairly well sorted, small gravel. This appears to be a strand line beach deposit of Pleistocene Lake Lahontan lacustrine sedimentation situated at an elevation of approximately 3980 feet. Very sparse vegetation is present and most consists of greasewood. Approximately 1% of the current project area has surface disturbance related to past mining activities.

Coal Canyon Material Site (Map 24) T26N, R34E, section 6

This mineral material site is fairly large, shallow, and spread-out. The depth potential is unknown. The material is mostly sand, and small gravel, moderately well sorted, and clean. The alluvium appears to be related to a Pleistocene Lake Lahontan lacustrine sedimentation feature, probably a beach deposit. PCRD has been the principal user. Sagebrush, rabbitbrush, and grasses are the vegetative types. The mineral material site is located at approximately 4,400 feet, the highest known point of Lahontan gravel deposits. Approximately 0% of the current project area has surface disturbance related to past mining activities.

Garavanta Material Site (Map 25) T25N, R32E, section 6

This is a very popular material site used by PCRD and the public. It is composed of decomposed granite (DG) and is deposited as an alluvial fan. The site is located on the east side of the Lovelock Lower Valley, and on the western flanks of the West Humboldt Range at an elevation of approximately 3970 feet with a mix of sagebrush, rabbitbrush and shadscale. Approximately 20% of the current project area has surface disturbance related to past mining activities.

Irish American Community Pit (Map 26) T27N, R32E, section 16

This is an existing community gravel pit located on the west flank of the West Humboldt Range at an elevation of approximately 4130 feet. This is a very large gravel deposit as there are gravel

material sites about a mile to the southwest, and coarse gravel deposits to the east at the Lovelock Reservoir site almost a half mile away. The topographic relief from these areas encompasses over 200 feet. The geomorphic feature is probably a large re-worked point bar and alluvial fan complex. The gravel in this site is fairly coarse, well sorted and clean. Quality is very good, and probably would make concrete material. The vegetation consists primarily of sagebrush, rabbitbrush and shadscale. Approximately 50% of the current project area has surface disturbance related to past mining activities.

Pedro Material Site (Map 27) T27N, R31E, section 6

PCRD and local Lovelock governmental agencies are the principal users of this site. This area appears to be an ancient beach deposit of Pleistocene Lake Lahontan. The gravel is well sorted, clean, and tends to be small to medium in size. Quality is very good, and probably would make concrete material. The site is at an elevation of approximately 4200 feet and the vegetation is mostly rabbitbrush, sagebrush and grasses. Approximately 15% of the current project area has surface disturbance related to past mining activities.

Ragged Top Material Site (Map 28) T25N, R28E, section 2

This is a small, isolated mineral material site located on the west side of the Trinity Range and on the east side of the Granite Springs Valley at an elevation of approximately 4950 feet. PCRD has used the site for construction and maintenance of the local roads. The gravel is small, angular, contains quite a bit of fine material and is poorly sorted. It appears that the material is originating from the west flank of the Trinity Range, most likely as an alluvial fan deposit. Vegetation consists primarily of rabbitbrush, sagebrush and grasses. Approximately 5% of the current project area has surface disturbance related to past mining activities.

<u>SEVEN TROUGHS/ SAGE VALLEY GEOGRAPHIC ZONE</u>

East Rosebud Canyon Material Site (Map 29) T34N, R30E, section 29

This would be a new FUP authorization from a small alluvial gravel source that has been used in the past without a permit. The material is medium in size, with a mix of slope wash from the canyon walls and detritus from the drainage above. Vegetation consists primarily of rabbitbrush, sagebrush and grasses. The elevation at the site is approximately 4820 feet. Approximately 10% of the proposed project area has surface disturbance related to past mining activities.

Placeritas DG Material Site (Map 30) T32N, R29E, section 13

This material site would also be a new FUP authorization. The mineral material site is located at the intersection of the northern edge of the Seven Troughs Range, and the Poker Brown Mountains at an elevation of approximately 4760 feet. This deposit appears to be part of an alluvial fan coming off of the Seven Troughs Range. The material is small angular to sub angular gravel consisting primarily of decomposed rhyolite. Vegetation is sparse and includes

shadscale, grasses, and small shrubs. Approximately 0% of the proposed project area has surface disturbance related to past mining activities.

Seven Troughs South Material Site (Map 31) T29N, R29E, section 4

This is a seldom used mineral material site that PCRD uses for maintenance of the local roads. It is located on the northwestern flank of the Trinity Range and on the eastern side of Sage Valley, at an elevation of approximately 4320 feet. This is a poorly sorted deposit with a high percentage of fines. The gravel seems to be erratically stratified. Vegetation consists primarily of rabbitbrush, sagebrush and grasses. Approximately 5% of the current project area has surface disturbance related to past mining activities.

Seven Troughs Y Material Site (Map 32) T29N, R29E, section 26

This is a currently permitted mineral material site that will expire in 2017. It went through NEPA and the CX was completed December, 2007. PCRD has not yet opened this mineral material site. A prospecting permit was issued earlier and PCRD tested the area. During the tests, satisfactory material found. The site is at an elevation of approximately 4675 feet. Vegetation is sparse and it consists of sagebrush and grasses. Approximately 15% of the current project area has surface disturbance related to past mining activities.

Stonehouse Material Site (Map 33) T30N, R29E, section 14

This is another example of a seldom used, small, shallow collection of gravel material sites. PCRD has been the only operator. This pit complex is approximately located on the northwestern flank of the Trinity Range and on the eastern side of Sage Valley at an elevation of approximately 4450 feet. This gravel deposit appears to be related to alluvial fan wash and the small drainage that flows through Sage Valley. The material is small in size, poorly to moderately sorted, and has considerable fines. Vegetation is sparse and consists of grasses and shadscale. Approximately 10% of the current project area has surface disturbance related to past mining activities.

Vernon Material Site (Map 34) T30N, R28E, section 36

PCRD occasionally uses this small material site which is located on the southeast flank of the Seven Troughs range. The majority of the material consists of weathered, and oxidized, siltstone mixed with sandy matrix, and minor gravels. The over-all material is poorly sorted and on the fine, silty side. Elevation at this site is approximately 4660 feet. Vegetation is very sparse owing to a fire in the area, and that which didn't burn consists of sagebrush and grasses. The material site boundary has been "relocated" on the maps to rectify a plotting error from previous FUPs. Approximately 1% of the current project area has surface disturbance related to past mining activities.

Vernon Flat Material Site (Map 35) T29N, R29E, section 8

This would be a new FUP authorization from a small gravel source that has been used in the past without a permit. It is located on the gently-sloping northwest flank of the Trinity Range, within Sage Valley. The material is moderately sorted, fine to medium in size, and has a significant amount of fines. Vegetation consists primarily of rabbitbrush, sagebrush, and grasses. The elevation at this site is approximately 4300 feet. Approximately 1% of the proposed project area has surface disturbance related to past mining activities.

3.2.4. Paleontological Resources

The location of the existing material acquisition sites are located on features related to ancient Lake Lahontan gravel beaches and gravel point bars, alluvial fans, and more recent fluvial processes. The materials within the material acquisition sites vary from location to location but primarily consist of gravel and sand deposits. During the period of deposition, now extinct Pleistocene fauna were present and have been identified in association with such deposits. Pleistocene fauna, like modern fauna, would concentrate around water resources such as the Pleistocene lakes, rivers, and streams that are associated with the material acquisition sites.

Through the study of paleontological resources that are associated with such geological formations, environments that existed during the Pleistocene can be better understood.

The proposed mineral material sites were analyzed utilizing the Potential Fossil Yield Classification (PFYC) System (See Table 5). Most of the proposed mineral material sites are located in alluvial deposits and fall within Class 3—"Moderate or Unknown" potential. Nine of the mineral material sites are in the vicinity of known fossils. Two others, the Ragged Top and E. Rosebud Canyon mineral material sites, include deposits which are considered to have high potential. Although the Seven Troughs Y mineral material site was rated Class II—Low, it includes older alluvial deposits which have potential for Pleistocene fossils. Twelve material sites were field checked for the presence of paleontological resources. The results of these field checks were negative. (D'Amo and Holzel 2012)

Table 5-Potential Fossil Yield

Mineral Material Site or Community Pit	PFYC Classification	Description	Known Fossils in Vicinity
Big Five	Class 3—Moderate or Unknown	Alluvial Deposits	None
Big Meadows	Class 3—Moderate or Unknown	Alluvial Deposits	None
Buena Vista	Class 3—Moderate or Unknown	Alluvial Deposits	None
Buffalo	Class 3—Moderate or	Alluvial Deposits	None

Mineral Material Site or Community Pit	PFYC Classification	Description	Known Fossils in Vicinity
	Unknown		
Butcher Canyon*	Class 3—Moderate or Unknown	Alluvial Deposits	PaNV-02-096
Coal Canyon	Class 3—Moderate or Unknown	Alluvial Deposits	None
Dago	Class 3—Moderate or Unknown Class 1—Very Low	Alluvial Deposits Rhyolitic Flows; shallow intrusive rocks	None
Dixie Cut-off*	Class 3—Moderate or Unknown	Alluvial Deposits	PaNV-02-097
Dixie Valley*	Class 3—Moderate or Unknown	Alluvial Deposits	PaNV-02-097
E. Rosebud* Canyon	Class 3—Moderate or Unknown Class 4a--High	Alluvial Deposits Shale, mudstone, siltstone, sandstone	None
Fencemaker	Class 3—Moderate or Unknown	Alluvial Deposits	None
Garavanta	Class 3—Moderate or Unknown	Alluvial Deposits	None
Golconda Canyon	Class 3—Moderate or Unknown	Alluvial Deposits	None
Goldbanks	Class 3—Moderate or Unknown	Alluvial Deposits	None
Humboldt River Ranch	Class 3—Moderate or Unknown	Alluvial Deposits	None
Imlay	Class 3—Moderate or Unknown	Alluvial Deposits	None
Irish American	Class 3—Moderate or Unknown	Alluvial Deposits	None
Jersey Valley	Class 3—Moderate or Unknown	Alluvial Deposits	None
Leach Hot Springs	Class 3—Moderate or Unknown	Alluvial Deposits	None
McCoy*	Class 3—Moderate or Unknown	Alluvial Deposits	PaNV-02-185 PaNV-02-156
Pedro	Class 3—Moderate or Unknown	Alluvial Deposits	None
McKinney Pass*	Class 3b-Unknown	Tuffaceous Sed. Rocks	PaNV-02-98

Mineral Material Site or Community Pit	PFYC Classification	Description	Known Fossils in Vicinity
Paris*	Class 3b-Unknown	Tuffaceous Sed. Rocks	PaNV-02-95, -96
Placeritas DG	Class 3—Moderate or Unknown	Alluvial Deposits	None
Pleasant Valley*	Class 3—Moderate or Unknown Near 4b---High	Alluvial Deposits	PaNV-02-95, -96
Ragged Top*	Class 1--Very Low Class 4a--High	Granitic Rocks Shale, mudstone, siltstone, sandstone	None
Rye Patch Reservoir*	Class 3-- Moderate or Unknown	Alluvial Deposits	PaNV-02-112
Seven Troughs South	Class 3-- Moderate or Unknown	Alluvial Deposits	None
Seven Troughs Y*	Class 2--Low	Older Alluvial deposits	None
Sonoma Canyon	Class 3-- Moderate or Unknown	Alluvial Deposits	None
Spaulding Canyon	Class 3-- Moderate or Unknown	Alluvial Deposits	None
Stonehouse	Class 3-- Moderate or Unknown	Alluvial Deposits	None
Unionville*	Class 3-- Moderate or Unknown	Alluvial Deposits	PaNV-02-159, -160, -166
Vernon	Class 3-- Moderate or Unknown Class 2--Low	Alluvial Deposits Andesite and Related Rocks of Intermediate Composition	None
Vernon Flat	Class 3-- Moderate or Unknown	Alluvial Deposits	None

*Field Checked

3.2.5. Recreation

BLM-administered lands in Pershing County provide opportunities for a wide variety of outdoor recreation activities and related benefits. While most recreation users participate in dispersed recreation activities, either individually or in small groups, others participate in organized events as participants or spectators. Many types of dispersed and organized uses provide for a diverse range of visitor needs and expectations. The BLM manages a large percentage of the land base in

the region, making BLM lands a critical resource for providing recreation opportunities to visitors.

Dispersed recreation activities include but are not limited to OHV use, camping, hunting and fishing, visiting interpretive and educational exhibits, touring the historic trails, sightseeing, pleasure driving, rock and mineral collecting, photography, picnicking, hiking, mountain biking, and hot spring bathing.

In addition, a variety of commercial, competitive, and organized group uses occur in the Pershing County, all of which are administered under the Special Recreation Permit (SRP) program. Many of the commercial permits, such as those issued to hunting outfitters and guides, are used throughout the Pershing County. Competitive permits, such as motorcycle races, are confined to a preapproved race course. Other examples of permitted activities within Pershing County (and the District) include OHV racing, mule racing, mountain bike races, various horse events, wagon trains reenactments, four-wheel drive tours, and other miscellaneous events.

The Pershing County has outstanding opportunities for OHV recreation on system roads, thousands of miles of user-classified, unmaintained ways, and several dry lake beds that are passable by vehicle. Many of the visitors to the planning area use OHVs at some point during their visit.

3.2.6. Social Values and Economics

According to the 2010 census, the total population of Pershing County is approximately 6,750 people. The incorporated city of Lovelock, with a 2010 population of 1,894 (US Census Bureau 2010), and the small towns and communities of Imlay, Oreana, Unionville, Mill City, portions of Grass Valley, and Humboldt River Ranch Estates are all located within Pershing County.

Although tourism connected with the gaming industry has increased in economic importance in the past few years, Pershing County remains economically dependent on agriculture, the Nevada State prison system, and somewhat on the mining industry. A recent increase in the price of precious metals has resulted in a surge in mining activity.

The county depends on FUPs for mineral materials provided by the BLM for construction and maintenance of the county road system. In turn, the public benefits from the quality of the roads for transportation associated with home, work, school and recreation.

The BLM maintains a large network of secondary roads other than what the county maintains and also depends on FUPs for the mineral materials it uses for construction and maintenance. Other governmental agencies and non-profit organizations benefit from FUPs to obtain mineral material resources for various projects. The public also benefits from road maintenance by PCRD and other governmental agencies, especially in the area of recreational activities.

The public also has a need of these material sites for various purposes on private lands and purchases the material at fair market costs under the CFR 3602 regulations utilizing a standard

mineral materials contract. Some of these are one time sales. Others are regular, repeat customers and frequently purchase larger amounts of mineral materials. The majority of sales from BLM managed mineral material sites across the county are to ranchers and small construction companies requiring gravel for their jobs and typically do not exceed 5,000 cubic yards. An exception has been where several larger sales were made to geothermal exploration companies in relation to geothermal development activities within the county. In addition, there have been a number of free-use permits issued to several non-profit, and local governmental groups

There are several privately owned gravel material sites based in the Lovelock area and Pershing County, and one cement plant associated with these gravel material sites, also located in the Lovelock community.

An armored car manufacturer, Eagle Picher Industries, Moltan Corp., two geothermal plants, and a medium security prison, are some of the manufacturing/industry/service related employers in Pershing County. The local government of Pershing County is also a source of employment. PCRD employees live in Lovelock as well as outlying communities within Pershing County and beyond. These employees are heavy equipment operators, truck drivers, office personnel and supervisors. These are skilled, well paying, permanent jobs.

3.2.7. Soils

Typically, the surface layer is fine material consisting of a medium texture (loam, silt loam, or sandy loam) ranging from 4 to 20 inches in depth (USDA, NRCS, Soil Data Mart). The substratum consists of very gravelly or extremely gravelly sands. Water erosion hazard is slight and wind erosion hazard is moderate.

The potential for biological crusts at the mineral material site locations is slight to moderate, with the majority being slight. The exceptions would be the Dixie Cut-Off and Butcher Canyon mineral material sites. These two material sites are situated within areas of intact biological crusts.

3.2.8. Special Status Species

Both Threatened and Endangered Species (addressed in Section 3.1.6. Threatened and Endangered Species) and Sensitive Species (addressed below) are considered Special Status Species. BLM policy is to provide special status species with the same level of protection as provided for candidate species in BLM Manual 6840.06C, which is to “ensure that actions authorized, funded, or carried out by the Bureau do not contribute to the need for the species to become listed”. The Nevada Natural Heritage Program (NNHP) database (July 2012) and the NDOW Diversity database (July 2012) were consulted for the possible presence of endangered, threatened, candidate and/or sensitive plants or animal species.

<u>Special Status animals</u>

According to these data, it has been determined that the following wildlife species have the potential to occur within or near the gravel material site areas and may be affected: bats, burrowing owl, loggerhead shrike, pygmy rabbit, and Brewer's sparrow.

Bats - Several species of bats may occur on or around each of these project areas. Most bats in Nevada are year-round residents. In general terms, bats eat insects during the warmer seasons and hibernate in underground structures during the cooler seasons. Bats commonly roost in caves, mines, outcrops, buildings, trees and under bridges. Bats may eat flies, moths, beetles, ants, scorpions, centipedes, grasshoppers, and crickets. Bats thrive where the plant communities are healthy enough to support a large population of prey (Bradley et. al 2006).

Burrowing Owl - There are no known colonies of burrowing owls within these proposed project areas but since they are found in sagebrush/bunchgrass vegetative communities it is possible that they occur there. Burrowing owls prefer open, arid, treeless landscapes with low vegetation. They are dependent on burrowing mammal populations for maintenance of nest habitat. Dense stands of grasses and forbs within owl home ranges support populations of rodent and insect prey.

Loggerhead Shrike - Loggerhead shrikes may be found in sagebrush/bunchgrass and salt desert scrub vegetative communities, so it is possible that they occur on the proposed project areas. Loggerhead shrikes tend to favor arid, open country with just a few perches or lookouts. They nest in isolated trees and large shrubs and feed mainly on small vertebrates and insects. The species is relatively common and well distributed across the state (Neel, 1999). These birds would benefit from habitat with a diverse structure and species composition. Healthy sagebrush communities would provide these habitat characteristics.

Pygmy Rabbit - Pygmy rabbit occurrence has not been documented in any of the proposed project areas. However, since 17 of the 35 gravel material sites are proposed for expansion, or are new mineral material site proposals, surveys for pygmy rabbits were conducted at eight mineral material sites proposed for expansion occurring in potential pygmy rabbit habitat. No sign of pygmy rabbit was discovered in any of the mineral material sites proposed for expansion during the surveys. Most of these mineral material sites contain sagebrush necessary for the rabbit but lack desirable grasses and forbs due to their low elevation. The proposed activities are judged to have no effect on pygmy rabbits as they are not present.

Brewer's Sparrow - The Brewer's sparrow may be found on the proposed project areas since it typically inhabits sagebrush-grass vegetative communities. It prefers mixed grass and sagebrush habitat where shrub cover is limited and bare ground is often present. The Brewer's sparrow builds an open cup nest in a shrub, preferring large, living sagebrush. Since the Brewer's sparrow often falls victim to the brown headed cowbird's nest parasitism, it is extremely important that they have live healthy sagebrush which conceals their nest. According to Paige and Ritter, 1999, "This sparrow chiefly forages in foliage but also on the ground, feeding on alfalfa weevils, aphids, beet leafhoppers, caterpillars, beetles, spiders, grasshoppers, and the seeds of grasses and forbs."

Greater sage-grouse - The Greater sage-grouse is currently listed as a candidate species by the USFWS. This species is considered an "umbrella species" where positive or negative impacts to their habitat generally affect the habitat for other sagebrush-obligate species or other species that utilize similar upland and riparian/meadow habitat on a seasonal or yearlong basis (Rowland et al. 2006).

Of the 35 mineral material sites, 16 are located within sage-grouse habitat on the edge of population management units (PMU). Of the 16, only the Butcher Canyon mineral material site falls within Preliminary General Habitat (PGH) for the greater sage-grouse. This is an existing mineral material site adjacent to a gravel road. This mineral material site has been proposed for an expansion at this time up to five acres.

Special Status plants

According to the NNHP database there is potential for six of the WDO special status plants to occur near existing mineral material sites. These species are Goodrich biscuitroot (Cymopterus goodrichii), windloving buckwheat (Eriogonum anemophilum), Crosby buckwheat (Eriogonum crosbyae), Owyhee prickly phlox (Leptodactylon glabrum), Oryctes (Oryctes nevadensis), and Lahontan beardtongue.

Goodrich biscuitroot – This plant is found in Lander, Nye and Pershing counties in Nevada, with the only documented occurrences on the Toyiabe and Humboldt Ranges. It is found on moderate to steep scree and talus slopes of dark angular slate or limestone in the upper subalpine and lower alpine zones (NNHP 2001). The habitat surrounding the gravel material sites differs greatly from the needed habitat of this flower. For this reason, proposed activities are judged to have no effect on this species or its habitats and it will be dismissed from further analysis.

Windloving buckwheat - This plant is endemic to Nevada and found in Churchill, Humboldt, Lander, Pershing and Washoe counties. It is found at low elevations on dry, relatively barren and undisturbed knolls and slopes of light colored, platy volcanic tuff weathered to form stiff clay soils, on all aspects, with Tetradymia canescens, Ericameria nauseosa, Ericameria viscidiflorus, Atriplex confertifolia, Elymus elymoides, Astragalus calycosus, etc. (NNHP 2001). A survey for windloving buckwheat was conducted at the Butcher Canyon mineral material site which is proposed for a 5 acre expansion occurring in potential windloving buckwheat habitat. No sign of windloving buckwheat was discovered at the mineral material site during the survey. For this reason, proposed activities are judged to have no effect on this species or its habitats and it will be dismissed from further analysis.

Crosby buckwheat - This plant is found in Washoe and Pershing counties in Nevada and in Oregon. It's habitat consists of outcrops of rhyolite or whitish fluviolacustrine volcanic ash deposits and derived shallow sandy to clay soils, on gentle to steep slopes of all aspects, with Chrysothamnus nauseosus, Tetradymia glabrata, Artemisia spp., Elymus cinerus, Stanleya viridiflora, Sphaeralcea, Ipomopsis congesta, and frequently with Astragalus tiehmii (NNHP

2001). The East Rosebud Canyon mineral material site is located in an environment that is suitable for this species.

Owyhee prickly phlox - This species can be found in Nevada and Idaho, in crevices in steep to vertical, coarse-crumbling volcanic canyon walls at 2600-4000 m elevation. It is intolerant of water paths or seeps that may form in the rock crevices. It is a shrubby, highly branched, perennial herb, 2-3 dm tall, with deeply lobed leaves and funnel-shaped flowers which appear in May-June (NatureServe 2012). The habitat surrounding the gravel material site differs greatly from the needed habitat of this flower. For this reason, proposed activities are judged to have no effect on this species or its habitats and it will be dismissed from further analysis.

Oryctes - This plant is found within sandy substrates, on washes, stabilized dunes, flats, slopes and low desert foothills in shadscale scrub communities in Churchill, Humboldt, Mineral, Pershing, and Washoe counties in Nevada (NNHP 2001). However, since 18 of the 35 mineral material sites are proposed for expansion, and 5 are new mineral material site proposals, surveys for oryctes were conducted at two mineral material sites proposed for expansion occurring in potential oryctes habitat. No sign of oryctes was discovered at either of the mineral material sites proposed for expansion during the surveys. For this reason, proposed activities are judged to have no effect on this species or its habitats and it will be dismissed from further analysis.

Lahontan beardtongue – This species has been found in Churchill, Nye and Pershing counties in Nevada. It is predominantly found along washes, roadsides and canyon floors, particularly on carbonate-containing substrates, usually where subsurface moisture is available throughout most of growing season. It is not known if this plant is restricted to calcareous substrates.

3.2.9. Vegetation Resources

Most of the vegetation communities on these proposed project areas are characterized by salt desert shrub and/or sagebrush species. These are common vegetation types within Pershing County. Vegetation is typically disturbed in the area adjacent to the mineral material sites from vehicles and heavy equipment accessing the mineral material sites. The mineral material sites themselves are generally devoid of vegetation due to the low quality growing medium present in the mineral material sites and from disturbance caused by the periodic removal of material.

Refer to Section 3.2.3. Minerals (Geology and Mineral Materials) for vegetation information for each of the existing material sites.

3.2.10. Visual Resources

Visual resources are the visible physical features on a landscape, such as land, water, vegetation, animals, and structures.

Scenic quality is a measure of the visual appeal of a parcel of land. Section 102(a)(8) of FLPMA placed an emphasis on the protection of the quality of scenic resources on public lands. Section

101(b) of the NEPA of 1969 required that measures be taken to ensure that aesthetically pleasing surroundings be retained for all Americans.

To ensure that these objectives are met, the BLM devised the Visual Resource Management (VRM) System. The VRM system provides a means to identify visual values, establish objectives for managing these values, and provide information to evaluate the visual effects of proposed projects. The inventory of visual values combines evaluations of scenic quality, sensitivity levels, and distance zones to establish visual resource inventory classes, which are "informational in nature and provide the basis for considering visual values in the land use planning process. They do not establish management direction and should not be used as a basis for constraining or limiting surface disturbing activities" (BLM 1986).

VRM classes are typically assigned to public land units through the use of the visual resource inventory classes in the BLM's land use planning process. One of four VRM classes is assigned to each unit of public lands. The specific objectives of each VRM class are presented in Table 6.

Table 6-BLM Visual Resource Management Classes

Class	Description
I	The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.
II	The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any change must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
III	The objective of this class is to partially retain the existing character of the landscape. The level of change to the character should be moderate. Management activities may attract attention, but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
IV	The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. Management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Source: BLM 1986

In general, the public lands within Pershing County could be described as the 'classic' panoramic Nevada landscape characterized by vast and open spaces and a back drop of tall mountains. Predominate vegetation in this area consists of sagebrush and grasses with areas of exposed soil and rock. Dominant, natural features consist of low rolling hills. Man- made structures include the interstate, state high-ways, both paved and unpaved county roads, BLM system roads and associated rights-of-way fence lines, transmission lines, and structures associated with the small communities, dispersed individual homes and ranch operations of various sizes.

Below is a table of the FUPs and community pits in Pershing County and their location within the existing Visual Resources Management (VRM) Classes in the Winnemucca Resource Area based on BLM Geographical Information System (GIS) data.

Table 7-Mineral Material Site VRM Classifications

NAME	VRM Class
Buffalo	IV
Butcher Canyon	IV
Dixie Cut-off	IV
Dixie Valley	IV
Jersey Valley	IV
McCoy	IV
Dago	IV
Fencemaker	IV
Golconda Canyon	IV
Goldbanks	IV
Leach Hot Springs	IV
McKinney Pass	IV
Paris	IV
Pleasant Valley	IV
Sonoma Canyon	III*
Spaulding	IV
Buena Vista	IV
Humboldt River Ranch	IV
Imlay	III*
Rye Patch Reservoir	III*
Unionville	IV
Big Five	IV
Big Meadows	III*
Coal Canyon	IV
Garavanta	IV
Irish American	III*
Pedro	III*
Ragged Top	IV
East Rosebud Canyon	IV
Placeritas DG	IV
Seven Troughs South	IV
Seven Troughs Y	IV
Stonehouse	IV

NAME	VRM Class
Vernon	IV
Vernon Flat	IV

*Material sites located within VRM Class III require the completion of a Contrast Rating field exercise. A Contrast Rating exercise was conducted for the noted mineral material sites in Table 7 between October 29 and November 8, 2012. The Proposed Action meets the objective of Class III VRM ratings.

3.2.11. Wildlife

Terrestrial wildlife resources on these proposed project areas are typical of the northern Great Basin. A wide variety of wildlife species common to the Great Basin ecosystem can be found within these proposed project areas. The vegetation on these areas are categorized into two broad vegetative types, primarily sagebrush and to a lesser amount, salt desert shrub.

Common wildlife species occurring on these proposed project areas include coyote (*Canis latrans*), badger (*Taxidea taxus*), chukar partridge, blacktail jackrabbit (*Lepus californicus*), raptors, small mammals, reptiles and small game species. Mule deer *(Odocoileus hemionus)* and pronghorn antelope *(Antilocapra americana)* may also occur on the proposed project areas, but in limited numbers due to the lack of free water and existing habitat disturbance.

Mule Deer - Deer are generally classified as browsers, with shrubs and forbs making up the bulk of their annual diet. The diet of mule deer is quite varied; however, the importance of various classes of forage plants varies by season. In winter, especially when grasses and forbs are covered with snow, their entire diet may consist of shrubby species. In these proposed project areas, Wyoming big sagebrush (*Artemisia tridentate wyomingensis*) is probably the most important browse species.

Pronghorn Antelope - Although the pronghorn may use the proposed project areas, the habitat disturbances may restrict the number of pronghorn utilizing the areas and their use could be described as intermittent. Rangelands with a mixture of grasses, forbs, and shrubs provide the best habitat for pronghorns. Pronghorn seem to prefer habitats with shrub heights between 10-25 inches. Many of the proposed project areas are dominated by Wyoming big sagebrush with the average height approaching or exceeding the 25 inch threshold.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1. Proposed Action

4.1.1. Supplemental Authorities (Critical Elements of the Human Environment)

4.1.1.1. Air Quality

PCRD may directly affect air quality from increased fugitive dust generated by processing activities and traffic. Due to the relatively small size of the proposed material sites, vehicles would not achieve speeds high enough to produce excessive quantities of fugitive dust. Vehicle emission should be minimal due to the limited use at each material site at any given time. Air quality impacts would be confined to when the processing activities are occurring, these activities are intermittent and are of relatively short duration, one or two weeks per year. Material site users would be required to comply with all state regulations regarding air quality. Mineral material sites would be reclaimed, sloped and revegetated. Reclamation would occur concurrently where possible and disturbed areas would be stabilized with perennial native and introduced vegetation to limit wind erosion. The haul roads, storage areas, and mineral material site surfaces would be controlled through the use of water trucks to prevent fugitive dust.

4.1.1.2. Cultural Resources

Fourteen of the sixteen sites recorded within the proposed mineral material site project areas are ineligible to the NRHP. Although two unevaluated sites have been recorded within the proposed Goldbanks and Big Five mineral material sites, one of these sites has been completely collected in the past and the other could not be relocated. The latter most likely was misplotted or has been destroyed. Therefore, no direct impacts are anticipated to NRHP sites as a consequence of the proposed action. Two unevaluated sites, CrNV-02-134 and CrNV-02-1904, have been recorded outside the proposed Big Five mineral material site and a NRHP eligible site, CrNV-02-9995, has been recorded outside the Leach Hot Springs mineral material site. No impacts to these sites are anticipated because additional permit boundary demarcations that would be implemented on the northern and eastern boundaries of the Big Five mineral material site and the northern boundary of the Leach Hot Springs Gravel mineral material site that would prevent impacts to these sites from inadvertent gravel mining beyond the mineral material site boundaries. Staking the corners of all permit boundaries and periodic monitoring of all material sites would also help prevent impacts to known and unknown cultural resources outside the boundaries of all gravel material sites.

The Big Meadows and Rye Patch mineral material sites are located approximately .6 miles from segments of the California Trail, CrNV-02-3305. Representatives of OCTA and Trails West were notified of the proposed Rye Patch and Big Meadows mineral material sites. Only one OCTA/Trails West representative, Don Buck, responded. He had no concerns about the effects of either gravel material site on the California Trail.

A visual assessment of the effects of the Rye Patch Gravel mineral material site on the California Emigrant Trail was completed by WDO BLM archeologists Peggy McGuckian and Calvin

Jennings in September 2012 (McGuckian 2012). The integrity of setting of this segment of California Trail has been impacted in the past by an existing road which dominates the foreground view between the historic trail and the gravel material site. The current stockpiles are barely noticeable from the trail and additional gravel removal would not result in significant changes in line, form, color, texture, scale or space because stockpiles at the Rye Patch Reservoir mineral material site would be maintained at a height equivalent to the existing stockpiles, and any new stockpiles would not exceed the height of current existing stockpiles. Impacts to the integrity of setting, feeling, and association would also be prevented by marking the corner boundaries of permit area with steel posts and annual monitoring for compliance with permit boundaries etc.

Changes to the viewshed resulting from continued use of the gravel material site would not attract the attention of the casual observer. Although there may be temporary impacts to the setting from the presence of equipment at the site, these impacts are anticipated to be infrequent with no increase in frequency or duration from current levels resulting from the proposed PCRD FUP renewal or Community Pit designation. Additional work at the gravel material site is not anticipated to significantly increase effects to this setting and overall the integrity and existing character of the NRHP-eligible historic landscape would be maintained.

A visual assessment of the effects of the Big Meadows Gravel mineral material site was not considered necessary because I-80 lies between the trail and the gravel material site, blocking the view of the gravel material site from the trail. The BLM has determined that neither the Rye Patch, Big Meadows, nor any other proposed mineral material site analyzed in this EA, would have an adverse effect on the National Register qualities of the California Trail

There would be no measurable impact to NRHP eligible or unevaluated resources from the proposed PCRD FUP renewals, new FUPs, expansions or community pit designations. Therefore this resource is dismissed from further analysis.

4.1.1.3. Invasive, Non-Native Species

There is a possibility for invasive/noxious weeds to be spread from mineral material sites to other locations. Mineral material sites would be treated if necessary by the PCRD as described in Section 2.1.2. Environmental Protection Measures. Gravel material sites do not provide decent growing conditions so infestations would be small and easily treated. If mineral material sites are maintained in a weed free condition, as is planned through the use of regular inventories and aggressive treatment of identified invasive species occurrences, the risk of spread from mineral material site locations is minimal.

The possibility exists that the heavy equipment that would be used for the Proposed Action would spread noxious weed seeds. The spread of seed would occur by attaching to the tires/undercarriages on the equipment or as a component of the removed material.

4.1.1.4. Migratory Birds

Mining activities conducted before March 1 or after August 31 are not expected to impact migratory birds because the birds are either not yet nesting or are mature and mobile. However, during the migratory bird nesting season (March 1 to August 31) there is the potential that some migratory birds nesting on or near the ground such as the sage sparrow, sage thrasher, burrowing owl or loggerhead shrike may be forced to relocate due to noise disturbance and the presence of humans and machinery. If nests with eggs or young are present, they may be abandoned by the parent birds due to the disturbance. If the nests with eggs or young go unnoticed, they could possibly be crushed by heavy equipment or foot traffic. With the implementation of the environmental protection measures, the impacts to migratory birds would be decreased.

4.1.1.5. Native American Religious Concerns

Based on continuing consultation, one Traditional Cultural Property (TCP) has been identified and two concerns fall within the scope of this EA: that access to the Native American cemetery near the Big Meadows mineral material site would be affected and that future mining may unearth previously unidentified cultural resources. The proposed action would impact the Native American TCP site by creating further disturbance to the character and visual setting of the TCP.

The Big Five mineral material site was permitted before the BLM knew of the TCP.

Recommended mitigation to address concerns regarding the TCP is as follows:

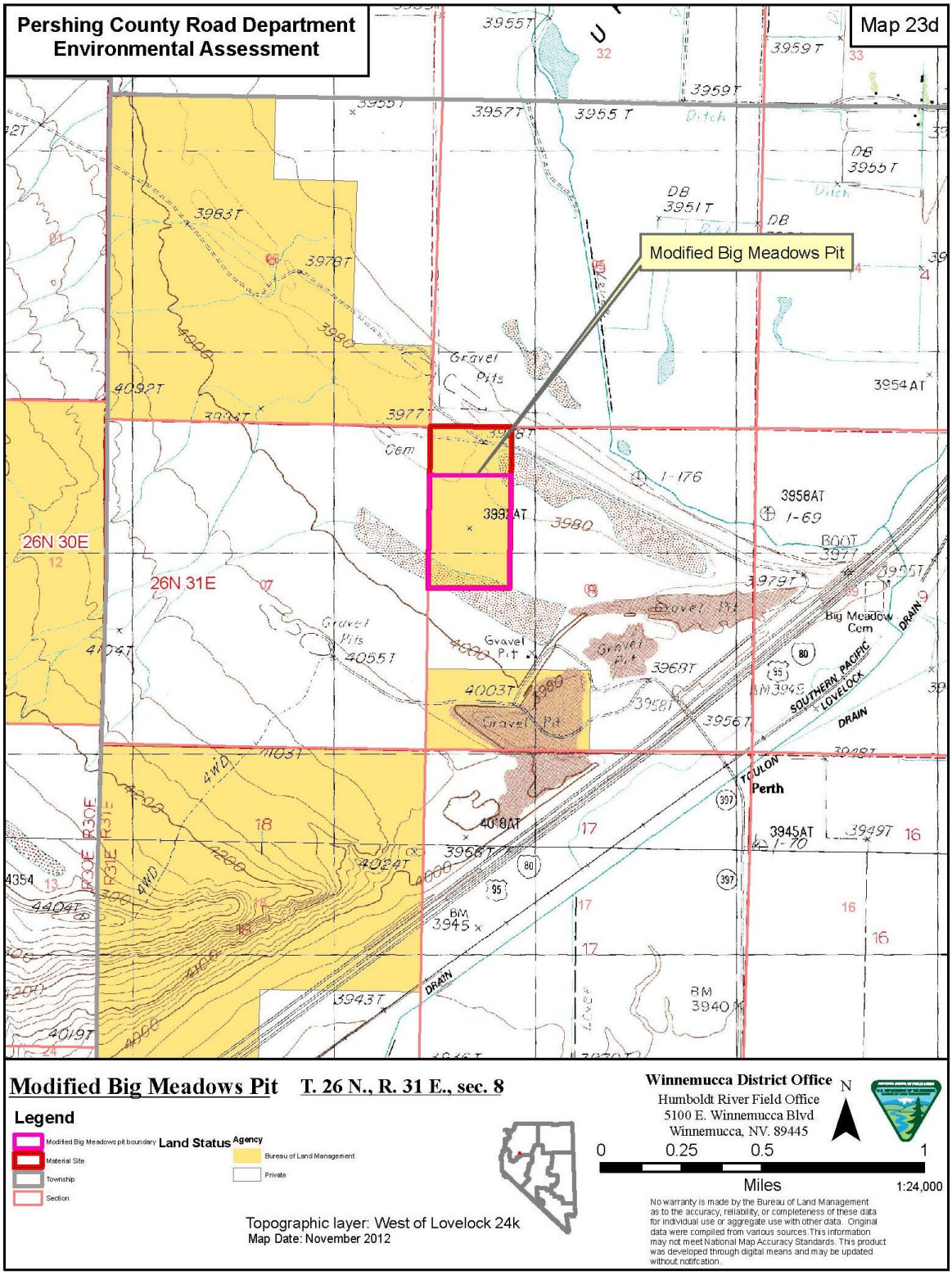
> The proposed expansion of the Big Five mineral material site should not be authorized.

The proposed action has the potential of removing or limiting access to the Native American cemetery.

Recommended mitigation to address concerns regarding access to the cemetery is as follows:

> The Big Meadows mineral material site boundary should be reduced by 1/3 of the proposed size. The northern boundary should be moved 793 feet south. In order to access the amended mineral material site boundary, PCRD would need to obtain a ROW from the BLM. See Figure 2, below:

Figure 2 - Proposed Mitigation for Big Meadows Mineral Material Site



As part of the Proposed Action, the following stipulations relating to cultural resources are included in the Standard Field Office Stipulations and would be attached to the permit, contract or sale as part of regularly attached stipulations (Appendix I):

Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the authorized officer.

When previously undiscovered antiquities or other objects of historic or scientific interest including but not limited to historic or prehistoric ruins, vertebrate fossils or artifacts are discovered in the performance of this permit, the item(s) or conditions(s) will be left intact and immediately brought to the attention of the authorized officer of the BLM.

4.1.2. Additional Affected Resources

4.1.2.1. Lands and Realty

Under the Proposed Action, impacts to existing ROW authorizations in the project area could occur if disturbance occurs near an overhead transmission line or underground pipeline or fiber optic line.

Recommended Mitigation:

> To avoid disturbance of existing power, telephone, and road rights-of-way, there should be no excavation within 40 feet of power poles, telephone poles, pole anchors, or the nearest side of an existing road.
>
> Prior to surface disturbing activities, the mineral material site user should contact ROW holders for location of underground and overhead utilities at the following locations:

Mineral material site Name	Right of Way holder
Butcher Canyon	Orni (Ormat Nevada)
Sonoma Canyon	Sierra Pacific Power Company Nevada Bell Southwest Gas (Paiute Pipeline Co.) BLM-ROWs
Imlay	Nevada Department of Transportation
Big Five	Nevada Bell
Pedro	Sierra Pacific Power Company Southwest Gas U S Gypsum Co
Ragged Top	Sierra Pacific Power Company

Mineral material site Name	Right of Way holder
	Southwest Gas
Irish American	Nevada Bell Lovelock Meadows Nevada Division of State Lands Sierra Pacific Power Company
Jersey Valley	Nevada Bell AT & T Sierra Pacific Power Company
Humboldt River Ranch	Humboldt River Ranch Association

The BLM has not obtained an easement to access the proposed Humboldt River Ranch community pit. The community pit would not be designated until legal access has been obtained.

4.1.2.2. Lands with Wilderness Characteristics

The Dixie Valley Mineral Material Site (Map 4) T26N, R38E, sections 11 and 12 would be located entirely within the Fencemaker Wilderness Characteristics Area. Although not formally permitted, the Dixie Valley site is an existing pit that was in use at the time of the initial inventory. Located between the boundary road and a hill, it was not deemed to substantially reduce the wilderness characteristics of the remainder of the WCA. With the implementation of the environmental protection measures, this site would not expand beyond the current disturbance footprint.

The Dago Mineral Material Site (Map 7) T27N, R37E, sections 18 and 19 is located on the northern edge of the Fencemaker Wilderness Characteristics Area. The primary mineral material site is located across a road from the WCA, and no portion of the maximum proposed mineral material site boundary overlaps the WCA.

The Paris Mineral Material Site (Map 13) T27N, R38E, section 21 is located on the northern edge of the Fencemaker Wilderness Characteristics Area. The primary mineral material site is located between the road and the unit, and no portion of the maximum proposed mineral material site boundary overlaps the WCA.

The McKinney Pass Mineral Material Site (Map 12) T27N, R37E, section 24 is located on the northern edge of the Fencemaker Wilderness Characteristics Area. No portion of the mineral material site or proposed expansion overlaps the WCA.

Expansion or development of mineral material sites outside the boundaries of WCAs would have no impact on wilderness characteristics. Since there would be no increased disturbance within the Fencemaker WCA, there would be no impacts. Therefore this resource is dismissed from further analysis.

4.1.2.3. Minerals (Geology and Mineral Materials)

Mining of the various geomorphological features would eventually remove them from the landscape, usually lowering the ground profile. The resulting topography after final mineral material site reclamation would have shallow, 3:1 slopes on former open pit features. All stockpiles would be removed or be reshaped to blend in with the surrounding area. The areas would then be re-vegetated with BLM approved seed mixtures. (Appendix I)

4.1.2.4. Paleontological

Although no known paleontological resources have been identified within the 35 proposed material sites, the probability for the presence of paleontological resources ranges from very low to high based on the PFYC system. Through the continued use of the existing gravel material sites, paleontological resources could be impacted by disturbing or removing portions of the resource to the complete destruction of the resource as heavy equipment is used in the removal of sands and gravels. These effects could be magnified through mineral material site expansions outside of previously disturbed areas. However, with the implementation of the environmental protection measures, the impact to paleontological resources is expected to be minimal. Therefore, this resource is dismissed from further analysis.

4.1.2.5. Recreation

The Proposed Action would not affect any of the developed recreational facilities (primitive camping areas, vault toilets and constructed trails) within Pershing County. Impacts to recreation would be temporary and minimal due to the location of the mineral material sites and the temporary nature of the disturbance. No mitigation measures would be necessary. Because recreational use within Pershing County is expected to continue consistent with past and present use, cumulative impacts as a result of the Proposed Action, if any, would be negligible. Therefore this resource is dismissed from further analysis.

4.1.2.6. Social and Economic Values

<u>FUP Renewals</u>

The FUPs would be issued for a 10 year period, thus providing for an adequate supply of mineral materials for the County's use. Sixteen expansions are proposed to assure this supply for future use. Without the expansions, the existing permitted areas would be exhausted.

The BLM engineering department would also benefit from the Proposed Action. BLM would be able to request FUPs from these mineral material sites to maintain other roads in the area that are not part of the PCRD system.

<u>Community Pits</u>

There are several private construction and excavation companies that would use the material sources for various business related projects within the county. Additionally, should BLM make the community pit designations, numerous county ranchers, farmers and residents would purchase materials from these material sites by making small sale purchases over the counter. This would save extensive time and the purchaser would only pay for the material and would not incur any permitting costs.

Proximal sources would allow users to conserve fuel and save time because material would not have to be hauled from distant private sources. Money would be saved as the appraised materials would be based upon in-place values, excluding all taxes, equipment and labor costs.

Social values would be enhanced through a network of good, all-weather, gravel-surfaced roads to use for access to recreation areas and in general for the rural residents for everyday transport for work and business. The Pershing County economy, however, would not be impacted because the net number of jobs would remain unchanged.

4.1.2.7. Soils

When the existing gravel material sites were initiated, the surface topsoil was salvaged. This material is required, by the standard stipulations (Appendix I & II) that accompany all FUPs and sales, to be stockpiled and reserved for final mineral material site reclamation. This policy would also be followed for any new disturbance on the recommended 18 expansion areas.

The potential for soil loss from wind erosion would be low due to the low-to-moderate wind erosion classification and that the surface soil would be removed and stockpiled prior to extraction activities.

Some biological crusts would be destroyed with the implementation of the Proposed Action. Given the very localized nature of the surface disturbance at these sites expected impacts would be little to none.

Due to the sensitive nature of preserving intact biological crusts where they do exist, the following mitigation to reduce impacts to surrounding intact biological crusts is recommended:

> The proposed Dixie Cut-off and Butcher Canyon material sites should have additional interim staking, in addition to the corner staking, to limit ground disturbing activities to the proposed areas.

Implementation of the recommended mitigation would reduce potential impacts to biological crusts outside of the designated mineral material site boundaries.

4.1.2.8. Special Status Species

Burrowing owl, Loggerhead shrike, and Brewer's sparrow – Since these sensitive species are also migratory birds, the discussion in section 4.1.1.4. also applies to these species.

Bats - No direct impacts to bats are expected as they tend to roost in areas away from the project areas. Indirectly, a minor portion of their foraging habitat would be lost to disturbance and human activity. These impacts would be negligible.

Greater Sage-grouse – In general, the proposed action would have minimal impacts on sage-grouse. Mining activities may cause temporary displacement of birds that frequent the project area due to noise and human presence during working hours. This would be limited in nature due to the size, location, and duration of the proposed project.

Expansion of the Butcher Canyon mineral material site would have minimal impacts on greater sage-grouse as the majority of the area surrounding the site and expansion area already have been previously disturbed. There are no known leks within the vicinity of the Butcher Canyon mineral material site that would be impacted by the human activity.

Crosby buckwheat and Lahontan beardtongue – Mining activities would destroy individual plants and possibly a relic population should they occur at these sites.

Due to the potential concerns over the destruction of sensitive plants, the following mitigation is recommended to reduce potential impacts associated with the identified concerns:

> Prior to issuance of FUPs for material sites within potential habitat for special status plants, a plant survey should be conducted by a qualified botanist and the reports would be submitted to BLM for review and approval. Should a sensitive plant species occur, the habitat for the species would be mapped out and no surface disturbance would occur within that area. BLM would provide PCRD with a list of mineral material sites that may contain suitable habitat for sensitive plant species.

4.1.2.9. Vegetation

The existing mineral material sites are currently devoid of vegetation within, and in some cases adjacent to, the mineral material sites. Expansion of the mineral material sites would cause the removal of any vegetation present in the expansion areas for a total of 430.5 acres of new disturbance within Pershing County. The impacted vegetation types would be sagebrush or salt desert shrub plant communities with a grass understory or cheatgrass in areas dominated by exotic species. All mineral material sites would eventually be rehabilitated and seeded with approved seeding mixes once all materials have been removed from the mineral material sites. There is a possibility for vegetation to become reestablished within the mineral material sites, though this would be temporary and would be disturbed once the site was accessed for removal of gravel.

4.1.2.10. Visual Resource Management

As a result of the Contrast Ratings it was determined that the implementation of the Proposed Action would not negatively affect the existing character of the landscape and the material sites would not attract the attention of the casual observer. While the Proposed Action would create a slight intrusion on the visual quality, this intrusion is well within the objectives of the Class III and Class IV VRM classification with respect to each of the proposed gravel material sites. This is based on the relative size of the projects, their distance from associated observation points, the history and presence of previous disturbances (existing landscape character/situation), and the methods of operation and reclamation. Since the impacts to VRM from the Proposed Action are minimal, no cumulative impacts are expected. This resource is therefore dismissed from further analysis.

4.1.2.11. Wildlife

Mining activities may cause temporary displacement of rodents, reptiles, birds and large ungulates that frequent the project area due to noise and human presence during working hours. This would be limited in nature due to the size, location, and duration of the proposed project.

4.2. No Action Alternative

4.2.1. Supplemental Authorities (Critical Elements of the Human Environment)

4.2.1.1. Air Quality

Under the No Action Alternative, the level of impact to air quality associated with the Proposed Action would not occur. The Big Five, Butcher Canyon, Dixie Cut-off, Fencemaker, Garavanta, Pleasant Valley, Jersey Valley, Irish American Community, Golconda Canyon, Rye Patch, and Seven Troughs Y mineral material sites would continue to operate with similar impact as identified in the Proposed Action until the existing permits expire. Remainder of the mineral material sites would be reclaimed and closed as specified in permit stipulations. The mineral material sites under current permits would be reclaimed and closed as specified in permit stipulations over time. Reclamation would occur on disturbed areas and seed would be used to stabilize wind erosion.

Processing activities at the above 11 mineral material sites would create fugitive dust, causing a minor impact to air resources. Fugitive dust would be controlled by minimizing surface disturbance per permit stipulations. Likewise, speed limits on access roads would be observed, and travel on roads within the Project Area would be conducted at prudent speeds. Vehicle emissions would be minimal.

4.2.1.2. Cultural Resources

Because all of the existing mineral material sites have been inventoried for cultural resources and there are no known NRHP listed, eligible, or unevaluated sites within the existing mineral

material sites, no impacts to NRHP values within boundaries of existing mineral material sites are anticipated from continued use of the mineral material sites or closure and rehabilitation. There could be impacts to undiscovered sites outside the boundaries of the existing permit areas due to inadvertent gravel mining beyond the mineral material site boundaries. However, the existing permits for Big Five, Butcher Canyon, Dixie Cut-off, Fencemaker, Garavanta, Golconda Canyon, Irish American, Jersey Valley, Pleasant Valley, Rye Patch Reservoir, and Seven Troughs Y mineral material sites would continue to be subject to the stipulations attached to the permit at the time of issuance. Stipulations include routine monitoring to confirm boundary compliance, which would reduce this potential impact. This would not avert potential impacts as well as the environmental protection measure identified in Section 2.1.2. that would require staking of the permitted boundary. However, due to the fact that this could occur at only these 11 out of the 35 mineral material sites being analyzed in this EA, the potential for impacts would be considered to be negligible. Therefore this resource is dismissed from further analysis.

4.2.1.3. Invasive, Non-Native Species

The mineral material site areas would be rehabilitated and seeded. Invasive species present at the mineral material sites would be treated during rehabilitation efforts. Closure and treatment of mineral material sites infested with invasive species would eliminate a potential source of weed spread. Weed spread as a result of mineral material site expansions would not occur.

4.2.1.4. Migratory Birds

Under the No Action Alternative mining activities conducted before March 1 or after August 31 are not expected to impact migratory birds because the birds are either not yet nesting or are mature and mobile. However, during the migratory bird nesting season (March 1 to August 31) there is the potential that some migratory birds nesting on or near the ground such as the sage sparrow, sage thrasher, burrowing owl or loggerhead shrike may be forced to relocate due to noise disturbance and the presence of humans and machinery. If nests with eggs or young are present, they may be abandoned by the parent birds due to the disturbance. If the nests with eggs or young go unnoticed, they could possibly be crushed by heavy equipment or foot traffic.

Although no new mineral material sites would be designated under the No Action Alternative, the activities in the existing mineral material sites would continue until the permits expire. Under the existing permits the majority of the permits do not have stipulations for migratory birds, therefore, the mineral material sites may be expanded to their current boundaries without regards to nesting birds.

4.2.1.5. Native American Religious Concerns

Under the No Action alternative, Native American religious concerns would not be affected because the Free Use Permit renewals/expansions near the known TCP and Native American Cemetery would not be authorized, nor would they be designated as community pits.

4.2.2. Additional Resources

4.2.2.1. Lands and Realty

Although unlikely, impacts to the ROW authorizations in five of the currently permitted mineral material sites would be anticipated under the No Action alternative if disturbance occurs near an overhead transmission line or underground pipeline or fiber optic line. Current state requirements to contact utility owners before surface disturbance reduce the potential for impacts even further. Access to and through the material sites would not change, as they would be accessed by existing roads. Many of the material sites parallel the county roads, but those that do not, already have existing access roads. Pershing County would not be required to obtain an easement or right-of-way on any of the material sites being proposed for a FUP renewal.

4.2.2.2. Lands with Wilderness Characteristics

There would be no expected impacts to lands with wilderness characteristics under the No Action Alternative. Although not formally permitted, the Dixie Valley mineral material site is an existing site that was in use at the time of the initial wilderness characteristics inventory. Located between the boundary road and a hill, it was not deemed to substantially reduce the wilderness characteristics of the remainder of the Fencemaker WCA. Under the No Action alternative the FUP for the Dixie Valley mineral material site would not be issued. Therefore this resource is dismissed from further analysis.

4.2.2.3. Minerals (Geology and Mineral Material)

Under the No Action Alternative, the permits would not be renewed, nor would there be any additional acreage added, nor would any of the proposed mineral material sites be designated as community pits. With the exception of the nine listed mineral material sites, which are currently permitted, the remainder of the mineral material sites would be reclaimed and closed as specified in the stipulations that accompany the FUPS. The existing areas would be re-contoured and seeded, resulting in a gentle 3:1 sloped topography over the old mined pit surface. There would be no further removal of the existing land forms that may be associated with each material site.

4.2.2.4. Paleontological

Closures would reduce the likelihood of damage or destruction of unknown paleontological located within permit boundaries. No impacts would be anticipated from rehabilitation. There would be potential for more impacts to unknown paleontological resources from inadvertent gravel mining beyond the mineral material site boundaries than under the Proposed Action due to the lack of environmental protection measures. However, the existing permits for Big Five, Butcher Canyon, Dixie Cut-off, Fencemaker, Garavanta, Golconda Canyon, Irish American, Jersey Valley, Pleasant Valley, Rye Patch Reservoir, and Seven Troughs Y mineral material sites would continue to be subject to the stipulations attached to the permit at the time of issuance. Stipulations include routine monitoring to confirm boundary compliance, which would reduce this potential impact. This would not avert potential impacts as well as the environmental

protection measure identified in Section 2.1.2. that would require staking of the permitted boundary. However, due to the fact that this could occur at only these 11 out of the 35 mineral material sites being analyzed in this EA, the potential for impacts would be considered to be negligible. Therefore this resource is dismissed from further analysis.

4.2.2.5. Recreation

Under the No Action alternative, closures would not affect any of the developed recreational facilities (primitive camping areas, vault toilets and constructed trails) within Pershing County. The 11 mineral material sites that would continue to be used until the permits expire would not impact recreation due to the location of the mineral material sites and the temporary nature of the disturbance. Therefore this resource is dismissed from further analysis.

4.2.2.6. Social Values and Economics

FUP Renewals

Under the No Action alternative, 24 material sites would be closed and reclaimed, and 11 would continue to be used until the FUPs expire. If the 11 remaining mineral material sites would not meet PCRD's needs, they would need to make their gravel purchases from the private sector or from other locations outside of Pershing County. This would result in transportation and haulage expenses to PCRD as a result of not having a gravel material site near the work locations. There are very few suitable (sizeable, quality) gravel material sites currently on private land in Pershing County other than within a few miles of Lovelock, and several other mineral material sites along I-80. This would make it difficult for PCRD to conduct its road work efficiently as it needs to have gravel material sites close to the location where the road work is needed especially when it is emergency work. These impacts directly affect PCRD but would not affect the economy of Pershing County.

Continued road maintenance by PCRD may be decreased which in turn may decrease the use of roads beyond established communities.

Community Pit Designations

The existing community pit would remain designated as a community pit. The proposed community pits would not be designated. Should the existing community pit not be close to where the demand or work is, the public would need to purchase mineral materials using a contract system from the other available mineral material sites which requires a minimum of three weeks permitting time and cost recovery charges. This would result in the purchaser needing to travel further for mineral materials, spending more money and waiting for the necessary permits to obtain the mineral materials.

The general public would likely need to make their gravel purchases from the private sector. This would result in transportation and haulage expenses as a result of not having a material site

near the area of use. Outside of the Lovelock area there are few suitable (sizeable, quality) gravel material sites currently on private land in Pershing County, meaning the costs for the public would increase.

An indirect impact of implementing the No Action alternative would be that private industry could expand mineral material sources on private land to fill the void of mineral materials. This may in turn lead to a higher priced commodity.

These impacts would affect the individuals that would otherwise utilize community pits, but the economy of Pershing County, as a whole, would not be affected.

4.2.2.7. Soils

The mineral material sites would be closed and the area rehabilitated. Stockpiled topsoil would be replaced at the various sites. There is a potential for increased erosion while the site is being rehabilitated but this would be temporary until the areas are re-vegetated.

Under this alternative the mineral material site expansions would not occur which would eliminate a potential source of impacts.

4.2.2.8. Special Status Species

Although no new mineral material sites or expansions would be designated under the No Action Alternative the activities in the existing 11 mineral material sites would continue until the permits expire. Under the existing permits there are no stipulations for special status species.

Burrowing owl, Loggerhead shrike, and Brewer's sparrow – Since these sensitive species are also migratory birds, the discussion in Section 4.2.1.4. also applies to these species.

Bats - No direct impacts to bats are expected as they tend to roost in areas away from the project areas. Indirectly, a minor portion of their foraging habitat would be lost to disturbance and human activity but to a lesser degree than under the proposed action. These impacts are considered negligible.

Greater sage-grouse – In general, the current mining operations would have minimal impacts on sage-grouse. Mining activities may cause temporary displacement of birds that frequent the project area due to noise and human presence during working hours. This would be limited in nature due to the size, location, and duration of the proposed project.

The majority of the gravel material sites are located outside of sage-grouse habitat. Under the No Action Alternative, there are 16 existing mineral material sites located within or immediately adjacent to sage-grouse habitat on the edge of PMU and only one, Butcher Canyon, falls within PGH for sage-grouse. As previously stated, this is an existing mineral material site adjacent to a gravel road which has had approximately 65% of the existing mineral material site boundaries

disturbed from mining activities. There are no known leks in close proximity to this mineral material site.

Under the No Action Alternative, the Butcher Canyon, and seven other mineral material sites that are in or immediately adjacent to PMUs would not be expanded therefore leaving more sagebrush habitat intact for the birds.

Crosby buckwheat and Lahontan beardtongue – Mining activities would continue at existing mineral material sites, without added mitigations, therefore the mining activities may destroy individual plants and possibly a relic population should they occur at these sites under the No Action Alternative.

4.2.2.9. Vegetation

The mineral material sites would be rehabilitated and vegetation would eventually be reestablished at the various sites. Under this alternative the mineral material site expansions would not occur which would eliminate a potential source of impacts.

4.2.2.10. Visual Resource Management

Since under the No Action Alternative all material sites would be reclaimed, the effects to the visual resource would be transitory. Initially, the on-site activities and machinery used in the reclamation process would detract from the visual quality of the immediate surroundings. In addition, there would be a period of time after the initial reclamation efforts are completed that the vegetative elements of the Visual Contrast Rating System would register as 'Weak'. The impacts to visual resources over time would be negligible. Therefore, this resource is dismissed from further analysis.

4.2.2.11. Wildlife

Mining activities may cause temporary displacement of rodents, reptiles, birds and large ungulates that frequent the project area due to noise and human presence during working hours. This would be limited in nature due to the size, location, and duration of the proposed project. Under the No Action Alternative, there would be no new mineral material sites or expansions authorized, so therefore, the No Action Alternative would impact less habitat for wildlife than the Proposed Action.

5.0 CUMULATIVE IMPACTS ANALYSIS

The Council on Environmental Quality (CEQ) regulations that implement NEPA defines a cumulative impact as: "The impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions." Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative Assessment Area

For the purposes of this analysis, the cumulative impact assessment area is the Pershing County administrative boundary. Since this project involves material sites located throughout the county, the administrative boundary covers the needs for any affected resources.

Cumulative Analysis Assumptions and Data Sources

Free Use Permits (FUPs) for mineral materials are issued for ten year periods with the ability of a one year extension. The last round of permitting for Pershing County Road Department's FUPs being analyzed in this document was over 10 years ago. Therefore, a ten year time frame seems a reasonable cutoff for addressing past and present actions occurring within the cumulative assessment area.

Since the life of the proposed action is ten years, this time frame is considered to be most appropriate for considering the incremental effect of reasonably foreseeable future actions.

On the basis of aerial photographic data, BLM Legacy Rehost 2000 database report of June 12, 2012, current agency GIS records and analysis, the following are past, present and reasonable foreseeable actions, which have impacted the assessment area to varying degrees.

5.1. Past and Present Actions

The majority of people living and working in the county are occupying the former sites of the old Lahontan lake complex. Ranches, agriculture, and towns all are in the valleys as well. Therefore, roads were required to serve these people and the associated ranches and communities. Many of these roads are not paved but are improved gravel roads that the PCRD constructs and maintains. Approximately half of the sand and gravel comes from the Lake Lahontan deposits. People living in the county frequently purchase materials from these deposits to construct private roads, driveways, and many small construction projects. Much of the aggregate used in construction is also mined from these related deposits, many of which are on private lands. Large NDOT projects, such as the interstate highway system and smaller state routes also utilize these deposits under BLM Material Site Rights-of-Way.

There are other gravel material sites in the Pershing County region. These include mineral material sites on public lands other than the 35 mineral material sites that this EA is covering, NDOT Material Site Rights-of-Way mineral material sites, and mineral material sites on private lands.

There have been a number of power transmission lines, gas pipelines, telephone lines, road right-of-ways and various water facilities authorized on public land within the assessment area within the past 10 years, as well as a handful of mining exploration projects 5 acres and under in size.

Numerous grazing allotments are located within the cumulative assessment area. The type of livestock grazing within the allotments is mainly cattle with limited sheep use. In order to support the management of these allotments a variety of range improvement projects such as fences, cattle guards, wells, spring developments, reservoirs, water pipelines, and corrals, have been implemented over the past ten years.

5.2. Reasonably Foreseeable Future Actions

Since the life of the proposed FUPs is ten years, this time frame is considered to be most appropriate for considering the incremental effect of reasonably foreseeable future actions. Many of the past and present actions discussed above are expected to persist through this time frame, though the relative intensity of these actions could vary depending on a variety of economic factors.

Recreational use is expected to increase, approximately five percent annually, as a result of population growth and family oriented activities. Some activities such as hunting and off-road vehicle use will likely continue and/or increase over time (Winnemucca RMP AMS, 2005).

There are a number of reasonable foreseeable future actions within the cumulative assessment area:

> The TerraGen Power LLC New York Canyon Development project, located in Buena Vista Valley, is currently being analyzed for the construction of a geothermal power plant and associated transmission lines.
>
> Nevada Iron LLC is considering the resumption of mining operations in Churchill County which would include transporting the iron ore via a slurry pipeline through a portion of Pershing County. The BLM is anticipating a formal proposal by summer 2013.
>
> Barrick Gold Exploration Inc. has submitted an amendment to the Spring Valley Plan of Operations to increase their exploration effort.
>
> Goldbanks Nevada Ventures has submitted an amendment to the Goldbanks Exploration Project, near the Goldbanks Hills, to increase their exploration efforts.
>
> Various small realty subdivisions resulting from sales offerings by private developers within the assessment area.
>
> Various small mineral material sales, road rights-of-way, and water facilities.
>
> A number of grazing permits are in the renewal process or will be within the 10 year timeframe of this analysis.

5.3. Cumulative Impacts to Affected Resources

Impacts associated with past, present, and reasonably foreseeable future actions are generally created by ground or vegetation-disturbing activities that effect natural and cultural resources in various ways. Of particular concern is the accumulation of these impacts over time. This section of the EA considers the nature of the cumulative effect and analyzes the degree to which the Proposed Action and alternatives contribute to the collective impact.

Inter-related resources with similar impacts have been grouped together for the cumulative impact analysis. No cumulative impacts are expected in the areas of Cultural Resources, Lands with Wilderness Characteristics, Paleontology, Recreation and Visual Resources Management.

Cumulative Impact

5.3.1. Air Quality

Impacts from Past and Present Actions

Impacts to air quality from past actions have resulted from background emission sources including windblown dust and dust from recreational activities, traffic on unpaved roads, road maintenance, wildfires, mining, agriculture, and gravel processing activities. Fugitive emissions from background sources are considered to have been low.

Impacts to air quality from present actions include the past background emission sources as well as emissions from ongoing recreation, mineral exploration, mining, mine reclamation, traffic on unpaved roads, road construction, road maintenance, and gravel processing. Impacts from present actions in the study area are considered to be low.

Impacts from RFFAs

Impacts to air quality from RFFAs could result from the generation of dust from recreational traffic on unpaved roads, mineral exploration, mining activities, gravel processing, and wild-land fires. Dust from traffic on unpaved roads would likely create a low impact to air quality. Impacts to air quality from RFFAs in the study area would be low.

Cumulative Impact

Proposed Action

The Proposed Action would incorporate measures to reduce fugitive dust emissions, therefore a cumulative impact on air quality is not expected from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs.

No Action

Under the No Action alternative, most of the mineral material sites would be reclaimed and activities producing fugitive dust would cease in these areas. The mineral material sites that would continue to be used over the years would still be subject to the stipulations attached to the permit at the time of issuance that require the permit holder to reduce fugitive dust emissions. A cumulative impact on air quality is not expected from the incremental impact of the No Action alternative when added to the past actions, present actions, and RFFAs.

5.3.2. Invasive, Non-Native Species

Impacts from Past and Present Actions

Past impacts from road construction and maintenance, grazing, agriculture, mining, recreation wildfire and other ground and vegetation disturbing activities have introduced and spread invasive species. Present grazing, mining, and other permitted activities have best management practices and/or concurrent monitoring and treatment which has reduced or eliminated invasive species spread associated with these activities. Other activities continue to be a source of invasive non-native species spread.

Impacts from RFFAs

Permitted RFFAs would have measures to limit invasive species spread. Some activities, such as OHV use and wildfire would likely increase the spread of invasive species over time.

Cumulative Impact

Proposed Action

The Proposed Action would incorporate rehabilitation of disturbed areas as well as inventory and treatment provisions, so the cumulative impacts from the Proposed Action, past and present actions, and RFFAs is expected to be low.

No Action

The No Action Alternative would incorporate rehabilitation of disturbed areas as well as treatment provisions, so the cumulative impacts from the No Action, past and present actions, and RFFAs is expected to be low.

5.3.3. Migratory Birds, Special Status Species, Wildlife

Impacts from Past and Present Actions

Minor to moderate amounts of displacement have resulted from disturbances to habitat associated with mining, livestock grazing, road construction, and human encroachment. Large areas of native habitat have been degraded from wildfires within the assessment area.

Impacts from RFFAs

Impacts from mining, livestock grazing, road construction, human encroachment, and wildfires are expected to increase over time. These activities are expected to cause minor amounts of displacement due to habitat disturbances. There should be an incremental impact from the Proposed Action as the mining level has been increased.

Cumulative Impact

Proposed Action

The addition of six new mineral material sites, and expansion of 16 others would add an incremental impact to migratory birds, special status species, and wildlife by removing potential habitat. Cumulatively, the amount of potential habitat loss in comparison to available habitat within Pershing County would be minimal.

No Action

Since these mineral material sites are already in existence, no incremental impacts would occur when adding the No Action alternative to the past, present, and RFFAs. Cumulative impacts would be absent.

5.3.4. Native American Religious Concerns

Impacts from Past and Present Actions

From contacts with settlers, disease and alcohol have decimated Northern Paiute and Shoshone population groups. Further, past historical actions such as mining and ranching, have served to drive the Northern Paiutes off the land, confine them to reservations, and further destroy their culture. Only in the past 50 years has an attempt been made by the federal and state governments to undo some of these previous actions.

Impacts from RFFAs

The New York Canyon geothermal project has the potential to cause adverse impacts to six TCPs that are within the project area. These adverse impacts could further destroy traditional Paiute culture.

Cumulative Impact

Proposed Action

The Proposed Action would incrementally increase impacts to TCPs and Native American cultural sites within the project area from past, present, and RFFAs. However, implementing the

recommended mitigation would help preserve a TCP important to the Lovelock and Fallon tribes. The recommended mitigation would also help preserve a cemetery still in use by many Native Americans.

No Action

Under the No Action alternative there would be no direct or indirect impacts to TCPs and Native American cultural sites. Therefore, there would be no cumulative impacts.

5.3.5. Land and Realty

Impacts from Past and Present Actions

The past and present actions identified in this EA are ranching, agriculture, livestock grazing, mining, and associated road construction & maintenance to support these activities. These activities have not affected ROWs in general within Pershing County. There have been no impacts or conflicts between ROWs and these other activities.

Impacts from RFFAs

The RFFAs identified in this EA are the continuation of the past and present activities as well as recreation, some new geothermal projects (TerraGen), mining projects (Barrick and Goldbanks), and the creation of subdivisions. Future projects would not affect existing ROWs, therefore, no conflicts would be anticipated in land use between ROWs and these other activities.

Cumulative Impact

Proposed Action

A cumulative impact on ROWs is not expected from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs.

No Action

Under the No Action alternative there would be no direct or indirect impacts to ROWs.
Therefore, there would be no cumulative impacts.

5.3.6. Minerals (Geology and Mineral Materials)

Impacts from Past and Present Actions

The largest contributor to the removal of mineral materials is PCRD for use in construction and maintenance of the county's 914-mile gravel road system. The NDOT projects are another principle user of mineral materials. Mineral materials are a non-renewable resource that is

slowly being depleted. As this resource depletes, it forces users to go further and further from the point of use to obtain mineral materials. These materials must meet certain specifications in order to be utilized for specific purposes such as road maintenance. The Lahontan deposits are the best quality in the area for meeting specifications.

Impacts from RFFAs

The RFFAs would put increasing pressure on the mineral material sites due to the need for concrete, road material and general construction materials related to the geothermal and mineral exploration projects identified in the RFFAs. The 5% annual increase expected in recreation activity level would put greater number of people on roads and in turn a greater need for road maintenance activities.

Cumulative Impact

Proposed Action

The combination of the Past, Present, and RFFAs with the Proposed Action would lead to an accelerated depletion of gravel deposits close to the points of use. In total, the amount of material that has been or will be removed within Pershing County is minimal compared to the available mineral material resources throughout the area.

No Action

Under the No Action alternative there would be no incremental impact to the mineral material deposits on public land. Existing permits would be allowed to expire and ultimately all mineral material sites would be closed and rehabilitated.

5.3.7. Social Values and Economics

Impacts from Past and Present Actions

The past and present actions have brought growth of communities within the assessment area. The past and present activities can be classified as occupational, infrastructure, mining and energy development, recreational and environmental protection and have occurred in conjunction with community growth. These activities expand sources of income and provide an avenue for improving social diversity and quality of life.

Impacts from RFFAs

Impacts from past and present actions would continue into the foreseeable future and are subject to fluctuation with changes in population. The expanding mineral exploration and geothermal development projects may increase job opportunities, both directly and indirectly. Increases in recreational activities may also provide economic stimulation.

Cumulative Impact

Proposed Action

The impact of the Proposed Action on the assessment area would incrementally increase the quality of life through a well-developed and maintained road system. Under the Proposed Action there would be no cumulative impact to the economy of Pershing County.

No Action

Under the No Action Alternative, it is unclear whether any reduction in road maintenance would affect the overall quality of life. Furthermore, the net number of jobs in Pershing County would not be affected. This would not incrementally add to any impacts from the past present or RFFAs. Therefore, there would be no cumulative effects.

5.3.8. Soils and Vegetation

Impacts from Past and Present Actions

Past and present actions have caused disturbance to soil and vegetation within the assessment area. In some cases this has led to increased erosion and conversion of native plant communities to invasive annual grasslands, especially in the case of wildfires. Permitted activities such as livestock grazing and mining have incorporated better management strategies and rehabilitation requirements that have reduced impacts to vegetation and soils.

Impacts from RFFAs

Impacts from RFFAs would in most cases incorporate some manner of rehabilitation or strategies to reduce impacts to soils and vegetation. Wildfires are likely to increase or at least remain at current levels, so there would likely be large scale degradation of native plant communities associated with fire. Recreation is expected to increase over time which will lead to increased impacts to soils and vegetation from recreational activities, notably OHV use.

Cumulative Impact

Proposed Action

The cumulative impacts from the Proposed Action, past and present actions, and RFFAs is expected to be low due to the localized nature of the surface disturbance at each site.

No Action

Under the No Action alternative, existing material sites would be utilized within the currently permitted areas of disturbance for the remainder of their permits. No expansions of existing sites

or creation of new sites would take place. No mineral material sites would be newly designated as community pits. The remaining mineral material sites would be reclaimed as specified in the stipulations that accompanied the FUPs. Therefore, cumulative impacts from the past and present actions, and RFFAs would remain the same.

6.0 MITIGATION AND MONITORING

6.1. Mitigation for Proposed Action

In addition to the Environmental Protection Measures identified in Section 2.1.2, the following recommended mitigation measures may be applied to the Proposed Action to minimize impacts to resources:

Native American Consultation

The proposed expansion of the Big Five mineral material site should not be authorized.

The Big Meadows mineral material site boundary should be reduced by 1/3 of the proposed size. The northern boundary should be moved 793 feet south. In order to access the amended mineral material site boundary, PCRD would need to obtain a ROW from the BLM.

Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the authorized officer.

When previously undiscovered antiquities or other objects of historic or scientific interest including but not limited to historic or prehistoric ruins, vertebrate fossils or artifacts are discovered in the performance of this permit, the item(s) or conditions(s) will be left intact and immediately brought to the attention of the authorized officer of the BLM.

Lands and Realty

To avoid disturbance of existing power, telephone, and road rights-of-way, there should be no excavation within 40 feet of power poles, telephone poles, pole anchors, or the nearest side of an existing road.

Prior to surface disturbing activities, the mineral material site user should contact ROW holders for location of underground and overhead utilities at the following locations:

Mineral Material Site Name	Right of Way holder
Butcher Canyon	Orni (Ormat Nevada)
Sonoma Canyon	Sierra Pacific Power Company Nevada Bell Southwest Gas (Paiute Pipeline Co.) BLM-ROWs
Imlay	Nevada Department of Transportation
Big Five	Nevada Bell
Pedro	Sierra Pacific Power Company Southwest Gas U S Gypsum Co
Ragged Top	Sierra Pacific Power Company Southwest Gas
Irish American	Nevada Bell Lovelock Meadows Nevada Division of State Lands Sierra Pacific Power Company
Jersey Valley	Nevada Bell AT & T Sierra Pacific Power Company
Humboldt River Ranch	Humboldt River Ranch Association

Soils

To protect biological crust, the proposed Dixie Cut-Off and Butcher Canyon material sites should have additional interim staking, in addition to the corner staking, to limit ground disturbing activities to the proposed areas.

Special Status Species

Prior to issuance of FUPs for material sites within potential habitat for special status plants, a plant survey should be conducted by a qualified botanist and the reports would be submitted to BLM for review and approval. Should a sensitive plant species occur, the habitat for the species would be mapped out and no surface disturbance would occur within that area. BLM would provide PCRD with a list of mineral material sites that may contain suitable habitat for sensitive plant species.

6.2. Monitoring

Periodic Inspections

As part of the proposed action, all material sites with known sensitive resources in the vicinity would be monitored annually for compliance with permit boundaries, etc. Other material sites would be monitored annually, if possible, or at least every two years.

7.0 PREPARERS

The following is a list of individuals responsible for developing the EA:

Amanda DeForest – Migratory Birds, Threatened or Endangered Species, Special Status Species, and Wildlife

Celeste Mimnaugh – Migratory Birds, Threatened or Endangered Species, Special Status Species, and Wildlife

Daniel Atkinson - Project Lead, Geology and Minerals, Social Values and Economics

Debbie Dunham – Lands and Realty

Eric Baxter – Invasive and Non-Native Species

Joey Carmosino–Visual Resource Management, Recreation

Kristine Struck – Lands with Wilderness Characteristics

Mark E. Hall- Native American Religious Concerns

Peggy McGuckian– Cultural Resources, Paleontology

Robert Burton – Soils, Vegetation, and Air Quality

Zwaantje Rorex– Planning and Environmental Coordinator

8.0 CONSULTATION AND COORDINATION

Tribal Consultation

At the planning stage of the proposal, a consultation meeting was held with the Fallon Paiute and Shoshone Tribe in July of 2011. Letters were sent on May 4, 2012, notifying the following tribal governments of the proposed action: Battle Mountain Band, Fallon Paiute and Shoshone Tribe, Fort McDermitt Paiute and Shoshone Tribe, Lovelock Paiute Tribe, and Pyramid Lake Paiute Tribe. Through the consultation process, mitigation was recommended to not authorize the expansion of the Big Five material site and reduce the overall size of the Big Meadows material site.

On November 15, 2012, a letter and copy of the preliminary EA were provided to the Battle Mountain Band, Fallon Paiute and Shoshone Tribe, Lovelock Paiute Tribe, and Pyramid Lake Paiute Tribe. No comments or concerns were provided to the BLM from the Native American groups contacted regarding review of the preliminary EA.

U.S. Fish and Wildlife Service

A list of federally listed, proposed or candidate species was requested from the U.S. Fish and Wildlife Service (Service) for the analysis areas in October 2012. A response from the Service was received on December 3, 2012, and the information has been incorporated into Section 3.1.6. Threatened and Endangered Species.

9.0 PUBLIC INVOLVEMENT

On April 27, 2010, a letter and map were sent to a list of potentially interested parties for external scoping where other agencies, organizations, tribes, local governments, and the general public were offered the opportunity to provide feedback regarding issues, concerns, data needs and such things as potential alternatives. This assisted the BLM in refining issues and in identifying new issues, coordination needs, and possible alternatives. The scoping letter and map were also posted on the BLM's Winnemucca District National Environmental Policy Act (NEPA) web page (http://www.blm.gov/nv/st/en/fo/wfo/blm_information/nepa0.html).

On November 14, 2012, public notification of the availability of a preliminary EA for a 14 day public review period was provided to 106 groups and individuals via direct mail. The preliminary EA was also posted to the BLM website.

During the public comment period for the preliminary EA 4 comment letters were received: 2 from property owners in the Humboldt River Ranch Association, 1 from the Humboldt River Ranch Association Board of Directors, and 1 from Paiute Pipeline Co. (a.k.a. Southwest Gas Corp.). The letters from the Humboldt River Ranch Association (HRRA) Board of Directors and community members requested that BLM not authorize the use of the proposed Humboldt River Ranch Community pit for reasons including decreased property values; increased traffic and subsequent road degradation requiring maintenance (the roads are currently maintained by the HRRA through fees from the members); extraction of the material would not benefit the community; lack of free and unhindered access; increased traffic may decrease security and privacy; increased fugitive dust; and increased noise. As stated in the EA, authorization of the Humboldt River Ranch Community pit is contingent upon the acquisition of legal access to the material site. The acquisition of legal access would require NEPA review, and the impacts associated with the development of the Humboldt River Ranch Community pit will be deferred until the need for, and preparation of, the access-related NEPA document. The comment from Paiute Pipeline Co. (Paiute) was regarding the proximity of the Sonoma Canyon pit to one of their high pressure gas lines. The comment requested that Paiute be contacted prior to excavation activities to reduce the likelihood of impacts to the pipeline. This request is addressed in the EA as recommended mitigation in Section 4.1.2.1. Lands and Realty. Additionally, in communication with Paiute, BLM agreed to meet with Paiute on-site to further delineate the pipeline and apply a buffer with visible markers to avoid impacts.

As a result of comments received and additional internal review, the following changes were made between the Preliminary EA and the Final EA:

- Environmental protection measures for Lands and Realty (Rights-of-way) and Lands with Wilderness Characteristics were added under community pit designations (Section 2.1.2.).
- The environmental protection measure for migratory birds under community pit designations was modified (Section 2.1.2.).
- Added clarification to recommended mitigation for Lands and Realty that Southwest Gas Corp. and Paiute Pipeline Co. are synonymous (Section 4.1.2.1. and Section 6.1.)
- Added clarification to recommended mitigation for Special Status Species plants (Section 4.1.2.8.).
- Editorial changes were made throughout the document.

In total, comments received did not result in substantial change to the analysis or conclusions made from the analysis.

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MAPS

APPENDICES