Environmental Assessment
Boulder Reservoir Gravel Pit

DOI-BLM-CA-N070-2015-0010-EA

USDI Bureau of Land Management
Applegate Field Office
708 W. 12th street
Alturas, CA 96101

Date prepared: December 10, 2014

Table of Contents

CHAPTER 1: INTRODUCTION **3**
Background 3
Purpose and Need for the Action 3
Decision to be Made 3
Scoping 3
Plan Conformance 4
Relationship to Statues, Regulations, and Plans 4
CHAPTER 2: PROPOSED ACTION AND ALTERNATIVES **4**
Proposed Action 4
Alternative 1 – No Action 5
CHAPTER 3: ENVIRONMENTAL ANALYSIS **5**
3.1 Air Quality 7
3.2 Cultural Resources 7
3.3 Invasive, Non-native Species 8
3.4 Native American Religious Concerns 9
3.5 Mineral Resources 9
3.6 Soils 10
3.7 Social and Economic Values 10
3.8 Vegetation 11
3.9 Visual Resources 12
3.10 Wildlife, including T&E Species and Migratory Birds 12
3.11 Paleontological Resources 12
CHAPTER 4: OVERALL CUMMULATIVE IMPACTS **13**
4.1 Air Quality 15
4.2 Cultural Resources 15
4.3 Invasive, Non-native Species 15
4.4 Native American Religious Concerns 15
4.5 Mineral Resources 15
4.6 Soils 15
4.7 Social and Economic Values 15
4.8 Vegetation 15
4.9 Visual Resources 16
4.10 Wildlife, including T&E Species and Migratory Birds 16
4.11 Paleontological Resources 16
CHAPTER 5: STANDARD OPPERATING PROCEEDURES & STIPULATIONS **16**
CHAPTER 6: CONSULTATION AND COORDINATION/PREPARERS **17**
List of Preparers 17

CHAPTER 1: INTRODUCTION

The purpose of this Environmental Assessment (EA) is to disclose the environmental consequences of authorizing Free-Use Gravel permits to the Washoe County Road Department (WCRD) and the Bureau of Land Management (BLM) for a new gravel pit that would be utilized by the two agencies for road maintenance or other uses. The EA is a site-specific analysis of potential impacts that could result with the implementation of any of the alternatives. The EA assists the (BLM) in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and with other laws and policies affecting the alternatives. If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an Environmental Impact Statement (EIS) would be prepared for the project. If not, a Finding of No Significant Impact (FONSI) statement would be prepared, documenting the reasons why implementation of the selected alternative would not result in "significant" environmental impacts.

The proposed gravel pit is located in northern Washoe County, Nevada, specifically within the northeastern corner of Township 41 N., Range 20E., Section 34.

See attached map

Background

Numerous gravel pits are operated by WCRD and BLM within the BLM Applegate Field Office area since at least the 1980's. WCRD is the permitted user and has received multiple 10 year Free-Use permits from BLM in the past. BLM also has Community Pits authorizations for some of the pits for material sales to the general public as well as administrative use. There are currently 17 pits that are authorized and have been utilized by WCRD under Free-Use permits. Free-Use permits are granted to governmental agencies for the use of materials for local government projects such as road maintenance. The Boulder Reservoir pit is proposed to fulfill the county's need to maintain a portion of Washoe County Road 34. There are two existing gravel pits that are located at the southern and northern end of County Road 34, however long haul distances make it difficult to maintain the central portion of the road. BLM also recently finished a recreation project at Boulder reservoir, which is likely to result in increased traffic into the site. In order for the BLM to maintain the main gravel road into the reservoir there must be a nearby source of gravel to utilize. This pit would serve the county as well as the BLM for road maintenance.

Purpose and Need for the Action

The purpose of the proposed action is for BLM to evaluate issuance of a 10 year, Free-Use permit to WCRD and BLM. The Free-Use permit is needed by WCRD and BLM to allow for the extraction of materials (gravel) for the ongoing maintenance of existing county and BLM roads in the area of northwestern Nevada.

Decision to be Made

This EA discloses the environmental consequences of implementing the Proposed Action or an alternative to that action. The BLM, Applegate Field Office Manager is the Authorized Officer. His decision and the rationale for that decision would be stated in Decision Record (DR). Based on analysis within this EA, the Authorized Officer would decide whether or not to issue the Free-Use permits, or if an EIS would be required.

Scoping

The BLM Applegate Field Office conducted internal scoping with an interdisciplinary team of specialists. Consultation was held with the Fort Bidwell Tribe on February 14, 2015, with the Summit Lake Paiute Tribes on January 17, 2015, and with the Susanville Indian Rancheria on January 9, 2015. This consultation resulted in no concerns.

Plan Conformance

This proposed action is subject to the following use plan(s): Surprise Resource Management Plan (RMP) and Records of Decision (ROD), approved on April 2008. The proposed action has been determined to be in conformance with these plans as required by regulation (43 CFR 1610.5-3(a)). "Provide mineral materials for local, state, and federal agencies and meet public demand." See page 2-13

Relationship to Statues, Regulations, and Plans

Cultural Resources

Under the National Historic Preservation Act The California Bureau of Land Management (BLM) has responsibility to manage cultural resources on public lands pursuant to the 1966 National Historic Preservation Act, the 1980 Rangeland Programmatic Memorandum of Agreement with the Advisory Council on Historic Places (WO IM 80-369), the 1997 Programmatic Agreement Among the BLM, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in Which BLM Will Meet Its Responsibilities, and the primary agreement, which dictates how the BLM in California will meet its responsibilities under the above Statutes and Regulations, the 2014 State Protocol Agreement among the California State Director of the BLM, the California State Historic Preservation Officer, and the Nevada State historic Preservation Officer.

Threatened or Endangered Species

The Endangered Species Act of 1973 (ESA) requires federal agencies to complete formal consultation with the U.S. Fish and Wildlife Service (FWS) for any action that "may affect" federally listed species or critical habitat. The ESA also requires federal agencies to use their authorities to carry out programs for the conservation of endangered, threatened and candidate species. The BLM has conducted formal and informal Section 7 consultations and submitted biological assessments for the following.

CHAPTER 2: PROPOSED ACTION AND ALTERNATIVES

Proposed Action

The proposed action would result in the issuance of Free-Use permits to WCRD and BLM for the development and use of a new 10 acre gravel pit on BLM lands near Boulder reservoir road. The proposed gravel pit would be located in northern Washoe County, Nevada, specifically within the northeastern corner of Township 41 N., Range 20 E., section 34. The Free-Use permits would allow the County and BLM to mine and extract up to 5,000 yards of material annually from the pit for a 10-year term.

Future mining operation in the pit would occur for the next 10 years. Total permitted extraction would be 50,000 yards during that period. All hauling would occur on BLM and county maintained roads. The mining plan would be to excavate material from the walls of the pit, generally working toward the pit's proposed boundaries. The material would then placed in stockpiles within the pit and when necessary to meet road bed or other specification, passing it through a portable crusher and screen to produce road base gravel or chips, Replenishment of the stockpiles would occur throughout the year as needed, generally between the months of April and November. Excavation at this pit would remain at least 75 feet from intermittent drainages. Prior to disturbance of any new surface, topsoil would be removed and stored on-site. As excavation continues, the sides of the pits would be sloped at not greater than 3:1 horizontal to vertical.

There would be no explosives used at this pit. The pit would be authorized for 10 acres however it is likely only 4-5 acres would be disturbed in the first 5 years. The pit would be expanded to the 10 acres over the life of the pit.

Stipulations
BLM would issue a list of stipulations with the Free-Use permits. These stipulations cover the protection of resources, prevention of erosion and the spread of noxious weeds. They also cover the construction, operation and maintenance of the proposed action. Stipulations are listed in Appendix 1.

Alternative 1 – No Action
Under the No Action alternative, no Free-Use permits would be issued to the county or BLM. The stretch of County Road 34 as well as the Boulder Reservoir Road would have to be maintained with material from existing gravel pits.

CHAPTER 3: ENVIRONMENTAL ANALYSIS

The affected environment is described below followed by the environmental consequences for each resource.

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

Supplemental Authorities	Present	Not Present	Affected	Rationale
Air Quality	✓		✓	Section 3.1
Areas of Critical Environmental Concern (ACEC's)		✓		Not present.
Cultural Resources	✓			Section 3.2
Paleontological Resources	✓			Section 3.11
Environmental Justice		✓		Not affected.
Floodplains		✓		Resource not present.
Global Climate Change	✓		✓	Emissions of greenhouse gases from the infrequent and short-term operation of motor vehicles and motorized equipment would have immeasurable effects on global climate change.
Invasive, Nonnative Species	✓			Section 3.3
Migratory Birds		✓		Not affected.
Native American Religious Concerns	✓			Section 3.4
Prime or Unique Farmlands		✓		Resource not present.
Threatened & Endangered Species		✓		No species occur within or near the project area.

Supplemental Authorities	Present	Not Present	Affected	Rationale
Wastes, Hazardous or Solid		✓		Not present. The permit requires that any wastes created during operation be removed prior to periods of non-operation.
Water Quality (Surface/Ground)		✓		No surface or ground water would be affected.
Wetlands and Riparian Zones		✓		No wetland or riparian zones would be affected.
Wild and Scenic Rivers		✓		Resource not present.
Wilderness/WSAs		✓		The pit location is located outside Wilderness Study Areas or designated Wilderness Areas.

In addition to the require elements described above (Supplemental Authorities) the Interdisciplinary Team considered the following resources and uses.

Resource or Use	Present	Not Present	Affected	Rationale
Livestock Grazing	✓			The location of the project site are within livestock grazing allotments, but due to the lack of forage plants and distance to water, there would be no effect on livestock grazing.
Minerals	✓			Section 3.5
Recreation	✓			Recreational target shooting and hunting does occur in the proximity of the pit but is not affected.
Soils	✓		✓	Section 3.6
Socio-Economics	✓		✓	Section 3.7
Special Status Species		✓		No special status plant or animal species are known from the project location or surrounding area.
Vegetation	✓		✓	Section 3.8
Visual Resources	✓		✓	Section 3.9
Wild Horses		✓		Not Present
Wildlife	✓		✓	Section 3.10

3.1 Air Quality

A. Affected Environment

The Washoe County District Health Department, Air Quality Management Division, Washoe County, has jurisdiction over air quality issues throughout Washoe County and administers air quality regulations developed at the federal, State, and local levels. Weather in this region is influenced by the position of a semi-permanent high pressure cell in the North Pacific Ocean. Due to the positioning of this cell southward during winter months, an almost unbroken chain of winter storms occurs in the Action Area, and a bulk of the precipitation in the Action Area occurs during this winter storm period. Weather systems in the region usually result in strong winds and unstable air masses, providing for good dispersion conditions. During fair weather periods, stable air conditions prevail throughout the region. Summers are hot and dry. Winds generally prevail from the south and southwest.
Air quality for the project area is generally good due to the remoteness and the limited amount of development/activity taking place within the project area. Air pollution in the region of the Action Area is predominately characterized by particulate matter (PM_{10}) (CARB 2010), resulting from a variety of sources including fugitive dust from construction and the use of unsurfaced roads, windblown dust, vehicular and equipment emissions, and smoke from prescribed burns and wildfires during summer months, and wood-burning stoves and furnaces used for heating during winter months. Washoe County is designated by national standards as "Unclassified/Attainment" for 8-Hour Ozone, PM_{10}, $PM_{2.5}$, Carbon Monoxide, Nitrogen Dioxide, and Sulfur Dioxide (USEPA 2011). Strong dust events are common in this area during the spring through fall as strong south winds associated with frontal passage raise dust clouds from vast areas of un-vegetated dry lakebeds south of the pits location.

B. Environmental Consequences

1. Impacts of Proposed Action

Operation at the gravel pit would involve the excavation and preparation of gravel material, including rock crushing, as well as the hauling of gravel for use throughout the County. During these operations, dust (PM10) would be produced from pits activity and associated haul trips over dirt roads. Because the mining operations in the pits would be infrequent and of relatively short duration, a few weeks during the entire year, the dust production would be localized and short-term and would be similar to natural dust generation from un-protected desert soils associated with winds and dust devils. Mining activities could potentially contribute to temporary, localized non-attainment of the PM10 ambient air quality.

2. Impacts of Alternative 1 – No Action

There would be no new impacts from the gravel pit. Gravel and other materials would be hauled from existing pits north and south of the Boulder area which would maintain minor emissions of dust from the operation and maintenance of the current gravel pits.

3.2 Cultural Resources

A. Affected Environment

The proposed gravel pit is located within Washoe County, Nevada. Ethnographically, this area was part of the traditional territory of the Northern Paiute, more specifically, within the territorial boundaries of the Kidütökadö band. The Northern Paiute were hunting-gathering bands that generally traveled seasonal rounds in small family groups subsisting on a variety of plant foods, insects, small game, and fish. Game animals available to Native Americans in the planning area included antelope, rabbits, bighorn sheep, mule deer, and a variety of small mammals, reptiles, and birds. Cultural resource inventories near the project area indicate that the area was used by prehistoric people over the past 7,000 years for resource procurement activities such as hunting, plant gathering, and obtaining raw materials for stone tools. Historically, this area has been used for sheep and cattle

grazing by Euro-Americans. The 1879 General Land Office Survey map indicates that wagon roads and a homestead were located north of the project area in the late 1800s.

The Applegate Field Office consulted with the Fort Bidwell Tribal Council, the Summit Lake Paiute Tribal Council and the Susanville Indian Rancheria regarding the proposed gravel pit. To date there have been no concerns expressed about the project.

The project area was surveyed by the Applegate Field Office Archaeologist to Class III standards, by means of parallel transects, spaced no further than 30 meters apart. No cultural resources were identified during this pedestrian survey.

B. Environmental Consequences

1. Impacts of Proposed Action

Operation of the pit would not create a physical change or condition that could affect known unique ethnic cultural values or restrict existing religious or sacred uses within the existing and future impact area. There would be no impacts to cultural resources under the proposed action.

2. Impacts of Alternative 1 – No Action

There would be no impacts to cultural resources under this Alternative.

3.3 Invasive, Non-native Species

A. Affected Environment

There are no known populations of noxious weed species within the proposed permit area. If noxious weeds were detected by WCRD, they would be reported to the BLM for immediate action to suppress and eradicate the infestation. BLM would also continue to survey for noxious weeds at gravel pits. Cheatgrass, a common invasive annual grass is present at all the pits, especially in areas where the soils have been disturbed. Hoary cress, an invasive weed, is present in many areas along roadsides within the Field Office. Hoary cress is not currently established in the location of the proposed gravel pit.

B. Environmental Consequences

1. Impacts of Proposed Action

Direct operations of the Pit would have no direct impact on the spread of noxious, non-native species. Indirectly, the use of the material by Washoe County to maintain gravel roads and shoulders of paved roads in Northwest Nevada could contribute to the spread of noxious weeds through hauling of materials and grading of the spread materials in areas where these species currently exist. If new invasions were detected at the pit sites, the weed species would be treated immediately to eradicate the weed invasion. Cheatgrass would be expected to slightly increase as a result of the proposed action due to expansion of the pits. Overall, the proposed action is expected to slightly increase the potential for noxious weed invasion due to the ground disturbance associated with establishing a new pit.

2. Impacts of Alternative 1 – No Action

Under the No Action Alternative, Washoe County or BLM would not be authorized to remove material out of the pit and noxious weed establishment and spread through moving of materials would be slightly reduced compared to the Proposed Action. Indirectly, the use of the material could result in the spread of these materials on private lands through hauling of materials and grading of the spread materials in areas where these species currently exist.

3.4 Native American Religious Concerns

A. Affected Environment

The proposed project is located within the traditional territory of the Kidütökadö band of the Northern Paiute. While no specific concerns were identified during consultation with three Northern Paiute tribes, religious concerns typically involve two main components: location and resources. Specific locations across the landscape are considered spiritually important to the Northern Paiute and areas where ceremonies have been held and continue to be held. Ground-disturbing projects have the potential to affect these locations by inhibiting access to these locations, physically damaging or destroying the place itself, or degrading the location's view. Undertakings can also affect the availability or procurement of certain resources (such as plants, animals, or minerals) needed for a ceremony or to continue to pass traditional knowledge from one generation to the next.

The Applegate Field Office conducted consultation with three tribes: the Fort Bidwell Tribe (February 14, 2015), the Summit Lake Tribe (January 17, 2015), and the Susanville Indian Rancheria (January 9, 2015). No concerns about the project have been expressed.

B. Environmental Consequences

1. Impacts of Proposed Action

There are no expressed concerns from the local tribes. Therefore there would be no impacts to known Native American Religious Concerns.

2. Impacts of Alternative 1 – No Action

There would be no new impacts to Native American Religious Concerns.

3.5 Mineral Resources

A. Affected Environment

Washoe County road department holds 17 Free-Use permits with BLM in Washoe County Nevada. This allows them to extract mineral resources from the pits for the operation and maintenance of roads. The proposed project is located in geomorphic features related to Long Valley such as ancient gravel beaches, gravel point bars and alluvial fans. Materials that are present include coarse gravel is moderately rounded, and contains abundant fine silt and clays. Vegetation consists of sagebrush, shadscale, and greasewood with occasional grasses.

B. Environmental Consequences

1. Impacts of Proposed Action

Issuance of two Free-Use permits would result in permanent removal of up to 5,000 cubic yards of subsoil, rock, sand and gravel from the pit annually for use as road base and other uses. Removal of materials from currently permitted gravel pits to the north and south of the proposed pit location would be decreased because it would be more efficient to minimize haul distances.

2. Impacts of Alternative 1 – No Action

There would be no impacts on mineral materials at the location of the proposed pit. Removal of materials from currently permitted gravel pits to the north and south of the proposed pit location would remain at current levels.

3.6 Soils

A. Affected Environment

The pit is located in an area mapped as the McWatt-Old Camp Association by the National Resource Conservation Service (NRCS) in their 1999 Soil Survey of Northern Washoe County. Based upon the landscape position of the proposed gravel pit, a beach terrace of Pleistocene Lake Meinzer, the soil is a McWatt extremely stony fine sandy loam. This soil is over four foot deep with over 75% of the profile below 20 inches associated with cobbles, pebbles or stones. The top soil layer of this soil is approximately 10 inches deep.

B. Environmental Consequences

1. Impacts of Proposed Action

Operation of the pit would include grading, excavation, and earth moving activities which would result in a maximum of 10 additional acres of soil disturbance. WCRD would strip and stockpile up to 16,000 yards yards of top soil from the site for future reclamation. The total soil disturbance would be a maximum of 10 acres. Operation of the pit would not result in erosion and unstable soils. Reclamation would be phased and would occur in mined and abandoned portions of the pit. Reclamation would include slope stabilization, recontouring, drainage control, and revegetation. Potential erosion problems would be limited to the area of active mining and negligible due to low precipitation, high infiltration and capture of runoff water in the pit.

2. Impacts of Alternative 1 – No Action

There would be no new impacts to soils if the pit was not authorized.

3.7 Social and Economic Values

A. Affected Environment

The WCRD and BLM are responsible for the maintenance of hundreds of miles of gravel roads used by the residents and travelers in the northern portion of the county. There are no paved roads in this region. Gravel is used for road base and shoulder material for all types of roads, for surfacing materials for gravel roads. To meet the state and federal needs for gravel materials the County has historically used 17 existing gravel pits scattered on public lands administered by the Applegate Field Office.

Operation of the 17 pits is based upon maintenance needs and budget priorities throughout the county. The result is that each pit is used infrequently and for a maximum of few weeks at a time.

Residents and visitors use Washoe County and BLM maintained roads on a regular basis and depend on them to recreate, operate businesses and travel to and from residences. Pits are also used for destination areas for activities such as shooting and camping.

B. Environmental Consequences

1. Impacts of Proposed Action

Operation of the pit would provide the County and BLM with a source of needed gravel. This gravel would be used for the maintenance of County and BLM roads, which is a beneficial public service impact. Operation of the pit would not adversely affect fire or police protection services or any schools. With the establishment of this pit the BLM and WCRD could continue to provide safe, steady, maintained roads to the area and the travelers who use the roads.

Mining activity would generate appreciable noise levels averaging approximately 88 dBA, 50 feet from operating machinery in the pit on an infrequent basis. It is estimated that noise would be generated from pit operations less than one percent of weekday daylight periods during the spring to fall period. However, noise naturally attenuates at an average rate of 6 dBA per doubling of distance from the noise source (Barksdale, 1991). The nearest residence to this pit is over 10 miles away and would be exposed to less than 40 dBA noise. Therefore noise except within the permit area would be negligible and short-term.

2. Impacts of Alternative 1 – No Action

Not issuing Washoe County or BLM permits to establish and mine gravel from the pit would result in increased maintenance cost for the County and BLM. Washoe County would have to continue to use other gravel pits in the area to maintain specific sections of the roads. The BLM would only maintain the Boulder reservoir road when funding allows every 5-6 years. The BLM would need to haul gravel over 20 miles one way to get gravel to the Boulder reservoir road which would result in increased transportation costs associated with increased haul distances.

With a limited use of the pits the maintenance to the roads would decrease and residents and visitors to Washoe County could be negatively impacted due to unsafe and unstable road conditions.

3.8 Vegetation

A. Affected Environment

The potential vegetation community within the permit area is within a Loamy 8-10 inch precipitation ecological site as mapped by NRCS in their soil survey of the area. This community dominated by Wyoming big sagebrush (*Artemsia tridentata spp. wyomingensis*, and sparse cover of perennial grasses including Sandberg's bluegrass (*Poa sandbergii*), bottlebrush squirreltail (*Elymus elymoides*), and Thurber's needlegrass (*Achnathermum thurberiana*), and annual cheatgrass (*Bromus tectorum*). Vegetation covers about 10-15% of the ground surface.

B. Environmental Consequences

1. Impacts of Proposed Action

The proposed operation of the pit by WCRD and BLM uses would result in the long-term loss of native vegetation on up to 10 acres. Top soil storage piles would likely be occupied by scattered cheatgrass. 10 acres of low density sagebrush communities would be removed.

Reclamation would be phased and would occur in mined and abandoned portions of the pit. Reclamation would include slope stabilization, recontouring, drainage control, and revegetation with native species.

2. Impacts of Alternative 2 – No Action

There would be no new impacts to vegetation associated with not authorizing the Free-Use permit authorizations.

3.9 Visual Resources

BLM's Visual Resource Management (VRM) system provides a way to identify and evaluate scenic values to determine the appropriate levels of management. It also provides a way to analyze potential visual impacts and apply visual design techniques to ensure that surface-disturbing activities are in harmony with their surroundings.

A. Affected Environment

The VRM category for the proposed gravel pit is: Class III. The management objective for this category is to partially retain the existing character of the landscape. The level of change to the characteristic landscape would be moderate.

B. Environmental Consequences

1. Impacts of Proposed Action

The level of change to the characteristic landscape would be moderate. The new gravel pit would modify the landscape moderately however due to the proximity to County Road 34. The proposed action would have minor effects on the visual quality in the surrounding area, but would be consistent with the management objectives for a VRM Class III designation.

2. Impacts of Alternative 1 – No Action

There would be no new impacts to visual resources. The pit would not be authorized and no disturbance would occur.

3.10 Wildlife, including T&E Species and Migratory Birds

A. Affected Environment

No T&E species were observed during surveys of the proposed area. Wildlife observed and typical in the study area includes low densities of jackrabbit, antelope ground squirrel, kangaroo rats, coyotes, badgers, and pronghorn antelope. Limiting factors for wildlife diversity and populations include the sparse, Wyoming big sagebrush communities that lack understory composition and lack of nearby water sources. No surface streams or wetlands are located on or adjacent to any past or proposed future mining areas at the Pits. The vegetative community at the pits site represents low quality habitat for the majority of wildlife species in the region. No migratory birds or there sign was noted at the pit sites or expansion areas. The native species composition of the pits site is well represented in the region, such that loss of this area would not significantly change the composition, abundance, or diversity of species in the region. The pit falls within Preliminary Priority Habitat (PPH) for Greater sage-grouse however no sage-grouse use or signs was observed in or adjacent to any of the pits. Wyoming sagebrush sites are used for sage-grouse nesting habitats and winter habitats in this area.

B. Environmental Consequences

1. Impacts of Proposed Action

During the life of the permit, an additional 10 acres of wildlife habitat would be damaged due to the creation of a new gravel pit. Given the low diversity of wildlife species and low population levels present around the pit, the impact to wildlife would be insignificant. Due to the existing disturbance on-site and the abundance of open space surrounding the site, additional mining activity is not expected to have measureable impact on wildlife migration corridors. A small amount of sage-grouse PPH habitat loss would occur under this alternative however the impacts are expected to be negligible due to no measureable or noticeable sage-grouse use occurring within the pit area and the marginal habitat conditions.

2. Impacts of Alternative 1 – No Action

There would be no new impacts to wildlife if the pit was not authorized.

3.11 Paleontological Resources

A. Affected Environment

Due to the nature of the geology in Washoe County, paleontological resources in the area are fairly rare and typically date to the Middle to Late Miocene (approximately 12 to 15 million years ago). Previously identified paleontological resources identified in the field office include bones, fossils, leaf imprints, and petrified wood and are usually found in ashy deposits rather than gravelly deposits.

Within local knowledge, there are several accounts of tusks from Pleistocene mammals (i.e. mammoths or mastodons) being found in local gravel pits. However, since the information is second-hand and lacks specifics (such as who found the fossils and when), the exact circumstances of the finds remain unknown.

The project area is located within undifferentiated alluvial, lake, playa, and talus sediments dating to the Quaternary. These sediments have the potential to contain fossils or bones dating from the Quaternary period (approximately 2.5 million to 11.7 thousand years ago). No paleontological resources were identified during a pedestrian surface survey of the project nor have any paleontological resources been identified in similar Quaternary sediments during other projects within the Applegate Field Office.

B. Environmental Consequences

1. Impacts of Proposed Action

If paleontological resources are present within the project area, then the proposed project has the potential to greatly disturb or destroy these resources. Depending on the type of fossil or other paleontological resource, the proposed project could impact the scientific integrity of the resource or the physical context in which the resource is located (e.g. the relationship the fossil would have to other fossils or its location within the soil stratigraphy).

2. Impacts of Alternative 1 – No Action

There would be no new impacts to paleontological resources if the pit was not authorized.

CHAPTER 4: OVERALL CUMMULATIVE IMPACTS

Cumulative impacts are the "incremental impacts of a proposal when added to other past, present, and reasonably foreseeable future actions, regardless of which agency or person undertakes them" (40 Code of Federal Regulations 1508.7)

Cumulative Effects Analysis Area (CEAA)

Potential cumulative impacts are assessed at the resource level. The cumulative effects analysis area (CEAA) for past, present, and reasonably foreseeable future activities (RFFAs) that may generate cumulative impacts varies depending on the resource under consideration. For example, the CEAA for socioeconomics is regional in nature; therefore, the scope of activities considered is necessarily broad. In contrast, the CEAA for wildlife is the area specifically associated with the Proposed Action and alternatives; therefore, the scope of potential cumulative activities considered is much narrower. Past, present, and reasonably foreseeable future actions are analyzed to the extent that they are relevant and useful in analyzing whether the reasonably foreseeable effects of the Proposed Action and Alternatives may have an additive and significant relationship to those effects.

The areas discussed in this EA have been and are being impacted to some degree by various actions, including but not limited to road construction, land clearing, sand and gravel mining, and recreational activities. The

present condition of resources analyzed in this document indicates the level of past impacts from all land use activities.

The CEAA for this project consists of public lands in Nevada managed by the Applagate Field Office. This would exclude the Black Rock Desert High Rock Canyon National Conservation Area, ACEC's, designated wildernesses, and WSA's.

Timeframe of Effects
Since the life of an EA is generally 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.

Past Actions
The Washoe County and BLM gravel pit authorizations have been occurring since the 1980's. Prior to that the BLM lands were open to mineral entry and considered bare land. Pits and areas were all analyzed under an environmental analysis when the pits were established in the 1980's. Since the pits were authorized the areas have been used as sand and gravel mines for the extraction of materials for road maintenance. Dispersed recreation also occurs on these pits. General activities include: rock hounding, hunting, off-highway vehicle (OHV) use, and camping. The BLM permits non-commercial and commercial recreation events through its Special Recreation Permit program. These areas are "open and unlimited use" area for travel management. Although most vehicle use occurs on existing two-track trails and dirt roads, OHV use is permitted. Actual number of users per day or per year is not available, but the intensity of recreational use is generally concentrated within the pit boundaries. Most recreation use occurs during the summer, spring and fall, and associated with hunting activities.

Present Actions
The Applegate Field Office and WCRD hold numerous Free-Use permits for gravel pits (17 pits within the CEAA). BLM holds community pit authorizations on 3 of the 17 pits as well as 3 pits in Modoc County, CA. The community pits are open to the public for the purchase and extraction sand and gravel. The Free-Use permits are operated by the county and are closed to members of the public for the extraction of minerals. These pits are currently a vital source to the road maintenance in Northern Washoe County.

Reasonably Foreseeable Actions
Washoe Country and BLM would continue to utilize the 20 existing authorized gravel pits in Modoc and Washoe counties to maintain roads in the vicinity. BLM would continue to keep the existing community pits open to the public. Pits would be expanded to the pit boundaries and if closed or relinquished the pits would be reclaimed in accordance to the existing reclamation plan. Sections of road that are not in reasonable proximity to existing pits would continue to be labeled as "low priority" for maintenance due to the distance from existing pits. As gravel diminished in the existing pits, new authorizations would be applied for to expand pits to produce more gravel.

As described in Past and Present Actions, dispersed recreation is likely to continue in the future, but it is anticipated to increase due to the construction of new recreation facilities.

4.1 Air Quality
The proposed action would not measurable impact air quality beyond localized areas immediately adjacent to the 20 pits currently active. There would be no negative cumulative effects to Air Quality as a result of the proposed action.

4.2 Cultural Resources
Since many Great Basin prehistoric sites are on the surface or near surface sites, any ground disturbing activities destroy site integrity, spatial patterning, and site function. Datable organic features are either destroyed or contaminated. Previous activities within the Applegate Field Office, including localized grazing, development of range improvements, road construction/maintenance, prescribed, natural, and human caused fire, and use of gravel pits have caused these types of impacts to cultural resources.
As there are no archaeological sites located within the proposed project area there will be no cumulative effects to Cultural Resources.

4.3 Invasive, Non-native Species
Due to the size of the proposed pit and no large noxious weed invasions in the areas surrounding the pit, there are no significant individual or cumulative effects anticipated as a result of the proposed action.

4.4 Native American Concerns
There are no expressed concerns from the local tribes. Therefore there would be no cumulative effects to known Native American Religious Concerns.

4.5 Mineral Resources
Establishment of one new gravel pit would add the potential of 5,000 cu yards of mineral materials removal to the existing 100,000 cu yards of potential material removal associated with operations of existing pits annually. This would result in minor effects on mineral resources due to the resources being depleted in those areas. However, due to the amount cu yards under the proposed action, there would be no significant individual or cumulative effects anticipated as a result of the proposed action.

4.6 Soils
Removal of soils from the 20 currently authorized pits as a result of mining gravel in pit has affected about 200 acres. The additional pit would increase this disturbance area to approximately 210 acres. This would have minor effects on soils however due to the amount of soils loss under the proposed action there are no significant individual or cumulative effects anticipated as a result of the proposed action. Soils would be stockpiled and replaced during reclamation. Some loss would occur but not at a significant measurable effect.

4.7 Social and Economic Values
The proposed action would improve the roads in the county. There would be no negative cumulative effects to Social and Economic Values. Impacts would be positive since the conditions of roads would be improved allowing for adequate transportation for visitors and residents. A decrease in overall operational cost would also be a result of the new pit due to shorter hauling times for WCRD and BLM.

4.8 Vegetation
Removal of vegetation as a result of mining gravel in the existing 20 pits has affected about 200 acres. The additional pit would increase this disturbance area to approximately 210 acres. This would have minor effects on vegetation, however due to the small amount of vegetation loss under the proposed action, there would be no significant individual or cumulative effects anticipated as a result of the proposed action.

4.9 Visual Resources

Establishment of one new gravel pit would add 10 acres to the existing 200 acres of disturbance associated with operations of existing pits. This would have minor effects on visual resources due to the amount disturbed acres under the proposed action. However there would be no significant individual or cumulative effects anticipated as a result of the proposed action. The pits location near a state highway would have low impacts to the visual resource management objectives. Impacts from the proposed action would be negligible to VRM.

4.10 Wildlife

Establishment of one new gravel pit would add 10 acres to the existing 200 acres of disturbance associated with operations of existing pits. This would result in minor effects on wildlife and sage grouse habitat. However, due to the amount disturbed acres under the proposed action, there would be no significant individual or cumulative effects anticipated as a result of the proposed action. Wildlife would be dispersed and displaced from the 210 acre disturbance area. However due to the small size of the proposed pit there would be no significant individual or cumulative effects anticipated as a result of the proposed action.

4.11 Paleontological Resources

The cumulative effects to paleontological resources within Washoe County have included surface collection and unauthorized excavation, erosion, weathering, trampling by large animals, and construction projects such as roads or other gravel pits. These activities and natural processes have led to the partial or complete destruction of the paleontological resource or the scientific information it could provide. Authorized excavations have increased the public's knowledge about fossils and past environmental conditions within Washoe County.

As the presence of paleontological resources is unknown, but not expected, the proposed action would have no cumulative effects to paleontological resources.

CHAPTER 5: STANDARD OPPERATING PROCEEDURES & STIPULATIONS

Mitigation Measures: Air Quality

Washoe County and BLM shall reduce dust emissions at the gravel pits by incorporating the use of a water truck in the mining plan. A water truck and operator shall be kept on site during all dry-weather mining activity. Extraction areas and stockpiles of dust producing materials shall be kept damp via regular watering to reduce fugitive dust emissions. Wetting of dirt and gravel haul roads would reduce dust production during episodes of dry weather hauling operations.

Mitigation Measures: Cultural

Should any Cultural Resources be encountered during mining activities, work shall be suspended and the BLM cultural resources specialist shall be immediately notified. At that time, BLM would coordinate any necessary investigations to determine the significance of the discovery. The BLM shall then coordinate with the County to implement any mitigation measures deemed necessary for protection of Cultural Resources.

Mitigation Measures: Paleontological

Should any paleontological resources be encountered during mining activities, work shall be suspended and the BLM cultural resources specialist shall be immediately notified. At that time, BLM would coordinate any necessary investigations to determine the significance of the discovery. The BLM shall then coordinate with the County to implement any mitigation measures deemed necessary for protection of the paleontological resources.

*See appendix 1 for standard stipulations.

CHAPTER 6: CONSULTATION AND COORDINATION/PREPARERS

List of Preparers

Name	Resource/Activities	Project Role
Dan Ryan	Realty & Minerals Wilderness/Recreation/VRM	EA Preparer Project Lead Interdisciplinary Team
Elias Flores	Wildlife/ Wildlife T&E/Noxious Weeds/Vegetation/Air Quality	EA Preparer Interdisciplinary Team
Jennifer Rovanpera	Cultural and Paleontological Resources	EA Preparer Interdisciplinary Team
Roger Farschon	Soils/Air Quality	EA Preparer Interdisciplinary Team

Appendix 1

BLM Stipulations

1. The Holder shall contact the Authorized Officer at least 7 days prior to the anticipated start of construction and/or any surface disturbing activities.

2. The Authorized Officer may suspend or terminate in whole, or in part, any notice to proceed which has been issued when, in his judgment, unforeseen conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment.

3. Where slope stabilization requires significant terrace or bench construction, the Holder shall include engineering drawings for this work to be reviewed, and where appropriate, modified and approved by the authorizing officer.

4. Any cultural or paleontological resource (historic or prehistoric site or object) or Native American human remains, funerary item, sacred object, or objects of cultural patrimony discovered by the permit holder, or any person working on their behalf, during the course of activities on federal land shall be immediately reported to the authorized officer by telephone, with written confirmation. The permit holder shall 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.

   For cultural resources other than Native American human remains, funerary item, sacred object, or objects of cultural patrimony, this evaluation will determine the significance of the discovery and what mitigation measures are necessary to allow activities to proceed. The holder is responsible for the cost of evaluation and mitigation. Any decision on treatment and/or mitigation will be made by the authorized officer after consulting with the permit holder. Operations may resume only upon written authorization to proceed from the authorized officer.

   For Native American human remains, funerary items, sacred objects, or objects of cultural patrimony the permit holder 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. The holder is responsible for the cost of consultation, evaluation and mitigation. Any decision on treatment and/or mitigation will be made by the authorized officer after consulting with the permit holder.

5. Use of pesticides shall comply with the applicable Federal and state laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, the Holder shall obtain from the Authorized Officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the Authorized Officer. Emergency use of pesticides shall be approved in writing by the Authorized Officer prior to such use.

6. The Holder shall be responsible for weed control on disturbed areas within the limits of the pit. The Holder is responsible for consultation with the Authorized Officer and/or local authorities for acceptable weed control methods (within limits imposed in the grant stipulations).

7. The Holder shall protect all survey monuments found within the pit. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management (BLM) Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, the Holder shall immediately report the incident, in writing, to the Authorized Officer and the respective installing authority if known. Where General Land Office or BLM pit monuments or references are obliterated during operations, the Holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands in the United States, latest edition. The Holder shall record such survey in the appropriate county and send a copy to the Authorized Officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the Holder shall be responsible for the survey cost.

8. No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 6 inches deep, the soil shall be deemed too wet to adequately support construction equipment.

9. All roads and parking areas shall be constructed to provide drainage and minimize erosion. Culverts shall be installed if necessary to maintain drainage. Culverts shall be at least 18-inches in diameter of corrugated metal and shall accommodate the 50 year flood event.

10. The Holder shall provide for the safety of the public entering the pit. This includes, but is not limited to, barricades for open trenches, flagmen/women with communication systems for single-lane roads without turnouts, and attended gates for blasting operations.

11. The Holder shall permit free and unrestricted public access to and upon the pit for all lawful purposes except for those specific areas designated as restricted by the Authorized Officer to protect the public, wildlife, livestock, or facilities constructed within the pit.

12. The Holder shall inform the Authorized Officer within 48 hours of any accidents on federal lands that require reporting to the Department of Transportation as required by 49 CFR Part 195.

13. The Holder shall maintain a fire watch with fire-fighting equipment during construction as required by the Authorized Officer.

14. The Holder shall maintain the pit in a safe, usable condition, as directed by the Authorized Officer. (A regular maintenance program may include, but is not limited to, blading, ditching, culvert installation and surfacing).

15. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

Map

Boulder Reservoir Free-Use Permit

NVCA 87944