

HABITAT CONSERVATION PLAN
for the
ORO GRANDE NORTH PIT
EXPANSION AREA

Prepared for approval by:
U.S. FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
Ventura, California

Submitted by:
CJR GENERAL PARTNERSHIP
17671 BEAR VALEY ROAD
HESPERIA, CALIFORNIA 92345

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EXECUTIVE SUMMARY

CJR General Partnership has applied for a permit pursuant to section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended (16 U.S.C. 153101544, 87 Stat. 884). The permit, issued by the U.S. Fish and Wildlife Service, would authorize the take of the desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (*Xerospermophilus mohavensis*). The potential taking would occur incidental to the proposed expansion of an existing sand and gravel mine near Oro Grande, San Bernardino County, California. The expansion would occur on 120 acres immediately north of their existing mine and processing facility.

The proposed mine expansion is within the range of the desert tortoise and Mohave ground squirrel. Surveys for desert tortoises on the proposed expansion lands revealed two desert tortoise and tortoise sign (Scat and burrows). Surveys for the Mohave ground squirrel were not conducted. Their presence was assumed.

Therefore, CJR General Partnership has applied for a section 10(a)(1)(B) permit and proposes to implement the habitat conservation plan (HCP) described herein, which provides for measures for mitigating adverse effects on the desert tortoise and Mohave ground squirrel for activities associated with the preparation, operation, and reclamation of the 120-acre mine site. CJR General Partnership is requesting issuance of the section 10(a)(1)(B) permit for a period of thirty (30) years.

This HCP summarizes information about the mine expansion project and identifies the responsibilities of The USFWS and CJR General Partnership for implementing the actions described herein to benefit the desert tortoise and Mohave ground squirrel. The biological goals of the HCP are to: 1) mitigate unavoidable adverse effects to the desert tortoise and the Mohave ground squirrel from Project Site implementation through the acquisition of compensation lands that will be managed for the benefit of the covered species in perpetuity and minimizing take of the desert tortoise and Mohave ground squirrel during the preparation, operation, and reclamation of the proposed mine expansion and the enhancement and management of the compensation lands. This HCP also describes measures that ensure the elements of the HCP are implemented in a timely manner. Funding sources for implementation of the HCP, actions to be taken for unforeseen events, alternatives to the proposed permit action, and other measures required by the USFWS are also discussed.

SECTION 1: INTRODUCTION

1.1 SUMMARY OF INFORMATION FOR THIS HABITAT CONSERVATION PLAN

This Habitat Conservation Plan for the Oro Grande North Pit Expansion Area (HCP) was prepared by CJR General Partnership and their consultant, RCA Associates, Inc. The HCP is part of the application that CJR General Partnership has submitted to the U.S. Fish and Wildlife Service (USFWS) for a permit authorizing incidental take of the Federal and State-threatened desert tortoise (*Gopherus agassizii*) and state-threatened Mohave ground squirrel (*Xerospermophilus mohavensis*). CJR General Partnership is proposing to expand their existing aggregate mining operation to meet their contractual demands to supply sand and gravel to customers in the west Mojave Desert. The proposed expansion is between Victorville and Barstow, California, and within the range of the desert tortoise and Mohave ground squirrel. Survey results revealed desert tortoises present on the proposed project site.

A summary of information about this HCP is listed below:

Covered Species:	<u>Name</u>	<u>Legal Status</u>
	Desert tortoise-Mojave population (<i>Gopherus agassizii</i>)	FT ¹ /ST ²
	Mohave ground squirrel (<i>Xerospermophilus mohavensis</i>)	ST

Permit Duration: 30 years from date of permit issuance (term of the Mining Conditional Use Permit and Reclamation Plan issued by San Bernardino County, Reclamation Plan No. 2003M-02)

Plan Area: The 120-acre site is located immediately north of the existing Oro Grande mine in Section 19, Township 7 North, Range 4 West. The mine site is located north of Bryman Road and east of National Trails Highway between Barstow and Victorville, San Bernardino County, California (Figures 1a and 1b). The compensation lands are located in the Superior-Cronese Desert Wildlife Management Area in western San Bernardino County (Figure 2).

Contact Information of the Applicant:

Lori Clifton
17671 Bear Valley Road
Hesperia, CA 92345
Phone: 760-244-9325
Fax: 760-244-1819
Email: lclifton@robarenterprises.com

Contact Information of the USFWS:

Judy Hohman
2493 Portola Road, Suite B
Ventura, CA 93003
Phone: 805-644-1766
Fax: 805-644-3958
Email: judy_hohman@fws.gov

¹ FT= Threatened under the Federal Endangered Species Act

² ST=Threatened under the California Endangered Species Act



Figure 1a. Vicinity map of the mine site.

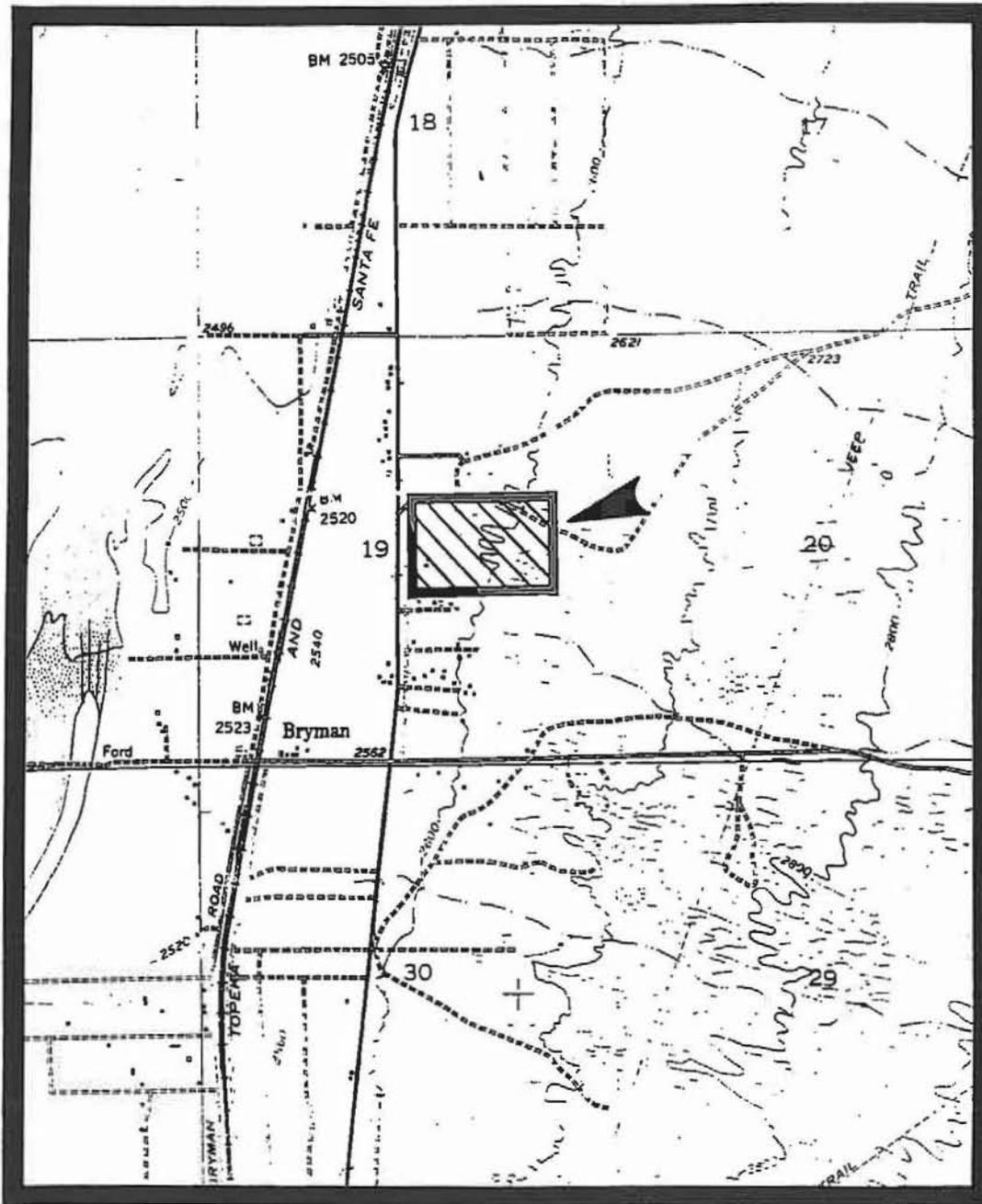


Figure 1b. Location of the proposed mine expansion site.

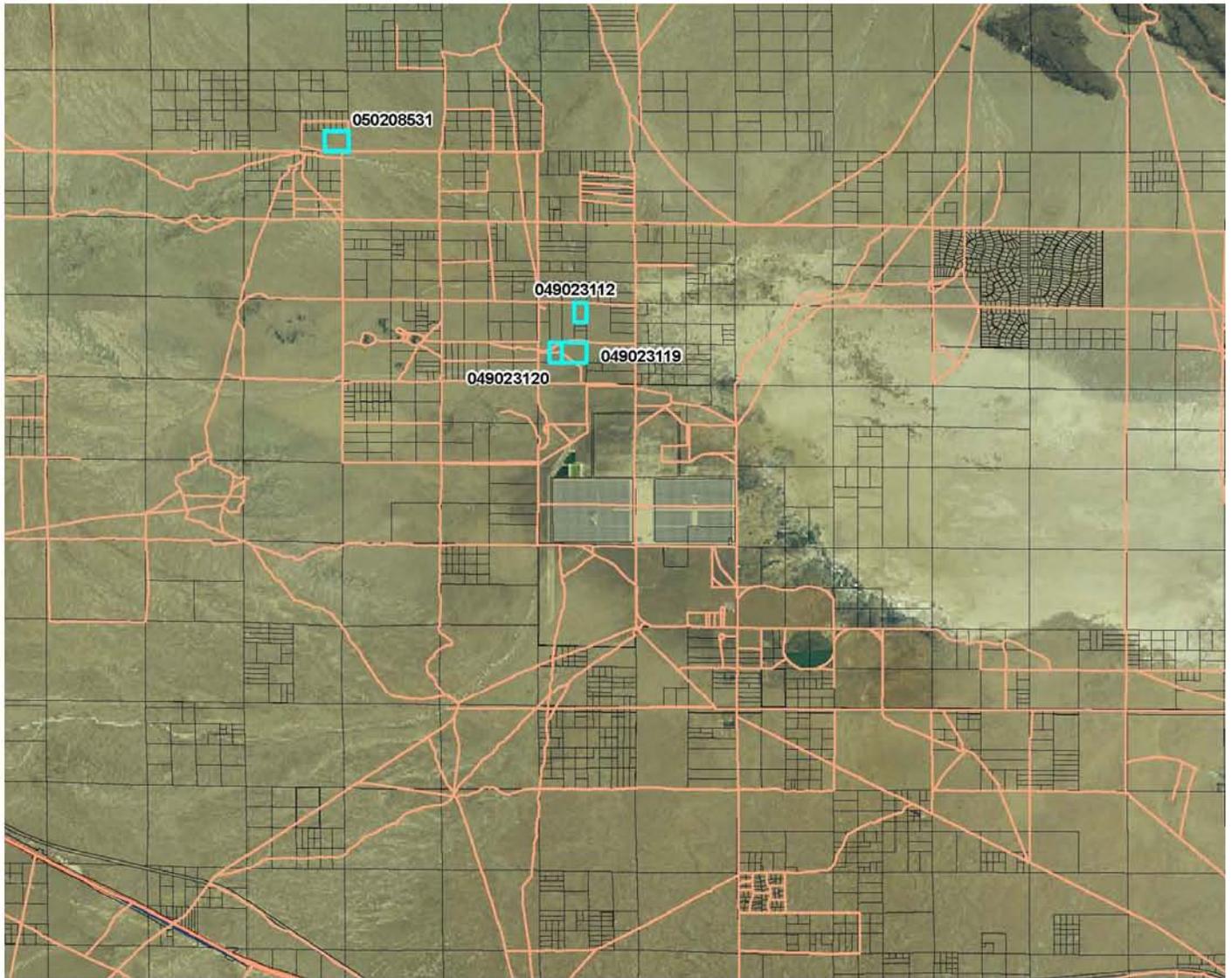


Figure 2. Map of compensation lands for desert tortoise and Mohave ground squirrel located west of Harper Dry Lake, San Bernardino County, California.

1.2 DEFINITION OF KEY TERMS

Definitions of key terms used in this HCP are as follows:

“Authorized Biologist” means the person with appropriate credentials and experience who is retained by CJR General Partnership to handle all aspects of the construction and operations and maintenance of the project as they affect the covered species. The Authorized Biologist is responsible for being aware of the latest information on U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) protocols and guidelines for the covered species. Information on the desert tortoise is located on the USFWS’s website at http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/.

Beginning November 1, 2008, Authorized Biologists are responsible for approving desert tortoise monitors, if monitors are needed for the project. Authorized Biologists will serve as mentors to train monitors and should approve monitors to conduct specific activities based on the monitor’s demonstrated skills, knowledge and qualifications. Direct supervision is always required for clearance surveys; “direct supervision” means the Authorized Biologist has direct voice and sight contact with the monitor. An Authorized Biologist is responsible for the outcome of all desert tortoise related activities for which the project is approved, including errors committed by monitors. This process will be in effect for projects occurring within the area of the desert tortoise’s range for which the Ventura Fish and Wildlife Office is responsible (i.e., San Bernardino, Los Angeles, Kern, and Inyo counties); outside of this area, please continue to follow guidance provided by the local USFWS office.

The Authorized Biologist must have thorough and current knowledge of desert tortoise behavior, natural history, ecology, and physiology, and demonstrate substantial field experience and training to safely and successfully conduct their required duties. Authorized Biologists are approved to monitor project activities within desert tortoise habitat and are responsible for locating desert tortoises and their sign (i.e., conduct clearance surveys). Authorized Biologists must ensure proper implementation of protective measures, and make certain that the effects of the project on the desert tortoise and its habitat are minimized in accordance with a biological opinion or incidental take permit. All incidents of noncompliance in accordance with the biological opinion or permit must be recorded and reported.

The Authorized Biologist must have the knowledge and experience to conduct any or all of the following, as needed:

- Locate, identify and report all forms of desert tortoise sign in accordance with approved protocols;
- Handle and temporarily hold desert tortoises;
- Move desert tortoises from harm’s way when they enter project sites;
- Relocate/translocate desert tortoises prior to implementation of projects;
- Excavate burrows to locate desert tortoises;
- Reconstruct desert tortoise burrows;
- Unearth and relocate desert tortoise eggs;
- Approve individual monitors and their activities based on qualifications of the monitors;
- Directly supervise monitors during clearance surveys and train monitors in all aspects of protecting desert tortoises during implementation of projects;
- Be familiar with the project biological assessment and biological opinion or permit (copy in hand);

- Ensure proper implementation of protective measures;
- Record and report incidents of noncompliance in accordance with a biological opinion or permit; and
- Halt project activities per provisions of the Incidental take permit.

“Biological Monitor” or “Monitor” means the person with appropriated credentials and experience who is retained by CJR General Partnership to monitor the biological impacts of the mining project and the implementation of HCP impact avoidance and minimization measures.

“Changed Circumstances” means changes in circumstances affecting a covered species or the geographic area covered by the HCP that can reasonably be anticipated by the HCP developer and the USFWS, and that can reasonably be planned for in the HCP (e.g., the listing of a new species, fire, drought, exotic species or natural catastrophic events);

“Conserved Habitat” means land that is permanently managed and protected for the benefit of covered species under legal arrangements that prevent its conversion to other uses, including institutional arrangements that provide for ongoing management;

“Contingencies” mean agreed-upon actions will be implemented by the permittee in response to changed circumstances;

“Covered Activities” means the activities that are part of the implementation of the mining project and HCP, which are subject to the terms and conditions of the permits, and which are covered by the authorization for incidental take from USFWS;

“Covered Species” identifies the total number of species and identifies the particular species involved that will be conserved when the HCP is implemented;

“HCP Area”, “Plan Area” means all lands covered by the HCP and permit including proposed lands to be mined, lands for relocation of the desert tortoise, and compensation lands.

“Incidental take permit” or ITP means the authorization from USFWS and CDFG to take a threatened or endangered species, provided the taking is incidental to and not the purpose of an otherwise lawful activity and conditioned on implementation of measures to minimize and mitigate the effects to the maximum extent practicable.

“Managed Lands” means the lands where HCP measures will be implemented. These lands include the lands which will be purchased to compensate for the impacts which will occur as a result of the proposed mine expansion.

“Management” means activities undertaken to protect habitat and covered species from disturbance and manage and maintain habitats for covered species;

“Unforeseen Circumstances” means changes in circumstances affecting a covered species or geographic area covered by a conservation plan that could not reasonably have been anticipated by HCP developers and the USFWS at the time of the HCP’s negotiation and development, and that result in a substantial and adverse change in the status of the covered species;

“Take” means to “harass, harm, pursue, hunt, shoot, wound, ill, trap, capture or collect or to attempt to engage in such conduct.” The terms ‘harm’ and ‘harass’ are further defined in the USFWS regulations as follows:

“Harm” means an act that actually kills or injures wildlife. Such acts may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

“Harass” means an intentional or negligent act or omission which creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering. To ensure that take was not underestimated, any displacement of animal covered species was treated as a potential instance of harassment. Activities or effects prohibited by the California Fish and game Code also were considered. The definition of take in the California Fish and Game Code (i.e., to hunt, pursue, capture, or kill or attempt the same) was considered in assessing the potential for impacts on “fully protected species” and state listed species.

1.3 REGULATORY FRAMEWORK

Section 9 of the Endangered Species Act (ESA) and Federal regulation pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the USFWS to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the USFWS as intentional or negligent actions that create the likelihood of injury to listed species by annoying them to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

Pursuant to section 11(a) and (b) of the ESA, any person who knowingly violates this section 9 of the ESA or any permit, certificate, or regulation related to section 9, may be subject to civil penalties of up to \$25,000 for each violation or criminal penalties up to \$50,000 and/or imprisonment of up to one year.

Individuals and State and local agencies proposing an action that is expected to result in the take of federally listed species are encouraged to apply for an incidental take permit under section 10(a)(1)(B) of the ESA to be in compliance with the law. Such permits are issued by the USFWS when take is not the intention of and is incidental to otherwise legal activities. An application for an incidental take permit must be accompanied by a habitat conservation plan, commonly referred to as an HCP. The regulatory standard under section 10(a)(1)(B) of the ESA is that the effects of authorized incidental take must be minimized and mitigated to the maximum extent practicable. Under section 10(a)(1)(B) of the ESA, a proposed project also must not appreciably reduce the likelihood of the survival and recovery of the species in the wild, and adequate funding for a plan to minimize and mitigate impacts must be ensured.

Section 7 of the ESA requires Federal agencies to ensure that their actions, including issuing permits, do not jeopardize the continued existence of listed species or destroy or adversely modify listed species’ critical habitat. “Jeopardize the continued existence of...” pursuant to 50 CFR 402.2, means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species. Issuance of an incidental take permit under section 10(a)(1)(B) of the ESA by the USFWS is a

Federal action subject to section 7 of the ESA. As a Federal agency issuing a discretionary permit, the USFWS is required to consult with itself (i.e., conduct an internal consultation). Delivery of the HCP and a section 10(a)(1)(B) permit application initiates the section 7 consultation process within the USFWS.

The requirements of section 7 and section 10 substantially overlap. Elements unique to section 7 include analyses of impacts on designated critical habitat, analyses of impacts on listed plant species, if any, and analyses of indirect and cumulative impacts on listed species. Cumulative effects are effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area, pursuant to section 7(a)(2) of the ESA. The action area is defined by the influence of direct and indirect impacts of covered activities. The action area may or may not be solely contained within the HCP boundary. These additional analyses are included in this HCP to meet the requirements of section 7 and to assist the USFWS with its internal consultation.

1.3.1 THE SECTION 10(A)(1)(B) PROCESS - HABITAT CONSERVATION PLAN REQUIREMENTS AND GUIDELINES

The Section 10(a)(1)(B) process for obtaining an incidental take permit has three primary phases: (1) the HCP development phase; (2) the formal permit processing phase; and (3) the post-issuance phase.

During the HCP development phase, the project applicant prepares a HCP that integrates the proposed project or activity with the protection of listed species. An HCP submitted in support of an incidental take permit application must include the following information:

- impacts likely to result from the proposed taking of the species for which permit coverage is requested;
- measures that will be implemented to monitor, minimize, and mitigate impacts; funding that will be made available to undertake such measures; and procedures to deal with unforeseen circumstances;
- alternative actions considered that would not result in take; and
- additional measures the USFWS may require as necessary or appropriate for purposes of the HCP.

The HCP development phase concludes and the permit processing phase begins when a complete application package is submitted to the appropriate permit-issuing office. A complete application package consists of 1) an HCP, 2) an Implementing Agreement (IA) if applicable, 3) a permit application, and 4) a \$100 fee from the applicant. The USFWS must also publish a Notice of Availability of the HCP package in the Federal Register to allow for public comment. The USFWS also prepares an Intra-Service Section 7 Biological Opinion; and prepare a Set of Findings, which evaluates the Section 10(a)(1)(B) permit application as in the context of permit issuance criteria (see below). An Environmental Action Statement, Environmental Assessment, or Environmental Impact Statement serves as the USFWS's record of compliance with the National Environmental Policy Act (NEPA), which has gone out for a 30-day, 60-day, or 90-day public comment period. An implementing agreement is required for HCPs unless the HCP qualifies as a low-effect HCP. A Section 10(a)(1)(B) incidental take permit is granted upon a determination by the USFWS that all requirements for permit issuance have been met. Statutory criteria for issuance of the permit specify that:

- the taking will be incidental;
- the impacts of incidental take will be minimized and mitigated to the maximum extent practicable;
- adequate funding for the HCP and procedures to handle unforeseen circumstances will be provided;
- the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild;

- the applicant will provide additional measures that the USFWS requires as being necessary or appropriate; and
- the USFWS has received assurances, as may be required, that the HCP will be implemented.

During the post-issuance phase, the Permittee and other responsible entities implement the HCP, and the USFWS monitors the Permittee's compliance with the HCP as well as the long-term progress and success of the HCP. The public is notified of permit issuance by means of the Federal Register.

1.3.2 NATIONAL ENVIRONMENTAL POLICY ACT

The purpose of NEPA is two-fold: to ensure that Federal agencies examine environmental impacts of their actions (in this case deciding whether to issue an incidental take permit) and to utilize public participation. NEPA serves as an analytical tool on direct, indirect, and cumulative impacts of the proposed project alternatives to help the USFWS decide whether to issue an incidental take permit (ITP or section 10(a)(1)(B) permit). NEPA analysis must be done by the USFWS for each HCP as part of the incidental take permit application process.

1.3.3 NATIONAL HISTORIC PRESERVATION ACT

All Federal agencies are required to examine the cultural impacts of their actions (e.g. issuance of a permit). This may require consultation with the State Historic Preservation Office (SHPO) and appropriate American Indian tribes. All incidental take permit applicants are requested to submit a Request for Cultural Resources Compliance form to the USFWS. To complete compliance, the applicants may be required to contract for cultural resource surveys and possibly mitigation.

1.3.4 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA) is similar to the NEPA. The purpose of the CEQA is for a state or local agency to identify and disclose to decision makers and the public the significant environmental impacts of a proposed project prior to its consideration and approval. This is accomplished by the preparation of the following types of initial studies, negative declarations, and environmental impact reports. If potential adverse environmental impacts are identified, the CEQA process next attempts to identify ways to prevent or reduce these impacts by requiring consideration of feasible project alternatives or the adoption of mitigation measures for project impacts that cannot be avoided along with appropriate monitoring. The CEQA process provides for the full disclosure to the public of the reasons for agency approval of projects with significant environmental impacts. The agencies assist each other in more thoroughly understanding the potential environmental impacts associated with a proposed project by incorporating one or more of the following into their CEQA processes: early consultation, scoping meetings, notice of preparation, and State clearinghouse review. The CEQA process encourages and provides opportunities for public participation in the overall project planning process through the scoping meetings, receipt of public notices, response to comments, legal enforcement procedures, and citizen access to the courts.

1.3.5 CALIFORNIA ENDANGERED SPECIES ACT

The California Endangered Species Act (CESA) generally parallels the main provisions of the Federal ESA and is administered by the California Department of Fish and Game (CDFG). It establishes a petitioning process for the listing of threatened or endangered species and it prohibits the "taking" of listed species except as otherwise provided in State law. Unlike its Federal counterpart, the CESA applies the take prohibitions to species petitioned for listing (state candidates). Each State or local agency is required to

consult with CDFG to ensure that any action it undertakes is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat. Take of a state-listed species is permitted through the issuance of a section 2081 incidental take permit by the CDFG.

SECTION 2: PROJECT DESCRIPTION/ACTIVITIES COVERED BY THE PERMIT

2.1 PROJECT DESCRIPTION

The proposed project is a 120-acre site located immediately north of the existing Oro Grande aggregate mine in Section 19, Township 7 North, Range 4 West. The proposed mine expansion site is located north of Bryman Road directly east of National Trails Highway in San Bernardino County, California (Figures 1a, 1b, and 2). Mining has been on-going for about 25 years on the parcel immediately south of the site, which is currently operated by AgCon. An existing single-family dwelling is located along the northern boundary of the proposed Project site.

The activities related to the mining project will occur within the boundaries of the 120-acre expansion area and will be undertaken by CJR General Partnership and its agents. The activities include: 1) All aspects of site preparation for the expansion area, including site studies, soil testing, vegetation clearing, grubbing, grading, dust control, and operation of heavy equipment and motorized vehicles; 2) all aspects of mining operations, including daily excavation, processing of sand and gravel, and disposal of materials on-site; and 3) all aspects of ongoing maintenance of the mine site, its facilities, onsite drainage systems, and onsite access roads.

2.2 ACTIVITIES COVERED BY THE PERMIT

Through the implementation of this HCP and issuance of the subsequent permit, CJR General Partnership is seeking incidental take coverage for the following activities:

Construction and operation activities at the mine expansion site: Mining activities at the proposed 120-acre mining site would include removing vegetation and the top layer of material and excavating the aggregate materials underneath for use off site. The mined aggregate would be transported to the existing mining facility immediately to the south for processing. Equipment used in excavating or mining these aggregate materials includes excavators, bulldozers, water trucks, front-end loaders, motorgraders, pick-up trucks and cars, and hauling trucks. Roads would be maintained with motorgraders and dust would be controlled with water trucks. A setback would be maintained along the property lines. The setback is needed for security and safety of the mine site, reclamation of the mine site, and to provide mitigation from possible erosion and headcutting concerns. Finished slopes would not exceed 2:1 (horizontal: vertical). An onsite drainage system would be installed within the 120 acres to manage runoff and other water issues. As the surface mining operation progresses, the ultimate slope grades would be achieved along with installation of appropriate erosion protection. For more information, please refer to the Mining and Reclamation Plan, pages 6-9 (Appendix B).

Additional activities include maintenance of access roads by CJR General Partnership, including minor grading as necessary and dust control, and manual or mechanical brush-clearing for fire management purposes by CJR General Partnership.

Implementation of minimization measures during construction, operation, and reclamation of the mine expansion site: This HCP identifies numerous measures that CJR General Partnership will implement to minimize adverse effects during mining operation and reclamation activities. Some of these activities, such as handling desert tortoises during clearance surveys, moving desert tortoises to the identified relocation area (release site); relocating Mohave ground squirrels found in burrows to new burrows; and

installing, maintaining, and removing the desert tortoise exclusion fence around work areas may result in incidental take. CJR General Partnership is requesting incidental take coverage for these activities.

For clearance surveys and moving desert tortoises, CJR General Partnership will follow the current protocols of the USFWS for the desert tortoise. These protocols include hiring a biologist(s) who must be authorized by the USFWS to conduct clearance surveys and move desert tortoises, and implementing the current clearance survey protocols by the Authorized Biologist. For this project, clearance surveys include first installing a desert tortoise exclusion fence around the mine pit expansion area. The exclusion fence will be installed under the direct supervision of the Authorized Biologist. If desert tortoises are located during the clearance surveys, the Authorized Biologist will implement the current USFWS handling protocols and relocation or translocation protocols for moving a desert tortoise a short distance. The Authorized Biologist will identify the area or areas on BLM land east of the proposed mine pit expansion to where the desert tortoise(s) will be released. The Authorized Biologist will ensure that the release site is the shortest distance from the capture site so each desert tortoise will remain within its home range and provides suitable habitat quality and other ecological needs of the desert tortoise. Prior to moving and releasing any desert tortoises, the Authorized Biologist will report the condition of the habitat at the release site and obtain concurrence from the BLM and USFWS. To access the release site, the Authorized Biologist will use the BLM's designated routes to transport the desert tortoise via vehicle, and then walk the desert tortoise(s) to the identified release site. The Authorized Biologist will notify the BLM and USFWS at least 15 days prior to moving the desert tortoises. The Authorized Biologist will record the GPS location of each desert tortoise at its release site and provide this information to the BLM and USFWS within 10 days.

For moving Mohave ground squirrels, CJR General Partnership will follow the protocols in the section 2081 permit issued by the CDFG. These protocols include the immediate relocation of any Mohave ground squirrel found in a burrow to a newly constructed burrow at an off-site location approved by the CDFG. Mohave ground squirrels may only be handled by a biologist approved by the CDFG and USFWS. The burrow shall be prepared in the manner described in the Section 2081 Permit from the CDFG. For all project-related vehicle traffic, the vehicle speeds in covered species habitat shall not exceed 20 m.p.h. to avoid covered species on or traversing the roads only actions that would require incidental take coverage.

Reclamation activities at the mine expansion site: Once mining of the mine expansion site is completed, the site will be reclaimed according to the Surface Mining and Reclamation Act of 1975, as amended (SMARA), and the associated Mining and Reclamation Plan, and meet San Bernardino County standards (see Appendix B, pages 12-19). All mining operations will comply with the Conditional Use Permit issued by San Bernardino County. Once the mining operation is completed the Reclamation Plan requires that the site be graded for safety and erosion control, and revegetated using native plant materials (Appendix B, pages 12-19),

Per SMARA and as approved by the County of San Bernardino, a reclamation bond shall be posted and the original bond held by the County of San Bernardino. The State of California shall be named on the financial assurance instrument (Appendix B, page 19).

The proposed mining footprint for the site will encompass the entire 120-acre site, with mining activities to occur initially in the western portion of the site, proceeding easterly as aggregate is required.

The HCP covers the duration of mining activities in the HCP Area and management activities at the compensation lands in perpetuity. Based on reasonably anticipated operating levels, mining activities would continue for a period of approximately 30 years; however, conserved habitat management activities would continue in perpetuity. The 30-year permit includes the estimated time for mining and for reclamation as required under the 2003 Mining Conditional Use Permit (CUP) and Reclamation Plan issued by the County

of San Bernardino (County). The applicant requested a CUP for 50 years which is noted in the CUP, but the County only issues CUPs for a maximum of 25 years. The applicant will need to submit an application to the County to continue their operation in 25 years.

Activities on the compensation land include fence construction and maintenance, trash removal, and removal of invasive species. These activities are needed to enhance the quality of the habitat for the covered species and maintain the habitat quality by discouraging human uses that damage or destroy the habitat (e.g., dumping, OHV use, ORV use, etc.).

In the event the permit needs to be amended once mining operations have begun, USFWS will be contacted by the project proponent to discuss those issues which warranted amending the ITP. If the HCP, Implementing Agreement, or NEPA documents need revision, the extent of the changes will be discussed with the agencies. Mining operations which have triggered the amendment process will not be implemented until the amendment process has been completed.

2.3 LAND OWNERSHIP

CJR General Partnership owns the land in the HCP Area and there are no restrictions on the property. AgCon, Inc, currently operates the existing mine and will also operate the new mine which will be located in the proposed expansion area. Vacant lands are located north and east of the site, and there are several single-family dwellings north and south of the site. Bryman Road is located along the southern boundary and National Trails Highway forms the western boundary.

SECTION 3: ENVIRONMENTAL SETTING/BIOLOGICAL RESOURCES

3.1 GENERAL BASELINE CONDITIONS

The proposed project is located between the 2480 and 2680 foot elevations amid the westerly down-sloping alluvial fan in southwestern San Bernardino County, approximately 9 miles north of Victorville. The Mojave River is located approximately 1 mile to the west of the site but the river flow is controlled by the West Forks Dam near its headwaters in the San Bernardino Mountains some 35 miles away.

3.1.1 CLIMATE

In the west Mojave Desert that includes the proposed project, relocation lands, and compensation lands, the desert has hot summer temperatures (average daily highs above 100 degrees Fahrenheit) and low annual precipitation (approximately 3 to 4 inches). Most precipitation occurs during the winter months with occasional isolated thunderstorms in the summer. Probably more important than the averages is the extreme variability in the weather. Daily temperatures ranges of 40 degrees can occur. Precipitation extremes are also common; variations of 80 percent in annual precipitation can occur. Summer thunderstorms can drop more precipitation on a site in one event than the mean precipitation for that location. High winds can occur. Peak wind velocities greater than 50 miles per hour (mph) are not uncommon.

3.1.2 TOPOGRAPHY/GEOLOGY

The site is approximately 120 acres in size and is relatively flat. Elevations range from about 2,560 to 2,600 feet. The existing and proposed AgCon Sand and Gravel Oro Grande Pit are located on alluvial fan deposits primarily originating from the Silver Mountain area approximately 4-5 miles to the southeast. Additionally, some materials have likely been deposited at the project site from fluvial flows of the Mojave River although the site is currently outside the 100-year floodplain. The main rock types present in the resultant alluvial fan deposit are granite, quartzite, metamorphic and volcanic (San Bernardino County 2003, Mining Conditional Use Permit).

There are no known geologic conditions at the project site or nearby that could adversely impact the project. Geologic conditions investigated included earthquake faults, Special Studies Zones, County Fault Hazard Zones, ground shaking, landslides, mudflows, Liquefaction Hazard Areas, differential settlement, hydro-consolidation, collapsible or expansive soils, wind erosion, water erosion, sedimentation, and/or inundation due to earthquake-induced dam failure (San Bernardino County 2003, Mining Conditional Use Permit)..

3.1.3 HYDROLOGY

The project site is located outside the 100-year floodplain of the Mojave River. Because average rainfall is low, sheet flow or runoff resulting in localized flooding is rare in the area. However, occasionally the area does experience heavy showers, occasionally subjecting the region to some type of local. These events occur once every 3-4 years and are highly localized, as evidenced during the past decades of the existing AgCon mining operations immediately south of the proposed project site.

The current drainage pattern on the project site is self-contained. Rainfall onto the site remains within the confines of the project boundary. An identified intermittent U.S. Geological Survey blue line stream enters the eastern boundary of the project and terminates within the mined-out East Pit Area. Small ephemeral washes dissect the project site. Berming around the project will incorporate openings to promote this

drainage when it occurs. The proposed project activities would not alter this drainage pattern during mining and reclamation activities.

3.1.4 VEGETATION AND SENSITIVE PLANT SPECIES

The proposed mine expansion and relocation site support a Mojave desertscrub community typical of the west Mojave Desert region. The dominant perennials throughout most of the site, but particularly in the eastern area, included creosote bush (*Larrea tridentata*), burrobush (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*), and ephedra (*Ephedra nevadensis*). Other perennials observed included Mohave yucca (*Yucca schidigera*), desert rue (*Thamnosma montana*), dalea (*Dalea schottii*), cholla (*Opuntia* sp.), and quailbrush (*Atriplex lentiformis*). Several native and non-native annuals were also common throughout the area including burweed (*Ambrosia acanthicarpa*), ricegrass (*Achnatherum hymenoides*), red brome grass (*Bromus rubens*), and Mediterranean split grass (*Schismus barbatus*).

The vegetation at the proposed compensation site is a creosote bush community dominated by *Larrea tridentata* with co-dominants burrobush (*Ambrosia dumosa*) and saltbush (*Atriplex canescens*). Additional perennials present include ephedra (*Ephedra nevadensis*), cholla (*Opuntia* sp.), and desert rue (*Thamnosma montana*). Burweed (*Ambrosia acanthicarpa*), brome (*Bromus* sp.), and Mediterranean split grass (*Schismus barbatus*) were the dominant annuals.

Sensitive plant species whose ranges include or are near the proposed mine expansion site and relocation site include the Mojave monkeyflower (*Mimulus mohavensis*) and pygmy poppy (*Canby candida*). Both are annual plants. The Mohave monkeyflower was not observed on the proposed mine expansion site; however, the species has been documented in the region between National Trails Highway and Interstate 15 to the east. The nearest known population is approximately 2 miles south of the proposed mine expansion site. See Appendix A, Section 4, for more information on the Mohave monkeyflower.

The pygmy poppy (*Canby candida*) is a California Native Plant Society List 4.2 species. It is a small annual herb in the poppy family (Papaveraceae) that blooms from March to June. This species occurs within Joshua tree woodland, Mojavean desert scrub, or pinyon and juniper woodland habitats in gravelly, granitic, or sandy soils at elevations of approximately 1,970 to 4,790 feet. The main threats to this plant are development and competition from invasive non-native plants. The pygmy poppy has limited distribution

in parts of Imperial, Inyo, Kern, Los Angeles, and San Bernardino counties. The closest known locations to the project site are several miles away in the Newberry Mountains, 7 miles east of Daggett and north of Apple Valley north of Round Mountain.

3.1.5 WILDLIFE

At the proposed mine expansion site and adjacent desert tortoise relocation area, various wildlife species use the property. Wildlife observed during the field surveys include the California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), and desert woodrat (*Neotoma lepida*). Other species that likely occur in the area include gray fox (*Urocyon cinereoargenteus*), badger (*Taxidea taxus*), black-tailed hare or jackrabbit (*Lepus californicus*), Audubon's cottontail (*Sylvilagus audubonii*), common deer mouse (*Peromyscus maniculatus*), Merriam's kangaroo rat (*Dipodomys merriami*), and Botta's pocket gopher (*Thomomys bottae*). Birds located on the sites include mourning dove (*Zenaida macroura*), house sparrow (*Passer domesticus*), starling (*Sturnus vulgaris*), Anna's hummingbird (*Calypte anna*), and common raven (*Corvus corax*). The black-throated sparrow (*Amphispiza bilineata*) also likely occurs on site or nearby. The small mammals present on the site (e.g., hares, rabbits, and ground squirrels) provide a food source for raptors; consequently, raptors may occasionally use the site when feeding. The red-tailed hawk

(*Buteo jamaicensis*) was the only raptor observed in the area during field surveys; however, other raptors such as the American kestrel (*Falco sparverius*) may utilize the site. Reptiles observed during the field investigations include the side-blotched lizard (*Uta stansburiana*) and western whiptail (*Cnemidophorus tigris*). The western rattlesnake (*Crotalus viridis*), Mojave rattlesnake (*Crotalus scutulatus*), and gopher snake (*Pituophis melanoleucus*) may also occur on the property although these species were not observed. No amphibians were noted on the site, nor does the site support any suitable habitat for amphibians.

Wildlife species at the compensation site are typical of species found throughout the Mohave Desert. They include jackrabbit (*Lepus californicus*), Meriam's kangaroo rat (*Dipodomys merriami*), coyote (*Canis latrans*), and antelope ground squirrel (*Ammospermophilus leucurus*). Other species expected to inhabit the area include desert woodrat (*Neotoma lepida*), Botta's pocket gopher (*Thomomys bottae*), and deer mouse (*Peromyscus maniculatus*). Birds are somewhat limited, although, species such as common raven (*Corvus corax*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), and sage sparrow (*Amphispiza belli*) occur at the site. Side-blotched lizard (*Uta stansburiana*), western whiptail lizard (*Cnemidophorus tigris*), desert spiny lizard (*Sceloporus magister*), and Mojave rattlesnake (*Crotalus scutulatus*) are the most common reptiles in the region.

3.1.6 EXISTING LAND USE

The proposed project site has one rental unit on it and show signs of past human activities. The site was farmed in the early part of the twentieth century, which resulted in a significant amount of disturbance to the native plant community. Evidence of past agricultural activities can still be seen (e.g., irrigation piping, building pads, etc.); however, portions of the site have recovered somewhat from past disturbance.

Land use to the north is scattered residential and open desert; to the east is open desert managed by the BLM, to the south is the existing mining operation and beyond that scattered residential and open desert; and to the west is the National Trails Highway and the railroad. The National Trails Highway borders the site on the west with a major rail line located beyond the highway. To the east, the vacant lands are managed by the Bureau of Land Management. The various activities which have occurred in the immediate area (i.e., mining, road construction, and houses) and nearby (i.e., agriculture) have altered the habitats in the immediate area, thereby adversely affecting desert tortoise habitat and population levels in the area. The vacant lands to the east are the only lands in the immediate area that support undisturbed habitat for the covered species.

The relocation site to the east is managed by the BLM. It is open desert with some dirt roads crossing it. Evidence of human use was limited to a few vehicle tracks which criss-cross the area.

Existing land use at the compensation site consists of vacant land which supports a undisturbed creosote bush community on the site and in the surrounding area.

3.2 COVERED SPECIES

CJR General Partnership is seeking authorization for the incidental take of the federally and state-threatened desert tortoise and state-threatened Mohave ground squirrel (Table 1).

**TABLE 1
COVERED SPECIES**

Common Name	Scientific Name	Listing Status
Desert tortoise, Mojave population	<i>Gopherus agassizii</i>	ST, FT
Mohave ground squirrel	<i>Xerospermophilus mohavensis</i>	ST

Notes:

ST	Listed as threatened under the California Endangered Species Act
FT	Listed as threatened under the Federal Endangered Species Act

3.2.1 DESERT TORTOISE

The desert tortoise (Mojave population) occurs in the Mojave Desert of southeastern California, southern Nevada, northwestern Arizona, and southwestern Utah, and the Colorado Desert in southeastern California. It is found from about 1,000 feet to more than 4,500 feet in elevation. It has a high-domed shell and elephant-like legs. Adults are up to 15 inches long with hatchling tortoises 2 inches long. The upper portion of the shell in adults is brown, gray, or black, often with distinctive growth lines. In hatchling tortoises, it is brownish-yellow.

The desert tortoise lives in a variety of habitats in the Mojave and Colorado deserts from sandy flats to rocky foothills, including alluvial fans, washes, and canyons where suitable soils for burrow construction might be found. The desert tortoise is a fossorial animal, spending up to 95 percent of its time underground. Desert tortoises use their front legs to excavate burrows to protect them from the temperature extremes encountered in the desert in summer and winter and from predators. They also depend on woody shrubs for shade and protection from predators. Desert tortoise predators include the coyote (*Canis latrans*), kit fox (*Vulpes macrotis*), and common raven (*Corvus corax*).

The desert tortoise is active during the day. Its active season or time above ground is generally limited to March to June and September to October when temperatures are mild and food is available. Their diet consists primarily of annual wildflowers, perennial grasses, and cacti. Desert tortoises derive almost all their water intake from the plants they eat.

Reproduction begins between ages 12 to 20, with clutch sizes of 1 to 14 eggs. In years with low rainfall, females may lay few to no eggs. Nests are excavated in the ground and eggs are laid in late spring or early summer. The hatchlings emerge in 90 to 120 days. When they are young desert tortoises seldom venture more than 150 feet from their burrow. As they get older, they may go as far as 3/4 mile in a day and use a network of burrows. Typically, desert tortoise densities are about one tortoise per 100 acres.

Many of the threats to the Mojave population of the desert tortoise include direct and indirect impacts from a combination of natural and human-caused activities. These threats include disease, predation, expanding development, off-highway vehicles, energy development, invasion of non-native grasses and weeds, fire, collection, poachers, livestock grazing, mining, and drought. This combination of threats that is resulting in the decline of the desert tortoise.

Two desert tortoises were observed on the site during surveys conducted in May 2002. In addition, eight active burrows and several tortoise scat were observed throughout the property. The presence of the burrows and scats indicate that desert tortoises have been using the area for several years, even though the site has

been significantly disturbed by past agricultural activities, including some signs of past plowing and plantings of certain species (i.e., wheat). Past mining activities in the general region have also contributed to the loss of desert tortoise habitat. Based on the 2002 survey and information provided by the Bureau of Land Management, a maximum of six desert tortoises are expected to inhabit the site at the present time.

3.2.2 MOHAVE GROUND SQUIRREL

The Mohave ground squirrel is found only in the western part of the Mojave Desert in portions of Inyo, Kern, Los Angeles, and San Bernardino counties, California. It has one of the smallest ranges of any species of ground squirrel in North America.

The Mohave ground squirrel is a medium-sized squirrel. Total length is approximately 9 inches (in) (23 centimeters (cm)), tail length is approximately 2.5 in (6.4 cm), and weight is approximately 3.5 ounces (104 grams). The upper body is grayish brown, pinkish gray, cinnamon gray, and pinkish cinnamon without stripes or fleckings. Maximum longevity is at least five years.

The Mohave ground squirrel occurs in a wide variety of habitats. Preferred habitat appears to be creosotebush scrub, shadscale scrub, and alkalai sink. Habitat features considered most suitable for the Mohave ground squirrel are relatively flat topography as found in a large alluvial-filled valley, fine to medium textured soil and absence of rocks, and the presence of a variety of native shrubs including creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), and saltbush (*Atriplex* spp.).

The Mohave ground squirrel has a patchy or not continuous distribution within its known range. This patchiness is attributed to differences in rainfall and terrain, elevation and temperature, and soils and vegetation that do not support the life requirements for feeding, breeding, and shelter of the Mohave ground squirrel. The range also contains differences in the types and degrees of human activities.

The Mohave ground squirrel excavates and lives in burrows. Burrows are used to escape the extreme temperature conditions of the Mojave Desert, as protection from predators, and for reproduction. The Mohave ground squirrel is active during the day in the spring and early summer. Emergence dates from dormancy vary in the spring, depending on elevation. Stored body fat is the principal source of energy during late summer through winter dormancy, although food is stored in burrows and may be consumed during the dormant period. The period when dormancy begins varies annually and appears to depend on the availability of food during the spring and summer.

Predators include coyotes, prairie falcons (*Falco mexicanus*), and common ravens.

The Mohave ground squirrel eats a variety of leaves of green forbs, shrubs, and grasses; seeds of forbs, grasses, shrubs, cacti, and Joshua trees; fruits and flowers of forbs; fungi; and arthropods (caterpillars), when available. It caches food for future use (Johnson no date), obtains water from its diet, and drinks free water if available. The feeding strategy of the Mohave ground squirrel appears to be to add body weight during the spring and summer active period to prepare for dormancy in fall and winter.

The Mohave ground squirrel mating season occurs from mid-February to mid-March soon after they emerge from their burrows. After a gestation period of 29-30 days, the young are born in the female's burrow from March to May with a peak in April. Litter size is about six and ranges from four to nine. Parental care continues through mid-May with juvenile Mohave ground squirrels emerging above ground between 10 days to 2 weeks. Female Mohave ground squirrels can breed at 1 year of age if environmental conditions are favorable while males do not breed until age 2 or older. Successful reproduction does not occur in years with low fall and winter rainfall and a low crop of annual herbaceous plants.

Home range size is larger for males than females. During the breeding season, it averaged 17 acres (6.7 hectares (ha)) for males and 1.7 acres (0.7 ha) for females. After the breeding season, the home range size for males was reduced, averaging 8 acres (3.2 ha). Juvenile Mohave ground squirrels displayed a greater dispersal distance than adults. Males moved a mean distance of 9,580 ft (2,920 m) and females moved 2,470 ft (753 m).

Threats to the Mohave ground squirrel are similar to those of the desert tortoise. Disease and poaching have not been identified as threats to the species.

The Mohave ground squirrel was assumed to be present on the project site. Live-trapping surveys were not conducted on the site; therefore, the exact number of squirrels cannot be determined at this time. However, the species is known to occur in the area and, the nearest documented location is approximately 4 miles southwest of the site in Section 11, Township 6 North, and Range 5 West. The site has been impacted by past agricultural activities, and OHV activities are common in the area; however, the creosote bush community present on the site provides marginal habitat for the species. Furthermore, areas adjacent to the property appear to have been less impacted by human activities and may support Mohave ground squirrel populations.

SECTION 4: POTENTIAL BIOLOGICAL IMPACTS/TAKE ASSESSMENT

To provide the basis for determining appropriate measures to avoid, minimize, mitigate, and monitor effects on covered species, CJR General Partnership has assessed the anticipated impacts from the proposed project and the type and extent of incidental take that might result from covered activities. This section identifies the methods used in the assessment and the resulting estimate of incidental take. Take estimates are provided for each covered species. There are no substantial data or informational gaps for any of the species which could present a significant risk to any of the species at the time the permit is issued.

4.1 DIRECT AND INDIRECT IMPACTS

4.1.1 EFFECTS OF PROJECT SITE CONSTRUCTION, OPERATION, RECLAMATION, DESERT TORTOISE EXCLUSION FENCE INSTALLATION AND REPAIR, TRASH REMOVAL, AND NON-NATIVE PLANT CONTROL ON THE DESERT TORTOISE AND MOHAVE GROUND SQUIRREL

Construction and operation activities at the proposed mine expansion site and fence installation and repair around the perimeter of the proposed mine expansion site would result in adverse effects to the desert tortoise and Mohave ground squirrel. Direct adverse effects may include crushing of unseen individuals on access roads in the Project Site, destruction of burrows, handling of individuals during relocations, and entrapment of individuals in excavations. Noise from the mining operation could prevent the Mohave ground squirrel from using its vocalizations to communicate with other individuals. Vibrations from the operation of heavy equipment could drive the desert tortoise away from the site and nearby areas. Trash removal, non-native plant control, and fence installation and repair (compensation lands only) would have similar effects because of the need for cross-country vehicle travel.

For the desert tortoise, USFWS-Authorized Biologist(s) would remove all desert tortoises from work sites and cross-country access routes prior to ground disturbance. Consequently, these activities are likely to directly kill or injure few desert tortoises. In addition, CJR General Partnership would fence work areas on the Project Site with desert tortoise exclusion fencing to eliminate the likelihood of take of desert tortoises in these areas. However, use of unfenced access routes could potentially kill or injure some desert tortoises that re-enter these areas. We cannot reasonably predict the number of desert tortoises these activities may kill or injure. We discuss the effects of handling desert tortoises later in this section. Desert tortoise exclusion fencing does not exclude Mohave ground squirrels. This species may enter the proposed mine expansion area at any time during mining operation and reclamation activities and would likely be killed or injured.

Indirect effects of construction and operation of facilities on the Project Site would include permanent habitat loss and increased raven predation for both the desert tortoise and Mohave ground squirrel. Development of the Project Site would result in the direct loss of 120 acres of desert tortoise and Mohave ground squirrel habitat. In addition, fencing activities, non-native plant removal, and trash removal within the compensation lands are likely to result in temporary habitat degradation due to some cross-country vehicle travel. Fencing activities would temporarily affect a 10 to 15-foot wide area along the fence alignments. We cannot predict how much habitat would be disturbed by fence repairs, but these activities would only disturb small areas of habitat when needed. We anticipate that the effects to habitat along the fence alignments would be temporary. Fencing of habitat on the compensation lands would likely result in increased the habitat quality within the fenced areas for the desert tortoise and Mohave ground squirrel due to the elimination of OHVs and other human disturbance. However, fencing could displace OHV use to adjacent parcels, and put desert tortoises and Mohave ground squirrels in those areas at risk.

The surface disturbance at the proposed mine expansion site could result in an increased number of predators at and near the Project Site due to food and water subsidies that commonly occur at or near human habitations and the exposure of animals in the soil when excavation begins. Human use of the project would attract predators of the desert tortoise and Mohave ground squirrel such as coyotes and common ravens. Food brought to the site, refuse not properly contained, and puddled water for dust suppression and processing of the mined products would attract common ravens, coyotes, and other predators to the site and adjacent areas. A larger raven population on the Project Site would likely result in higher numbers of raven-killed desert tortoises in adjacent areas including the relocation area. Because common ravens prey on young desert tortoises with unossified, soft shells and Mohave ground squirrels, increased raven predation would likely result in decreased desert tortoise recruitment and fewer Mohave ground squirrels in adjacent areas.

We cannot reasonably predict the number of common ravens, coyotes, or other predators the Project Site would attract, the number of desert tortoises and Mohave ground squirrels these predators would kill, or the magnitude of the effect on population dynamics in adjacent areas. However, CJR General Partnership is proposing avoidance and minimization measures to decrease predator subsidies and eliminate perching, roosting, and nest sites for common ravens within the Project Site. These measures would likely reduce the number of common ravens, coyotes, and other predators that the area would have supported without them. We do not anticipate that fence installation activities would affect common raven populations or the level predation on the desert tortoise and Mohave ground squirrel by their predators. Trash removal is likely to decrease the number of common ravens and coyotes on the compensation lands by reducing this subsidy for these predators of the covered species.

Indirect impacts to adjacent habitat also would occur. Mining operations would increase the particulates in the air, which when transported and deposited on plants in adjacent areas, would impede photosynthesis and plant growth. This would reduce food availability and cover for covered species in these areas. Surface disturbance at the proposed mine site would provide conditions for non-native weedy plant species to become established and spread to adjacent areas. These non-native species prevent native plant species from growing through competition for soil moisture and space and are nutritionally inferior to native species. Once established, these non-native species promote the spread of fire. Because native desert herbaceous and woody plants are not adapted to fire, fire then destroys the native plant species and can result in the conversion of plant communities from native diverse assemblages to stands of a few non-native annual species.

Reclamation activities would also result in similar impacts. While the loss of additional habitat would not occur, the use of heavy equipment to contour the mined site could injure or kill Mohave ground squirrels that access the site from adjacent areas. These activities could also kill or injure desert tortoises that wander onto the site if the exclusion fence has not been maintained. Impacts from reclamation activities include the production of particulates in the air, noise, and vibration, and until native plant species are established, the production of non-native weedy species on disturbed soils at the mined site.

4.1.2 EFFECTS OF CLEARANCE SURVEYS AND RELOCATION ON DESERT TORTOISES

Clearance surveys within the HCP area and moving of desert tortoise to the relocation area would result in adverse effects to desert tortoises. Direct effects to the desert tortoise are primarily associated with handling and manipulation of desert tortoises during clearance surveys. Desert tortoises could void their bladders when handled, which may result in the loss of important stored fluids needed to survive long periods of drought. Because desert tortoises would be moved a short distance from the proposed mine expansion area to BLM-managed lands adjacent to the expansion area, disease transmission is not considered an impact from this activity. In addition, because USFWS-Authorized Biologists would perform this activity according

to established protocols, it is unlikely that animals would suffer injury or mortality due to loss of fluid or disease transmission. In 2003, surveyors detected two desert tortoises on the Project Site, eight burrows, and numerous scat, but desert tortoise abundance and distribution on the site has likely changed since this time. In addition, we cannot predict all locations within the HCP area where CJR General Partnership or another designated entity would need to perform additional clearance surveys during compensation land management activities. Consequently, we do not know how many desert tortoises surveyors would handle during work area clearance surveys or Translocation Area monitoring.

Indirect effects to the desert tortoise would include loss of habitat and potential loss of individuals from the local population, and increased mortality of relocated animals. Up to 120 acres of desert tortoise habitat that has experienced various levels of human disturbance in the past and ongoing disturbance would be lost. Desert tortoises moved from the Project Site to the relocation area could also experience increased mortality because they may not be familiar with their new environment. In one study, 13 desert tortoises moved immediately adjacent to a development site showed no difference in survival when compared to the resident animals (Corn 1994b, 1997 in USGS 2002). Because CJR General Partnership would move desert tortoises to the relocation area adjacent to the Project Site, it is unlikely that they would suffer increased mortality.

It is unlikely that relocated or resident desert tortoises within the relocation area will suffer competitive interactions due to increased density and limited resources. Saethre et al. (2003) looked at the carrying capacity for desert tortoises in fenced enclosures, and found that densities below 850 desert tortoises per 247 acres (1 square kilometer) resulted in no effect to survival in a two-year study. In 2003, surveyors detected two desert tortoises on the Project Site. Even if there are five times as many desert tortoises moved than detected during presence surveys or 10 desert tortoises, the adjacent equivalent area of 120 acres (0.48 square kilometer) would need to support more than 400 desert tortoises to reach the carrying capacity identified by Saethre et al. (2003).

Relocated desert tortoises could transfer URTD to animals that are resident to the relocation area, although this is unlikely. USFWS-Authorized Biologists would check animals for signs of URTD prior to moving them to the relocation area, but animals can sometimes have the disease without expressing outward clinical signs that a biologist would detect. However, the desert tortoises on the Project Site and relocation area already live in close proximity to each other and likely have current interactions. If disease was present in the desert tortoises within the Project Site and relocation area, it is likely that transmission has already occurred.

In 2003, surveyors detected two desert tortoises on the Project Site, but desert tortoise abundance and distribution on the site has likely changed since this time. Consequently, we do not know how many desert tortoises that clearance surveys and relocation area establishment may indirectly affect.

4.1.3 EFFECTS OF RELOCATION ON MOHAVE GROUND SQUIRRELS

The effects to Mohave ground squirrels from relocation would be similar to those for the desert tortoise. Because a biologist approved by the USFWS and CDFG would perform this activity according to guidance in the CDFG incidental take permit, it is unlikely that animals would suffer injury or mortality during capture and handling.

Indirect effects to the Mohave ground squirrel would include loss of habitat and potential loss of individuals from the local population, and increased mortality of relocated animals. Up to 120 acres of Mohave ground squirrel habitat that has experienced various levels of human disturbance in the past and ongoing disturbance would be lost. Mohave ground squirrels moved from the Project Site to the relocation area could also experience increased mortality because they may not be familiar with their new environment. Because CJR

General Partnership would move Mohave ground squirrels to suitable habitat in the relocation area adjacent to the Project Site, it is unlikely that they would suffer increased mortality from changes in microclimate or habitat.

CJR General Partnership assumed presence of the Mohave ground squirrel and did not survey for presence or density. Consequently, we do not know how many Mohave ground squirrels that and relocation area establishment may indirectly affect.

4.2 ANTICIPATED TAKE OF COVERED SPECIES

For the two covered species, the desert tortoise and Mohave ground squirrel, the implementation of the proposed projects will likely result in the following take:

**TABLE 1. Summary of Occurrences and Incidental Take Estimate for Covered Species
(The data provided in this table are for the 120-acre mine expansion parcel only.)**

Species	Occurrence	Total in HCP Area	Incidental Take Estimate
Mohave ground squirrel	Mojave desertscrub	120 acres Unknown ¹	120 acres Unknown ¹
Desert tortoise	Mojave desertscrub and Individuals	120 acres 6 individuals ²	120 acres 6 individuals

¹ No observation/trapping surveys were conducted for the Mohave ground squirrel. Their presence at the project site was assumed.

² The number of individual desert tortoises that currently use the site is based on the baseline conditions of the habitat. Two desert tortoises, eight burrows, and numerous scat were observed during the May 2002 surveys. The survey results for desert tortoises are believed to represent seasonal use of the site.

For purposes of estimating take, it was assumed that the entire 120 acres, which comprise the proposed mine expansion area, would be cleared of vegetation and prepared for mining operations, mined, and then reclaimed. Take of the covered species would occur as a result of the clearing and initial grading activities and could occur during operation and reclamation if the Mohave ground squirrel wanders into the project area or the desert tortoise, if the exclusion fence is compromised. In addition, the noise and dust associated with the mine expansion could also adversely affect the covered species. Desert tortoises have been observed leaving their burrows when they hear nearby ground vibrations similar to that produced by the operation of heavy equipment. This behavior of leaving a burrow may make the desert tortoise more vulnerable to predation or exposure to high temperatures and low humidity, thus increasing physiological stress on the animal. Dust, if present in large quantities, can cover the photosynthetic surfaces of plants reducing their ability to produce food, grow, flower, and produce seed for future plant production. Because the desert tortoise and the Mohave ground squirrel rely on vegetation for most or all of their food and water, and because plant availability is limited in the desert, any reduction in food availability could have an adverse effect on these covered species.

4.3 EFFECTS ON CRITICAL HABITAT

The proposed mine expansion site and desert tortoise relocation area does not occur within or near designated critical habitat for the desert tortoise. The proposed location for the compensation lands for the desert tortoise and Mohave ground squirrel do or do not occur in critical habitat for the desert tortoise. The Mohave ground squirrel is not a federally listed species, thus it has no designated critical habitat. However, the management actions CJR General Partnership proposes are not likely to adversely affect critical habitat. Because any ground disturbance would likely affect a very small area and be temporary in nature, such effects would likely not be measurable within the context of the function and conservation role of the critical habitat unit.

4.4 CUMULATIVE IMPACTS

In contrast with the analysis of cumulative impacts under section 7, section 10 of the ESA and HCPs analyze cumulative impacts as incremental impacts of the action on the environment when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. The geographic area for analysis is defined by the manifestation of direct or indirect impacts as a result of covered activities. Cumulative impacts under section 10 of the ESA can result from individually minor but collectively significant actions taking place over a period of time.

For this discussion, the geographic area of analysis for cumulative impacts is considered to be an area extending one mile in radius from the project site. This is likely the distance that noise and vibration from the proposed project would be attenuated. We are aware of no other reasonably foreseeable future actions in this geographic area of analysis. Past and present actions in this geographic area to the west include the National Trails Highway or Route 66, mostly cleared areas or scattered buildings between the highway and the railroad line, the mail railroad line between Los Angeles and east for freight and passengers, and cleared areas currently or previously used for farming row crops, and the ephemeral portion of the Mojave River. To the south is the current aggregate mine. Beyond this and to the north are similar developments, scattered residential and outbuildings in a rural agricultural area. Some of the areas between buildings were previously farmed as lines of furrows in the soil. To the east is open undeveloped desert land managed by the BLM that increases in elevation and is dissected by washes and dirt roads.

Most of the effects to the desert tortoise and Mohave ground squirrel that are associated with this HCP would be contained within the boundaries of the HCP area. However, there is potential that common ravens attracted to the project site would prey on desert tortoises and Mohave ground squirrels in surrounding areas. This adverse effect would be cumulative to the direct and indirect effects associated with the past, present, and future projects listed above. We do not have an accurate estimate of the number of desert tortoises, Mohave ground squirrels, or the amount of habitat that these projects have, are, or may affect. In addition, we cannot reasonably predict how many desert tortoises and Mohave ground squirrel would be affected by raven predation in habitats adjacent to the Project Site and relocation area. CJR General Partnership is proposing avoidance and minimization measures to decrease common raven subsidies and eliminate nests within the project site and relocation area. These measures would likely reduce the number of common ravens that the area would have supported without them.

4.5 ANTICIPATED IMPACTS OF THE TAKING

Take is defined in section 9 of the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such activity. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering (50 CFR 17.3). Harass is defined as actions that create the likelihood

of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering.

CJR General Partnership's proposed project is to expand an existing mining operation into 120 acres of adjacent lands it owns, relocate desert tortoise to BLM-managed lands located east of the mining site. During the most recent desert tortoise survey in 2003, RCA found two desert tortoises in the Project Site. We do not know the number of desert tortoises the proposed project could affect. No trapping was done for the Mohave ground squirrel. We do not know the number of Mohave ground squirrels the proposed project could affect. Therefore, CJR General Partnership is requesting that the USFWS permit take for any desert tortoises and Mohave ground squirrels found on the 120 acre proposed mine expansion site, relocation lands, and compensation lands during the permit term.

Desert tortoises and Mohave ground squirrels could be taken during the grading and operation of the proposed mine expansion site, implementation of minimization measures, monitoring, enhancement, and management of the compensation lands. We anticipate that desert tortoises and Mohave ground squirrels could be taken in the following manner:

1. Desert tortoises and Mohave ground squirrels on the Project Site and desert tortoises on compensation lands would be **captured** during project implementation. A USFWS-Authorized Biologist would be called upon to move a desert tortoise (if necessary) out of harm's way to avoid harm, undue stress, or mortality to the individual animal within the Project Site. He/she would move these desert tortoises to the relocation area. In addition, enhancement and management actions on the compensation lands may require desert tortoises to be moved out of harm's way. USFWS-Authorized Biologists would move these desert tortoises from the immediate work area and place them in adjacent habitat, where they would monitor the tortoises until completion of activities. During this monitoring, a USFWS-Authorized Biologist would handle desert tortoises for a brief period (probably less than 30 minutes) to take measurements and assess health status.

A USFWS and CDFG Authorized Biologist would be called upon to move a Mohave ground squirrel, if found in a burrow, to another burrow at a protected, off-site location. The new location would be approved by the USFWS and CDFG. The relocation burrow would be constructed according to instructions in the CDFG's Section 2018 permit.

We anticipate that all desert tortoises within the 120 acres project site and the compensation parcel could be captured over the 30-year permit term. This capture would be temporary, and only for moving tortoises out of harm's way or for performing monitoring activities. In the case of the compensation lands all desert tortoises that are resident there may be captured multiple times during the permit term in order to perform monitoring. Monitoring would involve the measurement of body dimensions and assessment of health status according to the most recent USFWS protocols.

2. Desert tortoises and Mohave ground squirrels on the Project Site, relocation area, and mitigation lands could be **wounded or killed** during project implementation. These forms of take would occur if clearance surveys overlooked desert tortoises, Mohave ground squirrels or desert tortoise nests are unsuccessfully relocated during site clearance. Hatchlings and juvenile desert tortoises are nearly impossible to find. Injury or mortality could also result during relocation of desert tortoises if desert tortoises are handled improperly. Raven predation brought on by increased human activity at the mine expansion site could also cause injury or mortality of desert tortoises and Mohave ground squirrels or near the project site.

It is difficult to determine the precise number of desert tortoises that could be killed or injured on the Project Site for the following reasons: a) current survey information may not reflect the number of desert tortoises present at the start of project activities; b) the number of desert tortoises present in undeveloped phases of the Project Site and on the mitigation lands would change over the 16-year life of the permit and cannot be predicted from a survey done today; and c) the precise number of desert tortoises that would be protected from injury or mortality by the proposed minimization measures cannot be quantified. Consequently, we cannot anticipate the number of animals that could be injured or killed over the 16-year permit term. We anticipate the project may kill or injure few if any desert tortoises because the proposed minimization measures have proven to be successful in preventing or reducing the likelihood of injury or mortality on similar projects involving development within desert tortoise habitat. In addition, CJR General Partnership would implement common raven monitoring and management so that few if any desert tortoises would suffer injury or mortality from predation subsidized by project implementation.

For the desert tortoise, the anticipated impacts of the taking would be minimal. The number of desert tortoises that would be displaced by the proposed project is small given the size of the West Mojave Recovery Unit and the estimated number of desert tortoises in it. The site is not in a Desert Wildlife Management Area (DWMA), not in designated critical habitat, and not in a corridor that would connect the Superior-Cronese DWMA with the Ord-Rodman DWMA.

For the Mohave ground squirrel, the anticipated impacts of the taking would also be minimal. The proposed project is located on the edge of the known range of the species. It is not within or near core areas identified by the CDFG or Mohave ground squirrel Technical Advisory Group. The amount of habitat that would be lost from the proposed action is small and is adjacent to areas previously impacted. Adjacent areas to the proposed project have previously been degraded or destroyed, thus avoiding impacts to large areas of pristine Mohave ground squirrel habitat.

If the incidental take limit identified in the USFWS's intra-office biological opinion is met, all construction and operation activities would cease, and CJR General Partnership would meet with the USFWS to discuss the reasons for take and modify the measures as necessary to avoid additional take. Under no circumstance would the CJR General Partnership the take limit prior to USFWS approval. CJR General Partnership will implement the adaptive management strategies outlined in Section 3.7 to ensure that take is not exceeded.

SECTION 5: CONSERVATION PROGRAM

This section describes the biological goals and objectives of the conservation program for the covered species and describes measures that will be implemented to accomplish these goals and objectives. These measures include monitoring, adaptive management, and reporting preparation to document the status of the conservation program during the duration of the incidental take permit.

5.1 BIOLOGICAL GOALS

Section 10(a)(2)(A) of the ESA requires that an HCP specify the measures that the permittee will take to minimize and mitigate to the maximum extent practicable the impacts of the taking of any federally listed animal species as a result of activities addressed by the HCP.

As part of the “Five Point” Policy adopted by the USFWS in 2000, HCPs must establish biological goals and objectives (65 *Federal Register* 35242, June 1, 2000). The purpose of the biological goals is to ensure that the operating conservation program in the HCP is consistent with the conservation and recovery goals established for the species. The goals are also intended to provide to the applicant an understanding of why these actions are necessary. These goals are developed based upon the species’ biology, threats to the species, the potential effects of the covered activities, and the scope of the HCP.

Biological Goal 1: Mitigate unavoidable adverse effects to the desert tortoise and the Mohave ground squirrel from Project Site implementation including loss of habitat by providing for sustained desert tortoise and Mohave ground squirrel conservation with a focus on the Superior-Cronese Desert Wildlife Management Area for the desert tortoise and the central part of the range of the Mohave ground squirrel.

Biological Goal 2: Contribute to the conservation of desert tortoise and Mohave ground squirrel populations and habitat within the HCP area by improving/restoring habitat that has been adversely affected by past anthropogenic activity and preventing future adverse effects to the compensation lands.

Biological Goal 3: Minimize take of the desert tortoise and Mohave ground squirrel related to expansion of the aggregate mine during preparation, operation, and reclamation of this mine expansion and the enhancement and management of the compensation lands.

In keeping with Goal 3, CJR General Partnership does not wish to wound or kill desert tortoises during mine expansion, so they would implement a suite of minimization measures during site preparation, mining operation, and reclamation. Other projects have effectively used these measures elsewhere to minimize adverse effects to desert tortoises to avoid or reduce take during surface disturbance and operation activities at the Project Site (LaRue and Dougherty 1998).

An important aspect of Goal 2 would be to reduce habitat fragmentation, maintain habitat quality, reduce threats to habitat, and maintain viable desert tortoise and Mohave ground squirrel populations on lands within the regions important to the recovery of these species. CJR General Partnership would identify compensation lands in important desert tortoise and Mohave ground squirrel habitat that would be managed for desert tortoise and Mohave ground squirrel conservation and recovery.

5.2 BIOLOGICAL OBJECTIVES

To initiate **Goal 1**, CJR Partnership would achieve the following objective prior to ground disturbance on the Project Site:

1. **Objective 1:** Acquire and manage 120 acres of desert tortoise and Mohave ground squirrel habitat in the Superior-Cronese DWMA. The lands would be transferred to the to the CDFG or agreed upon third party.
2. .

To accomplish **Goal 2**, CJR General Partnership and/or designated land management entity would achieve the following objectives:

1. **Objective 2a:** Protect desert tortoise and Mohave ground squirrel populations and habitat by restoring all habitats damaged by past off-highway vehicle (OHV) intrusions on the 120 acres of compensation lands to fulfill Objective 1 (See 5.3.1).
2. **Objective 2b:** Protect desert tortoises, Mohave ground squirrels, and their habitat on the 120 acres of compensation lands purchased and/or managed to fulfill Objective 1 by removing non-native, invasive plant species with the exception of Mediterranean split grass (*Schismus* spp.), red-stem filaree (*Erodium cicutarium*), and red brome (*Bromus madritensis* spp. *rubens*) (See 5.3.1).
3. **Objective 2c:** Protect desert tortoise and Mohave ground squirrel populations from common raven (*Corvus corax*) predation on the 120 acres of compensation lands purchased and/or managed to fulfill Objective 1 by maintaining these sites free of trash; unnatural water sources; and unnatural perching, nesting, or roosting sites (See 5.3.1).

To accomplish **Goal 3**, CJR General Partnership would achieve the following objectives:

1. **Objective 3a:** Implement all minimization measures outlined in this HCP so that no desert tortoises are injured or killed during mining expansion or reclamaiton activities, the number of Mohave ground squirrels that are injured or killed is minimized, and no desert tortoises or Mohave ground squirrels are injured or killed during implementation of management activities on the 120 acres of compensation lands.
2. **Objective 3b:** Project biologists will conduct surveys for raven nests in conjunction with the desert tortoise clearance surveys to be performed on the project site. Any nests which are observed will be recorded and mapped, and any nesting activity will be documented. If no eggs or young are present in individual nests, the nests will be dismantled and the nesting materials removed from the site. If eggs or young are present, the nest(s) will not be removed until all of the young have fledged and left the nest(s).

Daily movement activities (e.g., evening feeding or grouping activities, etc.) will also be recorded and reasons for activities will be documented where possible (e.g., presence of trash, etc.). Following completion of all on-site biological surveys, a report will be prepared which will summarize the results of the raven surveys and will proposed additional mitigation measures which may be necessary.

5.3 MEASURES TO MITIGATE UNAVOIDABLE IMPACTS

Implementation of this mitigation would ensure that CJR general Partnership achieves the biological goals and objectives it has identified for this HCP. Sections 5.6 and 5.7 provide information about the monitoring and adaptive management strategies that the CDFG or third party would implement on the 120 acres of compensation land to ensure long-term achievement of the HCP's biological objectives. Following expiration of the permit, the CDFG or third party would continue to manage this parcel of land to benefit the desert tortoise and Mohave ground squirrel according to the mission of their organization and the conservation easement.

5.3.1 ACQUISITION, ENHANCEMENT, AND MANAGEMENT OF 120 ACRES OF COMPENSATION LAND IN THE SUPERIOR-CRONESE DWMA

CJR General Partnership would achieve **Objective 1** by providing funds to the CDFG or agreed upon third party who would use these funds for the acquisition, enhancement, and management of 120 acres of desert tortoise and Mohave ground squirrel habitat within the Superior-Cronese DWMA (Figure 2). The CDFG or agreed upon third party will perform enhancement and management of the 120 acres as an agent of CJR General Partnership under their incidental take permit, thus achieving **Objectives 2a and 2b**. The USFWS will review the agreement/contract that is developed between the CDFG or the third party and CJR General Partnership to ensure that it complies with the terms of this HCP. The BLM designated the Superior-Cronese DWMA as an Area of Critical Environmental Concern (ACEC) in the West Mojave Plan (BLM 2005). The BLM manages this area for the conservation of the desert tortoise and the Mohave ground squirrel.

Because of the mixed public and private ownership of parcels within the Superior-Cronese DWMA, the purchase of 120 acres in this DWMA would help the BLM consolidate management of the DWMA and help ensure consistent management of all lands within the DWMA boundaries for desert tortoise and Mohave ground squirrel conservation. Although each parcel would require site-specific consideration, actions taken to enhance the parcel would likely involve mechanical control (no herbicides) of non-native invasive plant species, removal of all trash and debris from the site, and fencing to achieve **Objectives 2a, 2b, and 2c**, respectively.

Implementation of this mitigation would ensure that CJR General Partnership achieves the biological goals and objectives it has identified for this HCP. Sections 5.6 and 5.7 provide details about the monitoring and adaptive management strategies that the CDFG or third party would implement on the 120 acres of compensation lands to ensure long-term achievement of the HCP's biological objectives. Following expiration of the permit, the CDFG or third party would continue to manage the 120 acres to benefit the desert tortoise and Mohave ground squirrel according to the mission of their organization.

5.4 MEASURES TO MINIMIZE IMPACTS

This section identifies measures that CJR General Partnership or its designated representatives would implement to minimize adverse effects to desert tortoises and Mohave ground squirrels found on the Project Site and compensation lands during ground disturbing activities. Implementation of these measures would help CJR General Partnership achieve **Objective 3** of this HCP. Because the CDFG or third party would manage the 120 acres of compensation lands, the USFWS would cover take for management activities at this location through the section 7 consultation process. Therefore, the USFWS may use this process to impose additional project-specific measures on that parcel. CJR Partnership has identified the following measures to minimize take of desert tortoises and Mohave ground squirrels during ground disturbing activities in all portions of the HCP area.

5.4.1 USE OF FIELD CONTACT REPRESENTATIVES (FCRs) FOR PERMITTED ACTIVITIES IN THE HCP AREA

CJR General Partnership will appoint a field contact representative (FCR) who would be responsible for overseeing compliance with the HCP minimization measures for the covered species and for coordinating compliance with project subcontractors and the USFWS. The FCR would have the authority to halt all project activities that are in violation of the measures given in the HCP.

5.4.2 IMPLEMENTATION OF AN AWARENESS PROGRAM FOR THE COVERED SPECIES FOR PERMITTED ACTIVITIES WITHIN THE HCP AREA

Prior to new ground disturbing activities within any portion of the HCP area, a USFWS-Authorized Biologist would meet with all construction personnel to administer the awareness program for the covered species. The USFWS must receive, review, and approve the awareness program at least 30 days prior to its presentation. At a minimum, the program would include a discussion of the desert tortoise's distribution, general behavior, and ecology, its sensitivity to human activities, the protection afforded it by the ESA, the procedures for reporting contacts with desert tortoises, and the importance of following all measures given in the HCP and any applicable Federal documents outlining those measures. The awareness program developed for the Mohave ground squirrel and approved by the CDFG will be implemented. The awareness program for the covered species would also include a discussion of the definition of take and procedures for avoiding take.

No more than 48 hours prior to initiating any new ground disturbing activities within the HCP area, the USFWS-Authorized Biologist would meet with all construction personnel in a classroom setting and administer the awareness program, including a USFWS-approved video presentation. Following this initial presentation, the USFWS-Authorized Biologist or other person designated by the USFWS-Authorized Biologist would make employees and contractors (workers) working at the HCP site aware of the provisions required to minimize take of the covered species. This awareness program would inform workers of the minimization measures CJR General Partnership is implementing at the Project Site to protect the covered species and the importance of abiding by those measures. CJR Partnership would maintain a list of all workers who have attended the awareness program. The person administering the awareness briefing would inform personnel that their signature on the list indicates that they understand the minimization measures and are willing to abide by them throughout all activities at the HCP site that could take the covered species.

Additional education measures would include the distribution of: (a) highly visible stickers to be worn on hard hats to identify workers who have attended the education program; the absence of such a sticker would indicate that a worker had not attended the session, which would be rectified prior to beginning work; (b) stickers or placards reminding workers to check beneath their vehicles for desert tortoises prior to moving the vehicle; and (c) wallet-sized cards outlining important, practical desert tortoise protection measures.

5.4.3 USE OF USFWS-AUTHORIZED BIOLOGIST(S) FOR PERMITTED ACTIVITIES IN THE HCP AREA

Only biologists authorized by the USFWS would handle covered species within the HCP area. CJR General Partnership or designated land management entity (compensation lands) would enlist a USFWS-Authorized Biologist to perform all desert tortoise clearance surveys and monitoring activities in all portions of the HCP area prior to and during any ground disturbing activities that may result in the take of desert tortoises (e.g., installation of a desert tortoise exclusion fence). Within 30 days prior to any new ground disturbing activities in the HCP area, CJR General Partnership would provide the resume(s) of the proposed biologist(s) to the USFWS. The USFWS would approve the biologist(s) before construction begins and before the biologist(s) begins monitoring duties. The USFWS-authorized biologist(s) would have the authority to halt all project activity should danger to a covered species arise. The USFWS-Authorized Biologist can then allow work to proceed after he/she has removed hazards to the covered species.

5.4.4 MINIMIZING DISTURBANCE FROM PERMITTED ACTIVITIES ON COMPENSATION LANDS

When performing ground disturbing enhancement or management activities on lands described in Section 5.3 of this HCP, CJR General Partnership or the designated land management entity would confine the area of disturbance to the smallest practical area, considering topography, placement of facilities, location of desert tortoise and Mohave ground squirrel burrows, public health and safety, and other limiting factors. The USFWS-Authorized Biologist would delineate work area boundaries with flagging or other marking to minimize surface disturbance associated with vehicle straying. The USFWS-Authorized Biologist would

identify special habitat features, such as burrows, that personnel would avoid to the extent possible. The USFWS-Authorized Biologist and/or FCR would ensure compliance with this measure.

5.4.5 MINIMIZATION OF DISTURBANCE FROM VEHICLE TRAVEL DURING PERMITTED ACTIVITIES ON COMPENSATION LANDS

When performing management activities on lands described in Section 3.3 of this HCP, CJR General Partnership or the designated land management entity would not blade access roads to work sites. Cross-country access would be the standard for temporary activities when access to the Project Site cannot be restricted to previously disturbed routes of travel. A USFWS-Authorized Biologist would select and flag the cross-country access route prior to vehicle use to avoid desert tortoise and Mohave ground squirrel burrows and to minimize disturbance of vegetation.

5.4.6 INSTALLATION OF DESERT TORTOISE EXCLUSION FENCING AND REMOVAL OF DESERT TORTOISES FROM THE MINE EXPANSION SITE

Prior to new ground disturbing activities in the mine expansion site, CJR General Partnership would erect a desert tortoise exclusion fence around the perimeter of the area where they would mine. Once fenced, a USFWS-Authorized Biologist would remove desert tortoises from the area according to the current USFWS clearance survey protocols. CJR General Partnership would maintain the fence in place until mining and reclamation are completed. The purpose of the fence is to preclude all desert tortoises from the mine expansion footprint, including desert tortoises removed from the site that may try to return to their on-site burrow(s).

All project-related facilities, such as staging areas and personnel parking areas, would occur within the fenced area(s). All related infrastructure (roads, refuse containment, etc.) would also remain within the fenced area. If CJR General Partnership requires new placement of infrastructure off-site, they would contact the USFWS to seek approval of the activity prior to ground disturbance, unless permitted under a separate authorization.

All desert tortoise exclusion fences would have either a desert tortoise exclusion gate or a breakaway portion of fence that workers can open and close to allow vehicle access. The gate or modified fence would remain closed at all times during the life of the mining operation and reclamation except to allow vehicles to enter or leave the site. The USFWS-Authorized Biologist may modify this measure if, based on his or her surveys of surrounding areas, he/she determines that there is little or no likelihood of desert tortoises entering the site through the opening. If the biologist determines that employees can leave the gate open, but subsequently finds that a desert tortoise has entered the construction area through that opening, they would install a gate or modified fence.

Prior to installing desert tortoise exclusion fencing, the USFWS-Authorized Biologist would survey the fence alignment. CJR General Partnership would move the fence line when possible so that any desert tortoise and Mohave ground squirrel burrows would remain on the outside of the fenced area. The USFWS-Authorized Biologist would consider the direction of the burrow and know that burrows may be 30 to 40 feet long. The USFWS-Authorized Biologist would consider and exclude burrow opening and its end when altering the fence line. Any desert tortoise burrows found within the proposed fence line that CJR General Partnership cannot avoid would be hand excavated by a USFWS-Authorized Biologist according to the excavation procedures given in current version of the Desert Tortoise Field Manual. The USFWS-Authorized Biologist would remain on-site to monitor the installation of the fence.

After installing the fence, and before any other activities occur within the fenced area, the USFWS-Authorized Biologist would conduct clearance surveys of the site for desert tortoises. The surveys would occur immediately after installation of the fence, and prior to new ground disturbing activities. The USFWS-Authorized Biologist would excavate burrows either as they are found or flag them for later excavation. They would also carefully

check each burrow for viable desert tortoise eggs. When found, the USFWS-Authorized Biologist would have a plan for relocation eggs outside the work site, and move the eggs in such a way that their relocation (see esert Tortoise Field Manual) does not adversely affect the viability of the eggs.

CJR General Partnership would be responsible for maintaining the desert tortoise exclusion fence throughout the mining operation and reclamaton. On-site biological monitors, the USFWS-Authorized Biologist, or other designated person would check the fence monthly and immediately after rainstorms, and repair any breaks in the fence immediately as part of their normal monitoring duties.

5.4.7 REMOVAL OF DESERT TORTOISE EXCLUSION FENCE

At the completion of the mining operation and reclamation, CJR General Partnership may remove the desert tortoise exclusion surrounding the mined area. If they remove the fence with heavy equipment, USFWS-Authorized Biologists would monitor that activity. If removed by hand, a monitor need not be present. In either case, the USFWS-Authorized Biologist would document such activities in appropriate reports.

5.4.8 REPORT OF ONSET OF NEW GROUND DISTURBING ACTIVITIES IN THE HCP AREA

Prior to beginning new surface disturbance in the mine expansion area or implementation of ground disturbing activities on compensation lands, CJR General Partnership or the designated land management entity (compensation lands) would inform the USFWS of the area they would disturb and the proposed implementation date date. If clearance survey data were available, the report would indicate how many desert tortoises the mining or compensations lands project is likely to affect. They would provide the information 30 to 45 days prior to implementation to inform the USFWS that they are acting on the incidental take permit. It is not necessary for the USFWS to respond for implementation to proceed so long as they are implementing all appropriate provisions identified in this HCP accordingly.

5.4.9 DESERT TORTOISE HANDLING PROCEDURES DURING IMPLEMENTATION OF PERMITTED ACTIVITIES IN THE HCP AREA

Desert tortoises may be handled only by the USFWS-Authorized Biologist and only when necessary. The USFWS-Authorized Biologist shall follow the techniques for handling desert tortoises in the most recent version of the USFWS Desert Tortoise Field Manual.

5.4.10 CHECKING BENEATH VEHICLES DURING IMPLEMENTATION OF PERMITTED ACTIVITIES IN THE HCP AREA

Workers would check beneath any parked vehicle within the HCP area immediately prior to moving the vehicle while in desert tortoise habitat outside of areas fenced with desert tortoise-proof fencing. If a worker finds a desert tortoise beneath a vehicle, the USFWS-Authorized Biologist would move it from harm's way. Alternatively, the worker could wait and move the vehicle after the desert tortoise has left of its own accord.

5.4.11 PETS, FIREARMS, AND FIREWORKS PROHIBITED ON WORK SITES WITHIN THE HCP AREA

Workers would not to bring pets (except for service animals) or firearms onto the work sites in any portion of the HCP area. The use of fireworks and other explosives (not used for mining purposes) would also be prohibited.

5.4.12 AVOID PREDATOR ATTRACTANTS AND SUBSIDIES IN THE HCP AREA

During all permitted activities within the HCP area, workers would promptly place all trash and food items in covered wind and predator-proof containers within the work site to reduce the attraction of common ravens and other desert tortoise and Mohave ground squirrel predators. Workers would place plastic garbage bags in wind and predator-proof containers and not leave them in the open. They would regularly remove the contents of the containers from the HCP site for disposal at an authorized landfill. CJR General Partnership would apply water used for dust suppression and other uses in a manner that avoids ponding and subsequent use by common ravens, coyotes, and other desert tortoise and Mohave ground squirrel predators.

5.4.13 PROHIBITIONS OF INTENTIONAL KILLING OF WILDLIFE WITHIN THE HCP AREA

CJR General Partnership and/or designated land management entities (compensation land) would not allow any intentional killing, harassment, wounding, or removal of wildlife within the HCP area, with the exception of moving desert tortoises and Mohave ground squirrels from the proposed mine expansion site or if a desert tortoise or Mohave ground squirrel is injured or found dead. In the latter case, the USFWS-Authorized Biologist would handle the injured animal(s) or carcass according to the provisions outlined in section 5.5 of this HCP.

5.4.14 TERMINATION OF MONITORING BY THE USFWS-AUTHORIZED BIOLOGIST WITHIN THE HCP AREA

Once the mine expansion area at the Project Site has been fenced with desert tortoise exclusion fencing, cleared of desert tortoise using clearance survey protocols, all desert tortoises removed and placed on adjacent land managed by the BLM, the vegetation cleared, and the area checked to ensure that no desert tortoises were injured or killed, the USFWS-Authorized Biologist would not be required to remain on the mine expansion site as long as all other measures given herein are being implemented.

Once the USFWS-Authorized Biologist leaves the site, the FCR would have the responsibility of ensuring compliance with HCP measures. The FCR would visit the site as often as needed to check the desert tortoise-exclusion fence and ensure that workers are effectively carrying out other measures. If the FCR finds that workers are not implementing measures, the FCR would contact CJR General Partnership and the USFWS to inform them of the situation and halt all project activities that are in violation of the measures given in the HCP. The USFWS would then determine if the USFWS-Authorized Biologist should resume monitoring activities on a daily basis.

If workers or other individuals observe a desert tortoise inside the mine expansion fenced area after the USFWS-Authorized Biologist leaves, he/she would immediately go to the site, and with input from available USFWS personnel, move the desert tortoise into the adjacent relocation area on BLM-managed lands following the current protocol in the USFWS's Desert Tortoise Field Manual.

During projects requiring a USFWS-Authorized Biologist on compensation lands, the USFWS-Authorized Biologist would remain on site until the project is finished or until he/she determines that the continued implementation of the project would not take desert tortoises.

5.4.15 FOLLOW-UP MEASURES TO MINIMIZE RESIDUAL AND INDIRECT EFFECTS AT THE HCP SITE

As described above, CJR General Partnership would monitor and maintain all desert tortoise-exclusion fences. Section 3.6 also describes steps CJR General Partnership would take at the Project Site to monitor common raven populations and desert tortoise populations within the Translocation Area. CJR General Partnership would make workers aware that desert tortoises occur in adjacent areas and that they are protected by the ESA.

5.5 REMOVING DEAD OR INJURED DESERT TORTOISES AND/OR MOHAVE GROUND SQUIRRELS

If a dead desert tortoise is found, the USFWS-Authorized Biologist would make a determination as to the cause of death, and report the information to the USFWS's Ventura Fish and Wildlife Office. If the USFWS-Authorized Biologist determines that the cause of death or injury is from mining activities, he/she would report the incident(s) as follows. Upon locating a freshly dead desert tortoise, the USFWS-Authorized Biologist would immediately notify the USFWS's Ventura Fish and Wildlife Office. If determinable, they would document the cause of death. Following initial notification, CJR General Partnership would make written notification within five calendar days and include the date, time, and location of the animal, photographs of the carcass and the site where found, and any other pertinent information. The USFWS-Authorized Biologist would send the notification to the Ventura Fish and Wildlife Office with copies to the the USFWS Law Enforcement Office in Torrance, California.

If an injured desert tortoise is found, it would be transported to the nearest qualified veterinarian. Upon locating an injured desert tortoise, the USFWS-Authorized Biologist would immediately notify the USFWS's Ventura Fish and Wildlife Office. If determinable, they would document the cause of death. Following initial notification, CJR General Partnership would make written notification within five calendar days and include the date, time, and location of the animal, a photograph, and any other pertinent information. The USFWS-Authorized Biologist would send the notification to the Ventura Fish and Wildlife Office with copies to the the USFWS Law Enforcement Office in Torrance, California. The ultimate disposition of that desert tortoise would depend on recuperation from the injury and would be determined with input from the USFWS. CJR General Partnership would pay all veterinary bills.

If a dead Mohave ground squirrel is found, the procedure would be the same as for a desert tortoise

5.6 MONITORING AND REPORTS

5.6.1 MONITORING AND REPORTING OF PERMITTED GROUND DISTURBING ACTIVITIES WITHIN THE HCP AREA

CJR General Partnership or designated land management entity would enlist USFWS-Authorized Biologist(s) to monitor all activities the permit covers that may take the desert tortoise and/or Mohave ground squirrel in any portion of the HCP area. The USFWS-Authorized Biologist would maintain a record of all desert tortoises and Mohave ground squirrels observed and desert tortoises moved during project activities during clearance and relocation. This information would include locations and dates of observations, approximate size or age, whether desert tortoises voided their bladders (if handled), general condition of health, any apparent injuries and state of healing, and diagnostic markings.

The USFWS-Authorized Biologist would provide a report to the USFWS within 90 days of completion of monitoring associated with any permitted ground disturbing activities in all portions of the HCP area. The reports would include final determination of the acres of surface disturbance, all desert tortoise and Mohave ground squirrel observations, and an evaluation of the adverse effects to desert tortoises and Mohave ground squirrels resulting from the activities. The report would address the appropriateness of the conservation measures and, in the context of adaptive management, make recommendations as to how to change the measures for future permitted activities.

5.6.2 LONG-TERM MONITORING OF THE 120 ACRES OF COMPENSATION LANDS

The CDFG or third party would perform long-term monitoring of the 120 acres of compensation lands according to the plan between CJR General Partnership and the compensation lands manager in perpetuity to ensure that they are achieving **Objectives 2a, 2b, and 2c**. Monitoring of this site would include the following:

- perform periodic survey and evaluation of the site to determine the presence of degraded habitats that require revegetation;
- perform twice-yearly inspections of the parcel for signs of human use (e.g., livestock grazing, OHV use, trash or hazardous materials, ground clearing, etc.), and the presence of non-native invasive plants; and
- perform patrols of fences that are established to protect the compensation land at least every three months.

5.6.3 120-ACRE COMPENSATION LANDS REPORTING

The CDFG or third party would provide a report to CJR General Partnership and the USFWS on or before January 31 of each year following acquisition. Upon request, the CDFG or third party would provide reports to the USFWS that account for any actions taken or funds expended in the enhancement and long-term management of the 120 acres of compensation land. If the CDFG or third party determines that they need to take action to manage the compensation land that is inconsistent with the provisions of this HCP, they would contact the USFWS to seek authorization.

5.6.4 ANNUAL REPORTING REQUIREMENTS

For the duration of the Mine Project including mining and reclamation activities, CJR General Partnership will prepare an annual report on HCP implementation for review by USFWS and CDFG. Annual reports will be due to the USFWS on or before January 31 of each year for the duration of the permit. All data collected during implementation of HCP tasks also will be provided annually to USFWS, CDFG, and NDDB.

Each annual report will include the following information for the previous 12 months:

Annual reports to the USFWS will include the following information for the previous calendar year:

1. Brief summary or list of project activities accomplished during the reporting year (e.g. this includes pre-construction, development/construction activities, and other covered activities)
2. Project impacts (e.g. number of acres graded, number of linear feet of fence installed, etc.)
3. Description of any take that occurred for each covered species (includes cause, form, and amount of take (e.g., clearance survey, capture, two desert tortoises), location of take and time of day, and deposition of any dead or injured individuals)
4. Brief description of conservation strategy implemented
5. Monitoring results (compliance, effects and effectiveness monitoring) and survey information (if applicable)
6. Description of circumstances that made adaptive management necessary and how it was implemented. Please include a table with the cumulative totals; by reporting period all adaptive management changes to the HCP, including a very brief summary of the actions.
7. Description of any changed or unforeseen circumstances that occurred and how they were dealt with
8. Funding expenditures, balance, and accrual, and
9. Description of any minor or major amendments.

5.7 ADAPTIVE MANAGEMENT STRATEGY

5.7.1 ADAPTIVE MANAGEMENT DURING GROUND DISTURBING ACTIVITIES

During all ground-disturbing activities within the HCP area, CJR General Partnership or designated land management entity (compensation lands) would maintain open communication with the USFWS to ensure that they are employing the latest methods to move desert tortoises from harm's way. If incidental take in the form of injury or mortality occurs during mining, reclamation, or during compensation lands management that the USFWS did not anticipate in its biological opinion, CJR General Partnership and the USFWS would discuss the circumstances of the take and determine if CJR General Partnership can modify the HCP's minimization measures to avoid additional take. If the USFWS and CJR General Partnership agree on modifications to the minimization measures, the USFWS would make a minor amendment to the HCP. Implementation of this procedure would ensure continued achievement of **Objective 3**.

5.7.2 ADAPTIVE MANAGEMENT OF THE 120 ACRES OF COMPENSATION LANDS

Once the CDFG or third party has completed initial enhancement of the 120 acres of compensation lands (Section 5.3.1), it would monitor the acreage and implement the following adaptive management measures to ensure continued achievement of the HCP's biological objectives:

1. repair any boundary fencing or signs that it discovers during its monthly fence patrols (Objective 2a);
2. remove any new trash and debris from the site that is detected during twice-yearly inspection of the parcel (Objective 2c); and
3. perform native plant revegetation of sites identified during twice-yearly inspections that show substantial degradation (Objective 2a and 2b).

SECTION 6: PROVISIONS FOR CHANGED AND UNFORESEEN CIRCUMSTANCES

6.1 CHANGED CIRCUMSTANCES

6.1.1 SUMMARY OF CIRCUMSTANCES

Under the ESA, Section 10 regulations [(69 *Federal Register* 71723, December 10, 2004 as codified in 50 Code of Federal Regulations (C.F.R.), Sections 17.22(b)(2) and 17.32(b)(2))] require that an HCP specify the procedures to be used for dealing with changed and unforeseen circumstances that may arise during the implementation of the HCP. In addition, the HCP No Surprises Rule [50 CFR 17.22 (b)(5) and 17.32 (b)(5)] describes the obligations of the permittee and the USFWS. The purpose of the No Surprises Rule is to provide assurance to the non-Federal landowners participating in habitat conservation planning under the ESA that no additional land restrictions or financial compensation will be required for species adequately covered by a properly implemented HCP, in light of unforeseen circumstances, without the consent of the permittee.

Changed circumstances are defined in 50 CFR 17.3 as changes in circumstances affecting a species or geographic area covered by an HCP that can reasonably be anticipated by HCP developers and the USFWS and for which contingency plans can be prepared (e.g., the new listing of species, a fire, or other natural catastrophic event in areas prone to such event). If additional conservation and mitigation measures are deemed necessary to respond to changed circumstances and these additional measures were already provided for in the HCP's operating conservation program (e.g., the conservation management activities or mitigation measures expressly agreed to in the HCP or IA), then the permittee will implement those measures as specified in the HCP. However, if additional conservation management and mitigation measures are deemed necessary to respond to changed circumstances and such measures were not provided for in the HCP's operating conservation program, the USFWS will not require these additional measures absent the consent of the permittee, provided that the HCP is being "properly implement" (properly implemented means the commitments and the provisions of the HCP and the IA have been or are fully implemented).

Table 3 indicates a range of response measures for the above identified circumstances. CJR General Partnership would be responsible to fund all response measures for changed circumstances. CJR General Partnership will be responsible for maintaining the desert tortoise exclusion fence during the operational and reclamation period of the mine. Implementing additional measures will require the permittee's consent, provided the HCP is being properly implemented.

6.2 NEWLY LISTED SPECIES

If a new species that is not covered by the HCP but that may be affected by activities covered by the HCP is listed under the ESA during the term of the section 10(a)(1)(B) permit, the section 10 permit will be reevaluated by the USFWS and the HCP covered activities may be modified, as necessary, to insure that the activities covered under the HCP are not likely to jeopardize or result in the take of the newly listed species or adverse modification of any newly designated critical habitat. CJR General Partnership shall implement the modifications to the HCP covered activities identified by the USFWS as necessary to avoid the likelihood of jeopardy to or take of the newly listed species or adverse modification of newly designated critical habitat. CJR General Partnership shall continue to implement such modifications until such time as the Permittee has applied for and the USFWS has approved an amendment of the Section 10(a)(1)(B) permit, in accordance with applicable statutory and regulatory requirements, to cover the newly listed species or until the USFWS notifies CJR General Partnership in writing that the modifications to the HCP covered activities are no

longer required to avoid the likelihood of jeopardy of the newly listed species or adverse modification of newly designated critical habitat.

6.3 UNFORESEEN CIRCUMSTANCES

Unforeseen circumstances are defined in 50 CFR 17.3 as changes in circumstances that affect a species or geographic area covered by the HCP that could not reasonably be anticipated by HCP developers and the USFWS at the time of the HCP's negotiation and development and that result in a substantial and adverse change in status of the covered species. The purpose of the No Surprises Rule is to provide assurances to non-Federal landowners participating in habitat conservation planning under the ESA that no additional land restrictions or financial compensation will be required for species adequately covered by a properly implemented HCP, in light of unforeseen circumstances, without the consent of the permittee.

In case of an unforeseen event, CJR General Partnership or the current permittee shall immediately notify the USFWS staff who have functioned as the principal contacts for the proposed action. In determining whether such an event constitutes an unforeseen circumstance, the USFWS shall consider, but not be limited to, the following factors: size of the current range of the affected species; percentage of range adversely affected by the HCP; percentage of range conserved by the HCP; ecological significance of that portion of the range affected by the HCP; level of knowledge about the affected species and the degree of specificity of the species' conservation program under the HCP; and whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

If the USFWS determines that the unforeseen circumstance will affect the outcome of the HCP, additional conservation and mitigation measures may be necessary. Where the HCP is being properly implemented and an unforeseen circumstance has occurred, the additional measures required of the permittee must be as close as possible to the terms of the original HCP and must be limited to modifications within any conserved habitat area or to adjustments within lands that are already set aside in the HCP's operating conservation program. Additional conservation and mitigation measures shall not involve the commitment of additional land or financial compensation or restrictions on the use of land or other natural resources otherwise available for development or use under the original terms of the HCP without the consent of the permittee. Resolution of the situation shall be documented by letters between the USFWS and CJR General Partnership.

Thus, in the event that unforeseen circumstances adversely affecting the desert tortoise and/or Mohave ground squirrel occur during the term of the requested incidental take permit, CJR General Partnership or the current permittee would not be required to provide additional financial mitigation or implement additional land use restrictions above those measures specified in the HCP, provided that the HCP is being properly implemented. This HCP expressly incorporates by reference the permit assurances set forth in the Habitat Conservation Plan Assurances ("No Surprises") Rule revised by the USFWS and published in the *Federal Register* on December 10, 2004 (50 CFR Part 17).

6.4 AMENDMENTS

6.4.1 MINOR AMENDMENTS

Minor amendments are changes that do not affect the scope of the HCP's impact and conservation strategy, change amount of take, add new species, and change significantly the boundaries of the HCP. Examples of minor amendments include correction of spelling errors or minor corrections in boundary descriptions. The minor amendment process is accomplished through an exchange of letters between the permit holder and the USFWS's Field Office.

6.4.2 MAJOR AMENDMENTS

Major amendments to the HCP and permit are changes that do affect the scope of the HCP and conservation strategy, increase the amount of take, add new species, and change significantly the boundaries of the HCP. Major amendments often require amendments to the USFWS's decision documents, including the NEPA document, the biological opinion, and findings and recommendations document. Major amendments will often require additional public review and comment.

6.5 SUSPENSION/REVOCAION OF PERMIT

The USFWS may suspend or revoke their respective permits if CJR General Partnership fails to implement the HCP in accordance with the terms and conditions of the permits or if suspension or revocation is otherwise required by law. Suspension or revocation of the Section 10(a)(1)(B) permit, in whole or in part, by the USFWS shall be in accordance with 50 CFR 13.27-29, 17.32 (b)(8).

6.6 PERMIT RENEWAL

Permit renewal would be needed if the mining and reclamation schedule of the 120-acre area was slower than anticipated and the mining operation or the reclamation activities continued for a longer period of time. Permit renewal also be needed if the integrity of the desert tortoise exclusion fence was not maintained during surface disturbance activities on the 124-acre project site. The habitat adjacent to the mine site is suitable for and within the range of the Mohave ground squirrel. The desert tortoise exclusion fence does not exclude the squirrel from entering the mining site during mining or reclamation activities. The habitat adjacent to the mining site is suitable habitat for the desert tortoise. If the exclusion fence is compromised, a desert tortoise could access the mining site during mining operations or reclamation activities.

Upon expiration, the Section 10(a)(1)(B) permit may be renewed without the issuance of a new permit, provided that the permit is renewable, and that biological circumstances and other pertinent factors affecting covered species are not significantly different than those described in the original HCP. To renew the permit, CJR General Partnership shall submit to the USFWS, in writing:

- a request to renew the permit; reference to the original permit number;
- certification that all statements and information provided in the original HCP and permit application, together with any approved HCP amendments, are still true and correct, and inclusion of a list of changes;
- a description of any take that has occurred under the existing permit; and
- a description of any portions of the project still to be completed, if applicable, or what activities under the original permit the renewal is intended to cover.

If the USFWS concurs with the information provided in the request, it shall renew the permit consistent with permit renewal procedures required by Federal regulation (50 CFR 13.22). If CJR General Partnership files a renewal request and the request is on file with the issuing USFWS office at least 30 days prior to the permits expiration, the permit shall remain valid while the renewal is being processed, provided the existing permit is renewable. However, CJR General Partnership may not take listed species beyond the quantity authorized by the original permit. If CJR General Partnership fails to file a renewal request within 30 days prior to permit expiration, the permit shall become invalid upon expiration. CJR General Partnership and

the compensation lands manager must have complied with all annual reporting requirements to qualify for a permit renewal.

6.7 PERMIT TRANSFER

In the event of a sale or transfer of ownership of the property during the life of the permit, the following will be submitted to the USFWS by the new owner(s): a new permit application, permit fee, and written documentation providing assurances pursuant to 50 CFR 13.25 (b)(2) that the new owner will provide sufficient funding for the HCP and will implement the relevant terms and conditions of the permit, including any outstanding minimization and mitigation. The new owner(s) will commit to all requirements regarding the take authorization and mitigation obligations of this HCP unless otherwise specified in writing and agreed to in advance by the USFWS.

SECTION 7: FUNDING

CJR General Partnership is responsible for the full cost of the mitigation and minimization measures described in section 5 and Table 7.1 potential changed circumstances in section 6.1. will assure that adequate funding is available for implementation of the HCP and that the HCP is implemented as per USFWS and CDFG requirements.

7.1 OFF-SITE MITIGATION LANDS

Mitigation or compensation lands will be purchased at a ratio of 1:1 within the Fremont-Kramer Desert Wildlife Management Area, and which have been designated as prime desert tortoise and Mohave ground squirrel habitat by USFWS and CDFG. The basis of the 1:1 ratio was arrived at through discussions with USFWS representatives from the Ventura, California office and representatives from CDFG. Furthermore, this ratio is based on the current baseline conditions of the habitat on the 120 acres.

The 120 acres will be purchased and set aside in perpetuity as required by the various review agencies (See below for discussion of specific location of lands) and will be purchased prior to issuance of the Section 10(a)(1)(B) ITP. Also provided prior to issuance of the ITP is the endowment and enhancement fee to fund the enhancement and management of the 120 acres in perpetuity for conservation purposes. The estimated amounts for these costs/fees are listed below:

1. Purchase price for compensations lands: \$836.00 /acre or \$100,310;
2. Endowment Fee: \$200.00/acre for a total of \$24,000;
3. Enhancement Fee: \$95/acre for a total of \$11,400.

The enhance and endowment fees will be placed in appropriate funds per CDFG guidelines with the funds to be used as designated by law, and the compensation lands will be managed per guidelines set forth by California Department of Fish and Game for the covered species.

The specific habitat conditions which the compensation lands must meet in order to be considered suitable for consideration are outlined below:

- a. Compensation land must support an undisturbed creosote bush plant community located in an area of the Mohave Desert where there is a minimal chance of disturbance by human activities such as off-road vehicle activities, sheep grazing, and mining activities. The plant community must support an abundant and diverse group of perennials and annuals in order to provide suitable habitat for the various species covered under this HCP, particularly in regards to the Federal and State listed species (desert tortoise and Mohave ground squirrel) (Luckenbach 1982).
- b. Compensation land should be located in an area that has been documented as desert tortoise habitat as determined by desert tortoise maps provided by USFWS.
- c. Soil types should consist of friable soils suitable for excavation of burrows and firm enough to ensure the burrows will not collapse (Luckenbach 1982).

7.2 COST ESTIMATE

Cost estimates were prepared for:

- a. Installation of the desert tortoise exclusion fencing around the North Pit Expansion Area;
- b. Annual and periodic tasks required for maintenance of the desert tortoise exclusion fence;
- c. Desert tortoise clearance surveys, and related tasks;
- d. Reports on the above tasks;
- e. Implementation of the worker education tasks (meetings and materials); and
- f. Purchase, enhancement, and management of the compensation lands.

Table 7.1. Costs of Minimization and Mitigation Measures for the AgCon Oro Grande North Pit Mine Expansion Project

Mitigation and Minimization Activities	Unit Cost	Total Cost
Mitigation Activities		
Acquire 120 acres of compensation lands	\$836 per acre	\$100,310
Enhancement and endowment fees for compensation lands	\$295 per acre	\$ 35,400
Minimization Activities		
Authorized Biologist (e.g., awareness program, clearance surveys, covered species relocation, etc.)		\$12,500
Desert tortoise exclusion fencing (installation, maintenance, and removal)	\$10,000 installation with authorized biologist \$45,000 maintenance and removal	\$55,000
Report Preparation	\$2,000 year 1 \$1,000 years 2 through 30	\$31,000
	Grand Total	\$253,810

¹ Calculated as 2010 dollars for a 30-year permit term, which is the term of the Mining Conditional Use Permit and Reclamation Plan issued by the County of San Bernardino, Reclamation Plan No. 2003M-02.

The compensation lands and associated fees would occur prior to permit issuance. Most of the minimization activities (e.g., construction of desert tortoise exclusion fence, clearance surveys, and relocation of desert tortoise) would occur prior to new mining activities.

SECTION 8: ALTERNATIVES

In accordance with the requirements for the section 10(a)(1)(B) incidental take permit, CJR General Partnership has considered several alternatives to the proposed taking of the covered species.

8.1 ALTERNATIVES TO THE MINING PROJECT

8.1.1 NO PROJECT

Under this alternative, the Oro Grande Mine expansion would not occur, and the existing mine would be closed after all of the recoverable minerals had been excavated from the existing mine. (Note: As of 2003, the recoverable minerals in the existing mine directly south of the 120-acre project site have been exhausted, and excavation to greater depths is not practicable (Lori Clifton 2003 personal communication, Hi-Grade Materials, Inc. December 10, 2003). Implementation of this alternative would have an adverse economic impact on the local economy and the personnel employed at the site. Approximately 25 jobs would be lost in the area of if the proposed project is not approved, as the materials in the existing mine are almost depleted.

8.1.2 EXPAND OTHER EXISTING MINE FACILITIES

The existing mine is the only mine facility which is currently owned by AgCon, Inc.; consequently, there are no other facilities which could be expanded to meet current AgCon contractual obligations. In addition, there are no other mines in the immediate region that could be purchased by the project proponent. Therefore, this is not considered a viable alternative by CJR General Partnership (Lori Clifton 2003 Personal communication. Hi-Grade Materials, December 10, 2003).

8.1.3 DEVELOP A NEW MINE AT A NEW SITE

Under this alternative, AgCon would locate suitable materials at a new site, purchase the land, develop the infrastructure to operate a new mine including new access roads, and apply for permits from the County of San Bernardino. These would be additional economic impacts for AgCon to incur. This alternative would result in new adverse effects to an area that previously had not been subject to these effects. These new adverse effects include noise from new or increased traffic from heavy equipment on site and vehicles delivering materials to the from the new mine, air quality from mining at a location not previously mined, and loss of biological resources from direct and indirect effects of the new mining location that may extend beyond the project footprint.

8.1.4 REDUCE THE SIZE OF THE PROPOSED MINE EXPANSION

Under this alternative, the expansion area would be reduced to a size less than 120 acres; however, implementing such a reduction would impair CJR General Partnership's ability to meet current contractual obligations. In addition, reducing the size of the mine expansion would not be financially feasible since the profit level associated with a reduced mine area would make the proposed mine project untenable.

8.1.5 CHANGE THE DIRECTION OF THE PROPOSED MINE EXPANSION

Expanding the mine in a direction that would reduce potential impacts to the desert tortoise was also considered; however, this alternative was not possible as the mine could only be expanded to the north or east given land ownership and current adjacent uses (e.g., highway, houses). Expansion to the north or east would result in adverse effects to covered species and their habitats.

These five alternatives were rejected in favor of the proposed mine expansion as minimized and mitigated by the measures outlined in this HCP.

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APPENDIX A

**Biological Profiles and Assessment of Covered Species and Special Status Species
for the
Oro Grande North Pit Expansion Area**

Submitted by:
CJR General Partnership
17671 Bear Valley Road
Hesperia, California 92345

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Biological Profiles and Assessment of Covered Species and Special Status Species for the Oro Grande North Pit Expansion Area

Prepared for:

U.S. Fish and Wildlife Service and California Department of Fish and Game

Submitted by:

**CJR General Partnership
17671 Bear Valley Road
Hesperia, California 92345**

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SECTION 1

1.1 Introduction

This biological profile and assessment (BPA) provides background information on the various listed species, special concern species, and sensitive plants that would be affected by the mining project proposed by CJR General Partnership or are known to occur in the area. It examines the effects of the proposed project on these species as well as the effects associated with the Habitat Conservation Plan (HCP) (See Table 1 for summary). Current information on these species is provided below including the species' physical description, habitat requirements, life history, population dynamics, range distribution, regional distribution, and current trends. This information has been compiled from current scientific information, technical reports, and other data from the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG).

1.2 Purpose and Need

This BPA was prepared in conjunction with the Habitat Conservation Plan, and in compliance with USFWS and CDFG requirements to evaluate the impacts associated with the proposed mine expansion. Specifically, the BPA was prepared to support the evaluation of the impacts to the covered species per the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). The Section 10 (a)(1)(B) incidental take permit would constitute the authorizing instrument and assurances for the proposed activity.

The purpose of the BPA is to:

1. Assess the effects of the proposed action, expanding the existing sand and gravel mine at Oro Grande by 120 acres, on the covered species (i.e., desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (*Xerospermophilus mohavensis*); and
2. From this assessment, determine appropriate minimization and mitigation measures to implement for the covered species that would contribute to their conservation

1.3 Issues and Concerns

Issues and concerns addressed in the BPA were identified based on requirements set forth in NEPA and CEQA, and on discussions with USFWS and CDFG officials. Specific issues and concerns include:

1. The occurrence of a listed species on the project site and in adjacent areas;
2. The level of incidental take and the amount of desert habitat that would be affected;
3. The risk that the proposed conservation measures would not be effective; and
4. The potential for cumulative adverse impacts on the regional desert tortoise population and Mohave ground squirrel.

(Note: The data provided in this table are for the 120-acre acre parcel only.)

Species	Occurrence	Total in HCP Area	Incidental Take Estimate
Mohave ground squirrel	Desert shrublands	120 acres Unknown (assumed presence)	120 acres Unknown (assumed presence)
Desert tortoise	Desert shrublands & Individuals	120 acres 6 individuals	120 acres 6 individuals

Note: The number of individual desert tortoises which currently use the site is based on the baseline conditions of the habitat. The results of the May 2002 surveys for desert tortoises may represent seasonal use of the site.

SECTION 2

2.1 Location of Project Site

The proposed mining site is located in Section 19, Township 7 North, Range 4 West near Oro Grande, California in San Bernardino County (Figures 1 and 2). The site, which was surveyed, is located immediately north of an existing mine facility, east of National Trails Highway road, and north of Bryman Road. The site is approximately 120 acres in size and is relatively flat. Elevations range from about 2,560 to 2,600 feet. The site is bordered on the north by existing single-family dwellings, on the east by vacant lands, and on the west by National Trails Highway. An existing aggregate open pit mine borders the property on the south.

The Plan Area is located in the Mojave Desert with access from the National Trails Highway via Bryman Road. There are no significant restrictions on the property which is owned by CJR General Partnership.

SECTION 3

3.1 Affected Environment-General Plant and Animal Communities

A description of the plant and animal communities which occur on the property site are described in the following sections. Plant surveys were conducted during a time of year (May 2002) when many annuals are in bloom. Wildlife species inhabiting the site and/or occurring in the surrounding region are also discussed below. Wildlife surveys were conducted in May 2002.

3.1.1 General Vegetation Resources

The site supports a creosote bush community typical of the region; however, the site does show some signs of past human disturbance, including dirt bike activities and trash dumping. The dominant perennials included creosote bush (*Larrea tridentata*), burrobush (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*), and ephedra (*Ephedra nevadensis*). Other perennial species observed included Mohave yucca (*Yucca schidigera*), desert rue (*Thamnosma montana*), dalea (*Dalea schottii*), cholla (*Opuntia* sp.), and quailbrush (*Atriplex lentiformis*). Several annuals were also common throughout the site including burweed (*Ambrosia acanthicarpa*), ricegrass (*Achnatherum hymenoides*), ripgut grass (*Bromus diandrus*) and Mediterranean split grass (*Schimus barbatus*). Table 1 provides a list of the various plants which occur on the site.

3.3.2 General Wildlife Resources

Various wildlife species use the property either as year-round residents or as transitory species. Wildlife observed during the field surveys or those known to inhabit the surrounding area are discussed below. A list of wildlife species occurring on the site is provided in Table 2 (Appendix A). A variety of human activities have occurred on the property over the last several decades; however, most of the wildlife species observed are those which are able to habituate to human activities and associated disturbances (e.g., increased noise levels, etc.).

Mammals

Three mammals were observed on the site during field investigations including the California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), and desert woodrat (*Neotoma lepida*) (Table 2). Although not observed, gray fox (*Urocyon cinereoargenteus*) may occasionally occur on the site. Live-trapping surveys were not conducted on the site; however, various rodent species may inhabit the site including the common deer mouse (*Peromyscus maniculatus*), Merriam's kangaroo rat (*Dipodomys merriami*), and Botta's pocket gopher (*Thomomys bottae*).

Birds

Avian species are the most diverse group of wildlife in the general region; however, only a few species were observed during the field investigations. A list of the bird species, which were observed on the property and in the surrounding area, is provided in Table 3. Several birds, which are common year-round residents of southern California, were observed during the field surveys including mourning dove (*Zenaida macroura*), house sparrow (*Passer domesticus*), starling (*Sturnus vulgaris*), Anna's hummingbird (*Calypte anna*), and common raven (*Corvus corax*).

The small mammals present on the site (e.g., rabbits, and ground squirrels) provide a food source for raptors; consequently, raptors may occasionally utilize the site when feeding. Red-tailed hawks (*Buteo jamaicensis*) were the only raptors observed in the general region during field surveys; however, other raptors such as the American kestrel (*Falco sparverius*) may utilize the site.

Reptiles and Amphibians

Reptile diversity was not comparable to mammalian or avian fauna; however, several species are known to occur in the region. The side-blotched lizard (*Uta stansburiana*) and western whiptail (*Cnemidophorus tigris*) are two species common in the region and were observed during field investigations. Also observed was the desert horned lizard (*Phrynosoma platyrhinos*). The western rattlesnake (*Crotalus viridis*), Mojave rattlesnake (*Crotalus scutulatus*), and gopher snake (*Pituophis melanoleucus*) may also occur on the property although these species were not observed. No amphibians were noted on the site, nor does the site support any suitable habitat for amphibians.

3.2 Affected Environment-Covered Species

The desert tortoise was the only covered species observed within the North Pit Expansion Area in May 2002. Two tortoises were found during the surveys along with eight active burrows and six scat. Two tortoise carcasses were also noted during the field surveys. The presence of the burrows and numerous scats indicate the site has been utilized by the species for several years.

Development of the mine site would impact the desert tortoise including potential mortality of individuals, as well as loss of occupied habitat. These impacts will require the project proponent to coordinate with the California Department of Fish and Game and U.S. Fish and Wildlife Service and likely obtain incidental take permits. For the USFWS to issue a Section 10(a)(1)(B) incidental take permit, the permit applicant must demonstrate that a project minimizes and mitigates the impacts of take to the maximum extent practicable and meets the other criteria.

SECTION 4

4.1 Mojave Monkeyflower (*Mimulus mohavensis*)

A. Current Listing

State: CNPS List 1B

Federal: None

B. Biological Profile (Note: The following information has been excerpted from a document prepared by P.J. MacKay, Department of Biology, Victor Valley College)

The Mojave monkeyflower is found only in the Mojave Desert of California with the highest population densities in areas just south of Daggett and Barstow; although, the species has also been found within the Barstow city limits (CDFG 1997b). Historic records also exist for the species at Calico Ghost Town, ten miles northeast of Barstow (Lemmon 1884). This historic population represents the northernmost reported location, while the easternmost population occurs at Kane Springs in the Newberry Mountains. It is uncertain whether the species still occurs at those two sites. The species has been observed in the Mitchell Range near Fort Irwin Road about five miles north of Barstow in 1992 (CDFG 1997b). There are numerous extant small populations east of the Mojave River Drainage and west of Interstate 15 between Victorville and Barstow. The species has been documented at Old Woman Spring east of Lucerne Valley, which is the southernmost reported occurrence of this species, however, the plants have not been there since 1936 (NDDB 1997).

The Mojave monkeyflower is a member of the figwort family (Scrophulariaceae). These annual plants have purplish-red stems and leaves, and are covered with minute glandular hairs. This species tends to grow erect and branch from the base, reaching a height of 1.6 in. (3-15 cm). The opposite leaves are from 0.3-1.1 inches (7-27 mm) long with an ellipse shape and acute tips. They are sessile on the upper stem, but may have petioles on the lower stem. The flowers are on 0.1 in. (2-3 mm) long pedicels that arise from upper leaf axils. The bell shaped red-purple calyx has unequal, pointed, ciliate lobes and minute hairs along the veins. It enlarges when fruits form, reaching 0.4-0.5 in. (10-12 mm) in length. Unique maroon corollas are radial with five spreading lobes with irregularly toothed to ragged white margins, distinguishing it from other species (Hickman 1993; Munz 1974; Grant 1924).

The Mojave monkeyflower blooms from April to June and the time of germination and requirements for germination are unknown (Munz 1974). The amount of precipitation is probably a major factor in germination, based on population fluctuations (Bagley 1991; CDFG 1997b). There is no information available about the pollination ecology of this species. The showy flowers suggest biotic pollen vectors, most likely hymenopteran or lepidopteran (Faegri and van der Pijl 1979). The white margin likely act as nectar guides. Other *Mimulus* species are insect pollinated and mostly outcross (Vickery, 1964) but many are also self compatible (Leclerc Potvin and Ritland 1994). Seed dispersal is probably mostly abiotic, since the seeds are small.

Some populations are reported from rocky slopes above washes, and it is likely that gravity carries seeds down into the washes. Intermittent water flow may carry seeds further down washes. Biotic vectors of seed transport are unknown; however, there is a possibility that granivorous ants or rodents could carry seeds, and birds might be important in transporting seed longer distances.

The Mojave monkeyflower occurs in Joshua tree woodland and creosote bush scrub communities where it is typically associated with creosote bush (*Larrea tridentata*), desert senna (*Senna armata*), cheese bush (*Hymenoclea salsola*), rattany (*Krameria sp.*), cholla (*Opuntia sp.*), burrow bush (*Ambrosia dumosa*), indigo bush (*Dalea sp.*) cat claw acacia (*Acacia greggii*), Bigelow's monkeyflower (*Mimulus bigelovii*), desert bells (*Phacelia campanularia*), and desert trumpet (*Eriogonum inflatum*). The species occurs primarily on granite soils on gravelly banks of desert washes, in sandy openings between creosote bushes and along rocky slopes above washes in areas that are not subject to regular water flows. The species occurs at an elevation from 200-3300 feet (600-1000 m) (Hickman 1993). There is suitable habitat for this species throughout much of the Mohave Desert; although, the species is restricted geographically. Where it is found, population sizes can greatly vary from year to year due in large part to the amount and timing of precipitation (Bagley 1991).

There are 25-30 occurrences of Mojave monkeyflower between the Mojave River and Interstate 15 between Victorville and Barstow which were first reported to NDDDB in 1992 (West 1992). Some of these locations are very close together, and it is unclear whether each reported location represents a distinct interbreeding population, since the distance of pollen dispersal and reproductive strategy of this species are not known. Most of these locations have 100 plants or less, with an average of about 40 plants per location. From the 1992 data, it appears that this region is not one supporting a dense concentration of these plants; although, populations are known to fluctuate widely therefore additional monitoring is needed. (Bagley 1991; CDFG 1997b).

The highest population densities occur in areas south of Barstow and Daggett especially along Camp Rock Road. The status of many of these populations was assessed in 1986, and at least four of the populations contained more than 1000 plants (CDFG 1997b). Several smaller populations of less than 50 plants were also reported from the same area. Three populations reported in the late 1970s were not found again in the 1986 surveys, possibly due to dry conditions (CDFG 1997b). Surveys of five Mohave monkeyflower sites from the Newberry Mountains to Stoddard Valley conducted in 1991 (Bagley 1991) revealed only dried remains at one site, while the Mohave monkeyflower was not found at the other four sites, possibly due to dry conditions. A few plants had been observed by others in some of these areas earlier in the season (Bagley 1991). A population of 200 plants was found in Daggett Wash in May of that year (Rutherford and Bransfield 1991), and more than 1000 plants were observed at one Camp Rock Road location in 1993.

Some historic locations have likely been extirpated, and the status of many populations is unknown. The type locality population, at the Calico Ghost Town (Lemmon 1884), has not been seen since, but the NDDDB reports (CDFG 1997b) assume that it is extant. This locality has heavy recreational use, and it seems likely that it would have been reported to NDDDB since 1884 if this species was still present. The population at Old Woman Springs, south of Highway 247, was first collected in 1937. It is presumed extant (CDFG 1997b); however, there are no subsequent reports of this species from that location. The Kane Springs population in the Newberry Mountains was last seen in 1906 but is presumed extant, and another population at Bloody Gulch is also extant. Populations have also been documented for the Barstow areas; however, the species may have been extirpated from Barstow due to urban development (CDFG 1997b).

There are numerous locations where the Mojave monkeyflower is known to occur; however, population sizes are quite variable as a result of varying rainfall each year. Surveys conducted in 1986 did not find any plants from known populations; however, it was speculated that conditions were too dry that year resulting in no germination. This species may experience major population fluctuations in response to environmental conditions including: 1) how much water is available, 2) when the precipitation occurs, 3) in what form the precipitation occurs, and 4) ambient temperatures. It is presumed that seeds survive bad years and germinate when conditions are more favorable, but a series of dry years may decrease the seed bank to a point where it is difficult for the population to recover.

When population sizes are small it is possible that inbreeding may contribute to a reduction of number of seeds set or of seed viability, although some rare species are known to self pollinate with no detrimental effects (Barrett and Kohn 1991; Carr and Dudash 1996; Huenneke 1991). Pollination vectors may be limited if plant populations are insufficiently large to attract them (Karron 1991), and random fluctuations in environmental conditions can lead to pollinator unreliability (Menges 1991).

The populations of Mojave monkeyflower occurring between the Mojave River and Interstate 15 north of Victorville are situated on a patchwork of private and BLM lands. The regions contain many quarries and test pits, some of which are adjacent to known populations (West 1992). The area is also dotted with developed home sites, which could potentially impact these plants. The BLM is at present attempting to dispose of some of its land in that area, and some has already been sold to the private sector (West 1992). The San Bernardino County Transportation Department has recently paved many of the dirt roads in this area, using ground asphalt removed from the renovation of Interstate 15. These roads include Rodeo Road, Corral Road, and Bonanza Trail, along which Mojave monkeyflower have been found (West 1992). Paving the road will increase traffic to this area, and will likely promote development. Even though the 1992 population sizes of Mojave monkeyflower reported from this area were not large, those between the Mojave River and Interstate 15 represent a substantial proportion of the known range of this species; substantial populations may be present here in some years. The major threat to these populations is that some of them are already on private lands, and more soon will be. Since this species has no legal status, a private land owner is not legally required to protect it. If the amount of relatively protected habitat on public land is continually diminished by transfer of these lands to the private sector, it is much more likely that this species will require listing in the future. Alternatively, if BLM could maintain control of the lands in this area, it may be possible to control the loss of Mojave monkeyflower habitat so that future listing might not be necessary.

Continued urbanization around Barstow, Daggett, and Newberry Springs has already destroyed numerous Mohave monkeyflower populations and new development activities will likely destroy potential habitat for the species. In addition, off highway (OHV) vehicles pose a considerable threat to this species in the Barstow and Daggett area. Several populations are located in or adjacent to the Stoddard Valley OHV vehicle open area and are susceptible to continued impacts. This is a BLM managed area, and in some sites OHV competition events are frequently staged. One reported population of the Mojave monkeyflower is bisected by Stoddard Valley Road, and several populations are known from areas adjacent to the heavily used Camp Rock Road. OHV tracks were observed at several known population sites along Camp Rock Road during a recent survey to assess habitat integrity (MacKay and Thomas 1997). Multiple tracks were concentrated in a wash located at one location along Camp Rock Road where a considerable population was observed in 1995. In addition to threats by OHVs, livestock grazing creates a considerable threat and signs of recent grazing were observed during the habitat integrity survey in 1997.

Current mining probably does not pose much of a threat to most populations; although, future mining activities may pose a serious threat. Energy and pipeline projects, such as the Barstow pipeline project, also pose potential threats to the species. There are only a few known populations of Mojave monkeyflower which do not appear to be affected by significant human impacts. These populations occur along the powerline road just south of Daggett off Camp Rock Road. Although there is some vehicular traffic along this road, there were no signs of livestock grazing, OHV travel, or mining activity in these areas during past habitat assessment surveys which were conducted in these areas.

C. Impacts and Conservation

1. Plan Area Occurrence

No Mohave monkeyflowers were observed on the project site; however, the species has been documented in the region as indicated above. The species has been identified in the immediate surrounding area, and the nearest known population is approximately 2 miles south of the project site in Sections 31 and 32, Township 7 North, Range 4 West (NDDB 2002). A survey was conducted on the site in 1993 (Lilburn 1993) and this survey was conducted during a year when precipitation levels were adequate to foster the growth of the plant. No Mohave monkeyflowers were observed during the field investigations; however, the site does provide potential habitat for the plant and may occur on the site during years of optimum conditions.

2. Adverse Impacts from Covered Activities

The site provides potential habitat for the species even though past human activities (e.g., farming) and the on-going OHV activities have reduced the overall quality of the habitat to a certain extent. Native vegetation occurs throughout much of the site; therefore, the Mojave monkeyflower may occur on the site, particularly during years of adequate rainfall. Based on the potential for the species, the proposed mining project will have a direct impact on any Mohave monkeyflowers that occur on the site during mining operations. In addition, the proposed project will permanently impact 120 acres of potential habitat for the plant. Although, a few individual plants may be affected by the project and 120 acres of potential habitat will be lost, the project is not expected to have any adverse effect on the species' long-term survival.

3. Conservation Objectives and Measures

To maintain viable populations of the Mohave monkeyflower, it is important to afford protection to the areas where the species is known to occur, and in those areas which provide potential habitat. Few known populations are protected at present; therefore, protective efforts could include the elimination of OHV use and livestock grazing at known population sites south of Barstow and Daggett, and maintenance of BLM ownership of lands located between the Mojave River and Interstate 15 between Victorville and Barstow. Under the West Mojave Plan, sections 32 and 33, which are south of the project site, have been proposed as potential conservation areas for the Mohave monkeyflower. Focused surveys for this species should be conducted in those areas which provide suitable habitat to determine the extent and size of existing populations. Reducing or removing these potential hazards would not, however, eliminate population fluctuations, which are probably induced by random variations in precipitation affecting germination and seedling establishment. These variables are beyond human control; however, protecting areas which provide suitable habitat for the species and implementing measures to maintain the habitats in these areas will help to maintain the viability of existing populations.

Efforts are underway to locate and procure mitigation lands which will provide compensatory lands for the various species which will be impacted by the project, including the Mohave monkeyflower.

4. Potential Effect on Species' Long-term Survival

The proposed project will impact populations of the species, if present on the site at the time mining activities are initiated. However, the project is not expected to appreciably reduce the long-term survival of the species in the region, or have any unmitigated adverse effects on the species in the region. Implementation of the measures presented in this HCP will effectively mitigate impacts to the species.

4.2 Desert Tortoise (*Gopherus agassizii*)

A. Current Listing

State: Threatened

Federal: Threatened

B. Biological Profile

The desert tortoise is the largest reptile in the arid southwestern United States. It historically occupied a range that included a variety of desert communities in southeastern California, southern Nevada, western and southern Arizona, southwestern Utah, and through Sonora and northern Sinaloa, Mexico. Today populations are largely fragmented and studies indicate a steady and dramatic decline over most of its former range. Additionally, because tortoises have long been prized as pets, collecting wild tortoises has further reduced the population. Wildlife biologists estimate that between 1880 and 1970, five to eight million tortoises were taken from the desert by collectors.

Recently, a highly contagious respiratory disease has infected tortoise populations, primarily in the western Mojave Desert region. While the disease seems to be most widespread in the western Mojave, cases have been documented in numerous widely scattered areas throughout the wider Mojave range of the tortoise. In one area of the western Mojave, the infection rate among individual tortoises increased from 9 to 52 percent based on surveys conducted between 1988 and 1989. Isolated cases are believed to have the potential to cause widespread infection over a short time period. Given the continued habitat loss and the rapid decline in the number of tortoises brought about by the disease, the U.S. Fish and Wildlife Service exercised its emergency authority and determined tortoise populations north and west of the Colorado River to be an endangered species under the Endangered Species Act of 1973, as amended. The emergency rule was published in the Federal Register on August 4, 1989, and remained in effect until April 1, 1990. On April 2, 1990, the U.S. Fish and Wildlife Service officially listed the desert tortoise as a threatened species under the Endangered Species Act of 1973, as amended.

Desert tortoises occur in creosote bush scrub and saltbush communities throughout the region, where they occur in burrows excavated in firm soil typically at the bases of shrubs. Threats leading to its listing included residential and agricultural development of historic habitat; impacts associated with various human activities such as off-highway vehicle use; sheep and cattle grazing, and mining; collection for pets and ceremonial purposes; military maneuvers; raven predation, and effects of the respiratory disease described above. Extensive, additional life history information is provided in the following references: Woodbury and Hardy 1948; Burge and Bradley 1976; Burge 1978; Luckenbach 1976; Berry 1978.

C. Impacts and Conservation

1. Plan Area Occurrence

Desert tortoises are known to occur throughout the region surrounding the project site. In 1980, maps produced by the Bureau (Bureau of Land Management 1980) indicates that the proposed mine site is located within an area that supported approximately 20 tortoises per square mile. The National Trails Highway bisects this area, and has likely affected tortoise densities in the immediate vicinity of the highway (Marlow and Hoff 1992). The project site is not located within a designated Critical Habitat Unit, and the nearest designated critical area is the Fremont-Kramer Critical Habitat Unit located about 10 miles north of the project site. The lands immediately adjacent to the site are designated as Category III Habitat by USBLM. Category III areas are defined by BLM as areas which support population densities of 0 to 20 tortoises per square mile.

Two desert tortoises were observed on the site during surveys conducted in May 2002. In addition to the tortoises, eight active burrows and several tortoise scats were also observed throughout the property. The presence of the burrows and scats indicate that tortoises have been utilizing the area for several years, even

though the site has been significantly disturbed by past agricultural activities, including some signs of past plowing and plantings of certain species (i.e., wheat). Past mining activities in the general region have also contributed to the loss of tortoise habitat. Based on the 2002 survey and information provided by BLM, a maximum of six tortoises are expected to inhabit the site at the present time. The surrounding area was not surveyed; however, reconnaissance level surveys indicated that suitable habitat also exists in the area; and habitat to the east of the site appears to be relatively undisturbed; although, some OHV trails were present.

2. Adverse Impacts from Covered Activities

An estimated six tortoises will be adversely affected by the proposed mining project, and 120 acres of occupied habitat would be permanently lost. This estimation is based upon the results of the 2002 survey of the proposed mine site, data from the BLM, and from discussions with biologists from USFWS. Mining activities would result in the death of desert tortoises, assuming the tortoises are not relocated prior to excavation activities.

3. Conservation Objectives and Measures

To minimize and mitigate the adverse effects of the project, the Plan would require implementation of the following conservation objectives and measures for the desert tortoise:

- a.** Conduct clearance surveys on the project site immediately prior to excavation activities. The surveys will be conducted by a biologist approved by CDFG and USFWS in order to locate every tortoise which currently inhabits the site. The approved biologist will also assess the health of the tortoise prior relocation to determine if the tortoises found on the site are suffering from the upper respiratory disease which has infected numerous tortoises throughout the Mojave Desert. If the tortoises are found to be infected, the tortoises will be placed in an approved adoption facility. The facilities that will be considered will be those approved by USFWS and CDFG. Discussions will be held with CDFG and USFWS prior to placement of the tortoises in the adoption facility.
- b.** If desert tortoises are found to be free of any disease, they will be relocated to an area, preferably within the tortoises existing home range. At the present time, BLM lands immediately east of the project site (i.e., Section 20, Township 7 North, Range 4 West) may be the preferred area. Discussions with BLM (L. Foreman, personal communications, 2003) have been initiated and relocation activities will follow all guidelines set forth by BLM. In addition, the biologist will conduct surveys within the proposed relocation area to determine if the area meets the habitat requirements (e.g., available burrows, adequate food sources, etc.) required by BLM, CDFG, and USFWS. There are numerous limiting factors which determine whether an area is suitable desert tortoise habitat; however, some of the factors which will be assessed by the biologist will include presence of suitable vegetation communities (e.g., creosote bush community) presence of adequate food sources (e.g., annuals), and friable soils suitable for digging burrows. It should be noted that relocation of the tortoises may not necessarily assure survival of the individual tortoises. Relocation efforts will be consistent with the relocation guidelines established by USFWS in the recovery plan for the desert tortoises.
- c.** Mitigation lands will be purchased in areas which have been designated as suitable habitat for the desert tortoise and appropriate endowment and enhancement fees will be paid by the project proponent as outlined in the HCP. Specifically, the focus will be on obtaining high quality habitat/mitigation lands in areas identified by the Desert Tortoise Recovery Plan as supporting suitable tortoise habitat.
- d.** Measures will be implemented to manage raven populations in the area given the fact that ravens are one of the prime predators on young tortoises. Efforts will be made to eliminate potential perching and nesting

areas on the project site (e.g., trees, etc.). Raven-proof trash containers will be provided on-site to minimize the number of common ravens attracted to the site. Raven management strategies will be consistent with the strategies identified in the recovery plan for the desert tortoise.

4. Potential Effects on Species' Long-Term Survival

The proposed mining activities would impact 120 acres of occupied habitat and would directly affect an estimated six desert tortoises. Impacts to the tortoises on the site are not, in and of themselves, expected to have any long-term, adverse effect on the overall survival of the species; however, the loss of any habitat that is utilized by a listed species is considered noteworthy because of the decline in desert tortoise numbers and the continual loss and fragmentation of habitat, especially from numerous energy development projects combined with a suite of human-caused threats. Implementation of the mitigation measures outlined in the HCP will effectively mitigate impacts to tortoises.

4.3 Mohave Ground Squirrel (*Xerospermophilus mohavensis*) (Note: The following discussion has been excerpted from data prepared by D. Laabs, Biosearch Wildlife Surveys, Inc.)

A. Current Listing

State: Threatened

Federal: No Status

B. Biological Profile

The Mohave ground squirrel occupies portions of Inyo, Kern, Los Angeles and San Bernardino counties in the western Mojave Desert. The species ranges from near Palmdale to the southwest to Lucerne Valley on the southeast. Olancho denotes the species northwest distribution and the Avawatz Mountains are the species' farthest distribution to the northeast (Gustafson 1993).

The species is one of two members of the subgenus *Xerospermophilus*, which also includes the round-tailed ground squirrel (*Xerospermophilus tereticaudus*) (Hall 1981; Nowak 1991). The ranges of the two species are in contact along a broad front, although they do not overlap. There is some evidence that the species hybridizes near Helendale (Wessman 1977; Best 1995); although, analysis of chromosomal and genetic data has indicated that *X. mohavensis* and *X. tereticaudus* are separate species (Hafner and Yates 1983).

The Mohave ground squirrel occupies canyons in the eastern foothills of the Sierra Nevada up to 5,600 feet (1706 m). In the northwest portion of its range, the species occupies the Coso Range and Argus Range, and in the northeast the species extends to the Avawatz Mountains and Soda Mountains. The Mojave River forms the southeastern extent of its range; although, historical evidence indicates the species was found as far east as Lucerne Valley. The southern edge of the distribution of the species is delineated by the San Bernardino and San Gabriel Mountains. Historical data indicate the species occupied the Antelope Valley; however, widespread development activities have apparently resulted in the extirpation of the species from west of Palmdale and Lancaster. The species has not been seen between Palmdale and Lucerne Valley and recent trapping studies indicate the species has probably been eliminated from these areas (Gustafson 1993).

The Mohave ground squirrel is a medium-sized ground squirrel that measures 8.3-9.1 inches (210-230 mm) in total length, 2.2-2.8 inches (57-72 mm) in tail length, and 1.3-1.5 inches (32-38 mm) in hind foot length (Hall 1981). There is little difference in size between the sexes. Dorsal coloration is uniformly light gray or brown. Cinnamon or pink coloration is also common and ventral coloration is whitish. The ears are small and the eyelids are white. *X. mohavensis* can be distinguished from *X. tereticaudus* by a shorter, flatter tail

with a white ventral surface and it is significantly larger than *X. tereticaudus* in most cranial measurements (Best 1995).

Mohave ground squirrels feed on a variety of foods including the leaves and seeds of forbs and shrubs. Leaves of perennial shrubs make up a large part of the diet, and are utilized extensively when annual plants are not available. Mohave ground squirrels also forage on the leaves, flowers, seeds and/or pollen of herbaceous annuals. Mohave ground squirrels also consume invertebrates; however, they provide a relatively small proportion of the species' diet. Winterfat (*Krascheninnikovia lanata*), spiny hopsage (*Grayia spinosa*), and saltbush (*Atriplex* sp.) are the species which form the majority of the species' diet in dry years (Leitner and Leitner 1998).

The Mohave ground squirrel exhibits a seasonal cycle of activity and torpor with the species typically emerging from hibernation in early to mid-March (Leitner and Leitner 1998). The timing of emergence appears to vary geographically, and individuals in the southern portion of the range may emerge as early as mid-January (Recht unpublished data); however, males typically emerge up to two weeks prior to females (Best 1995). Once a sufficient amount of fat has been accumulated, individuals will enter a period of aestivation and hibernation (Bartholomew and Hudson 1961). Aestivation generally typically begins between approximately July and September; however, drought conditions may cause the species to enter aestivation as early as April or May (Leitner et al. 1995).

The reproductive success of the Mohave ground squirrel appears to be dependent on the amount of fall and winter rains. There is a correlation between fall and winter precipitation and recruitment of juveniles the following year (Leitner and Leitner 1998). During years of low annual rainfall, the species may forego breeding if annual herbaceous plants are not available (Leitner and Leitner 1998). Adults are solitary except during breeding, which occurs soon after emergence from hibernation. Gestation lasts 29-30 days, and litter size is between four and nine (Best 1995). Juveniles typically emerge within four to six weeks, and mortality is high during the first year (Brylski et al. 1994). Females will breed at one year of age if environmental conditions are appropriate, while males do not normally mate until two years of age (Leitner and Leitner 1998). Individuals maintain several home burrows that are used at night, as well as additional burrows that are used for temperature control and predator avoidance. A separate burrow is dug specifically for use during the summer and winter period of dormancy and is typically located below a large shrub (Best 1995; Leitner et al. 1995).

The Mohave ground squirrel occurs throughout the Mojave Desert and is found in all major desert scrub habitats. It has been observed primarily in Mojave creosote scrub, dominated by creosote bush (*Larrea tridentata*) and burrobrush (*Ambrosia dumosa*), and in desert saltbush scrub, dominated by various species of saltbush (*Atriplex*). The species has also been observed in desert sink scrub, desert greasewood scrub, shadscale scrub, Mojave mixed woody scrub, and Joshua tree woodlands (Holland 1986). These various habitat types are distributed throughout the range of the Mohave ground squirrel. The Mohave ground squirrel typically inhabits flat to moderate terrain and is not generally found on steep slopes. The species occurs primarily on sandy, alluvial soils, but is also found on gravelly and rocky soils (Wessman 1977; Zembal and Gall 1980; Best 1995).

Readily available food sources and soils with appropriate composition for burrow construction are the important habitat requirements for the species. The presence of shrubs that provide reliable forage during drought years may also be critical for survival of a population in a particular area. Spiny hopsage (*Grayia spinosa*), winterfat (*Krascheninnikovia lanata*), and saltbush (*Atriplex* sp.) are utilized extensively in the early spring before annuals become available, and during drought years (Leitner and Leitner 1998).

Determining the population status of the Mohave ground squirrel is relatively difficult because the species is inactive throughout much of the year, and surface activity varies from year to year. In addition, Mohave ground squirrel populations are dependent on the amount of fall and winter precipitation (Leitner and Leitner 1998). Extirpation can occur in some areas if poor conditions persist with re-colonization occurring if favorable conditions return (Gustafson 1993).

The primary cause of the population decline of the Mohave ground squirrel is destruction of its habitat and conversion to urban, suburban, agricultural, and other uses (Gustafson 1993). Urbanization has resulted in the loss of native habitats, particularly surrounding the cities of Palmdale/Lancaster and Victorville/Adelanto/Hesperia/Apple Valley. Urban development can result in the direct mortality of individuals and loss of habitat, as well as indirect effects such as habitat fragmentation, increased OHV vehicle use, and increased abundance of domestic and feral cats. Local extirpations can also result in the loss of genetic variability for the species as a whole, which can lead to a reduced ability to adapt to environmental change (Meffe et al. 1997). Agricultural development has resulted in the loss of occupied and potential habitat in large areas, particularly in the Antelope Valley, Lucerne Valley and the Mohave River Basin (Wessman 1977). Military activities have also disturbed or destroyed habitat in certain areas, particularly in the Fort Irwin area. Fragmentation of habitat due to various development activities is another factor in the decline of the Mohave ground squirrel (Gustafson 1993). Conversion of habitat results in the isolation populations from one another, which leads to reduced gene flow. Small, isolated populations are subjected to the loss of genetic variation, which may ultimately lead to a reduction in fecundity, growth and survivorship (Meffe et al. 1997). Small populations also face a greater probability of extirpation in the event of fluctuations in available food, and if the habitat is isolated from other blocks of habitat, natural re-colonization of the habitat cannot take place (Noss and Cooperrider 1994).

C. Impacts and Conservation

Large areas of native habitat are needed to ensure long term survival of the species. The size and location of preserve areas should be based on biological, demographic and genetic considerations, since populations are known to fluctuate widely in response to rainfall patterns. Preservation of core areas must be large enough to support sufficient numbers of individuals to account for natural fluctuations in abundance. It is also critical that core reserves be situated in high quality habitat in which the species can persist during drought conditions. These areas will also serve as a source of individuals for expansion into unoccupied areas when better environmental conditions occur. Research into food habits and habitat requirements in creosote bush scrub and saltbush habitats indicate that a minimum preserve size of 60,000 acres of suitable habitat may be required (Gustafson 1993). Smaller preserve areas may not provide a sufficient “buffer” against environmental fluctuations and from the genetic consequences of small populations (Meffe et al. 1977).

Connectivity between preserve areas is also critical to ensure that populations are not isolated and that gene flow between populations is maintained. The width of such corridors between preserves should be based on demographic considerations including home range size and average dispersal distances.

Human activities within preserve areas and corridors need to be evaluated and activities incompatible with maintaining optimal habitat for Mohave ground squirrels should be eliminated. For example, grazing by domestic livestock in Mohave ground squirrel habitat may reduce the availability of annual herbaceous plants and perennial forage species that are important to Mohave ground squirrels thereby increasing the potential for loss of certain populations. Grazing in designated Mohave ground squirrel preserve areas should be carefully controlled or eliminated. OHV vehicle activity can also have an adverse impact on vegetation used by Mohave ground squirrels, as well as causing destruction of burrows. OHV activities should be controlled or eliminated in Mohave ground squirrel preserve areas.

1. Plan Area Occurrence

Live-trapping surveys were not conducted on the site; therefore, the exact number of squirrels, if present, cannot be determined at this time. However, the species is known to occur in the area and, the nearest document location is approximately 4 miles southwest of the site in Section 11, Township 6 North, and Range 5 West (NDDDB 2002). The site has been impacted by past agricultural activities, and OHV activities are common in the area; however, the creosote bush community present on the site provides marginal habitat for the species. Furthermore, areas adjacent to the property appear to have been less impacted by human activities and may support Mohave ground squirrel populations.

2. Adverse Impacts from Covered Activities

If the species is present on the site, the proposed mining activities would have a direct impact on the species including mortality and loss of habitat. Individuals would be killed during vegetation clearing and excavation activities; although, some individuals may be forced into adjacent habitats. As noted above, no live-trapping surveys were conducted; however, given the presence of the species in the region it is assumed that the species some or all of the 120 acres proposed for mining.

3. Conservation Objectives and Measures

To maintain viable populations of the Mohave ground squirrel in the region, it is important to preserve areas where the species is known to occur or where potential habitat is present and in areas identified as necessary for the species' long-term survival. Therefore, as part of the overall mitigation proposed for the project, land will be purchased in an area where suitable habitat is present. CDFG and USFWS will be consulted regarding proposed mitigation lands to make sure they are located in an area acceptable to both agencies. At present, efforts are underway to locate mitigation lands which provide habitat for the Mohave ground squirrel.

4. Potential Effects on Species' Long-term Survival

The species distribution within the area surrounding the project site is not well documented; although, the species has been observed in various areas near the site (NDDDB 2002). Impacts to the species on the site are not expected to have an adverse effect on the species' long-term survival. Only a few individuals (if any at all) are likely to be effected by the mining activities. The mitigation measures proposed in the HCP, including purchasing mitigation land and providing various fees, will help to minimize and mitigate the loss of habitat utilized by the species. However, the project is not expected to appreciably reduce the long-term survival of the species in the region, or have any unmitigated adverse effects on the Mohave ground squirrel outside of the project site. Implementation of the measures presented in the HCP will effectively mitigate impacts to the Mohave ground squirrel.

4.4 Burrowing Owl (*Athene cunicularia*)

A. Current Listing

State: Special concern species

Federal: Bird of Conservation Concern (USFWS)

B. Biological Profile

The burrowing owl is not listed under the Federal ESA; however, the species is a California special concern species and is of importance due to declines of suitable habitat and declines in local and statewide populations. The burrowing owl is a migratory species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The burrowing owl is a member of the Strigidae family and is frequently observed perched on fence posts, mounds of dirt, or near the entrance of their burrows. Burrowing owls are primarily diurnal and crepuscular (dawn and dusk) hunters (CDFG 1990). There are 18-20 subspecies; although, all exhibit similar plumage (CDFG 2002).

Burrowing owls occur in annual and perennial grasslands, deserts, and arid scrublands characterized by low-growing vegetation. Suitable owl habitat may also include areas where trees and shrubs are dominant, if the canopy covers less than 30 percent of the ground surface. Both natural and artificial burrows provide protection, shelter, and nests for burrowing owls and are the essential component of the species habitat. Burrowing owls typically use burrows made by mammals, such as ground squirrels or badgers, but also may use man-made structures such as cement culverts, cement asphalt, or wood debris piles; or openings beneath cement or asphalt pavement.

Areas which support burrowing owls may be used for breeding, wintering, foraging, and/or migration stopovers. The nesting period for the species is approximately February 1 to August 31. The presence of owls can be determined by the presence of molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance. Burrowing owls frequently use the same burrow each year.

C. Impacts and Conservation

1. Plan Area Occurrence

The species has been observed in the area with the nearest document population located five miles southwest of the site in Section 14, Township 6 North, Range 5 West (NDDDB 2002). No burrowing owls were observed on the site during the field surveys, nor were any abandoned owl burrows identified within the North Pit Expansion Area. However, given the presence of the species in the general area, owls could be attracted to the site since suitable burrows are present.

2. Adverse Impacts from Covered Activities

The burrowing owl would be affected by the project if the species is present on the site during mining activities. Mortality may occur to certain individuals, whereas, some birds would be displaced into adjacent habitats. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) is considered “take” and there are no provisions to permit take.

3. Conservation Objectives and Measures

The preferred mitigation is “avoiding the impact altogether by not taking a certain action or parts of an action”, “minimizing impacts by limiting the degree or magnitude of the action and its implementation”, “rectifying the impact by repairing, rehabilitating or restoring the impacted environment”, or “reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action” (CDFG Guidelines, Section 15370). Avoidance or mitigation to reduce impacts to less than significant levels is required of a project as per CEQA. To minimize and mitigate adverse impacts to the species, the following conservation objectives and measures will be implemented as part of the HCP process.

Burrowing owl surveys will be conducted 30 days, or less, prior to initiation of mining activities, and will be conducted in conjunction with the desert tortoise clearance surveys. Surveys will be conducted from two

hours before sunset to one hour after, or from one hour before to two hours after sunrise. Surveys will be conducted by walking suitable habitat on the entire project site and (where possible) in areas within 150 meters (approximately 500 feet) of the project impact zone. If surveys confirm that the site is occupied habitat, mitigation measures to minimize impacts to burrowing owls, their burrows and foraging habitat would be implemented per CEQA requirements to conserve the species by protecting and maintaining viable populations of the species. If ground disturbing activities are delayed or suspended for more than 30 days after the preconstruction survey, the site will be re-surveyed. The specific mitigation measures which will be implemented are outlined below.

If burrowing owls are present on the site, the following measures will be implemented to avoid and minimize impacts to burrowing owls, and preserve habitat, where possible. Mitigation measures to minimize and offset the potential impacts will be formalized in a Memorandum of Understanding (MOU) between CDFG and the project proponent. In addition, relocation efforts will be following the guidelines established by CDFG.

- a. Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies through non-invasive methods that either: (a) the birds have not begun egg-laying and incubation; or (b) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
- b. The mitigation lands, which will be purchased as outlined in the HCP for desert tortoises and Mohave ground squirrels, may also help to offset the loss of foraging and burrow habitat on the project site. If additional mitigation is required by CDFG, these additional measures will be outlined in the MOU.
- c. When destruction of occupied burrows is unavoidable, existing unsuitable burrows in adjacent lands should be enhanced (where possible) at a ratio of 2:1. If necessary, artificial burrows will be constructed using the guidelines which have been established by CDFG.
- d. If owls must be moved away from the disturbance area, relocation techniques established by CDFG will be followed. Relocation activities will be conducted by a biologist approved by CDFG, and will follow the guidelines established by CDFG. All applicable permits for this activity would be obtained prior to implementation.
- e. Mitigation fees which will be paid by the project, which are outlined in the HCP, will provide funding for long-term management and monitoring of the burrowing owl.

4. Potential Effect on Species' Long-term Survival

The proposed project is not expected to appreciably reduce the long-term survival of the species in the region, or have any unmitigated adverse effect on the species in the region. Implementation of the proposed mitigation measures will effectively mitigate impacts to the burrowing owl.

SECTION 5 REFERENCES

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APPENDIX B

MINING CONDITIONAL USE PERMIT AND RECLAMATION PLAN

**AgCon Inc. Sand and Gravel Pit
Reclamation Plan Number 2003M-02
Oro Grande North Pit Expansion Area**