GRANITE CONSTRUCTION
RIO DEL ORO MINING PROJECT

Final Mitigated Negative Declaration

City of Rancho Cordova
2729 Prospect Park Drive
Rancho Cordova, CA 95670

July 2007
(Original MND Released April 2007)

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NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION/INITIAL STUDY FOR GRANITE CONSTRUCTION – RIO DEL ORO MINING, PROJECT RC-06-224

April 27, 2007

LEAD AGENCY: City of Rancho Cordova Planning Department
Ben Ritchie, 916-361-8384
2729 Prospect Park Drive
Rancho Cordova, CA 95670

PROJECT TITLE: Granite Construction – Rio Del Oro Mining

PROJECT LOCATION: The Granite Construction - Rio Del Oro Mining Project site consists of a 1,300-acre proposed mining and processing area, situated within a 2,526-acre parcel owned by Aerojet/GenCorp. The site is located within the city limits of Rancho Cordova, directly adjacent and south of White Rock Road, approximately 4,800 feet east of Sunrise Boulevard and approximately 5,100 feet north of Douglas Road.

PROJECT DESCRIPTION: The applicant is requesting approval of an Aerojet Special Planning Area (SPA) Implementation Permit and a Reclamation Plan to allow for surface mining and the commencement of processing operations on the site. The project proposes the mining, processing, and export of tailings which were created by previous gold dredge mining operations on the project site. Approximately 600 acres of the 1,300-acre site is expected to be disturbed. Some or all of the material mined from the site may be processed by a portable crushing and screening plant that will work its way across the project site as the operation progresses. Material from the site will be loaded into transport trucks and weighed at an on-site scale house, located at an on-site staging and sales area before entering onto either Douglas Road or White Rock Road.

FINDINGS/DETERMINATION: The City has reviewed and considered the proposed project and has determined that the project will not have a significant effect on the environment, with substantial supporting evidence provided in the Initial Study. The City hereby prepares and proposes to adopt a **Mitigated Negative Declaration** for this project.

PUBLIC REVIEW PERIOD: A 30 day public review period for the Mitigated Negative Declaration/Initial Study will commence on **April 27, 2007** and will end on **May 28, 2007** for interested individuals and public agencies to submit written comments on the document. Any written comments on the Mitigated Negative Declaration/Initial Study should be sent to the attention of **Ben Ritchie** and must be received at the above address by **5:00 PM on May 28, 2007**. Copies of the Mitigated Negative Declaration/Initial Study are available for review at **Rancho Cordova City Hall at 2729 Prospect Park Drive in Rancho Cordova** and online at www.cityofranchocordova.org.

PUBLIC MEETING: This project is not yet scheduled to be heard by the City of Rancho Cordova Planning Commission. Upon being scheduled for the Planning Commission, public notice will be provided on the City's website at http://www.cityofranchocordova.org/ and at City Hall.

FINAL MITIGATED NEGATIVE DECLARATION
FOR
GRANITE CONSTRUCTION
RIO DEL ORO MINING PROJECT
CITY OF RANCHO CORDOVA, CALIFORNIA

Prepared by:

The City of Rancho Cordova
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JULY 2007
ORIGINAL MND RELEASED APRIL 2007

7.0 REFERENCES

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This document is an Initial Study and Mitigated Negative Declaration (IS/MND) prepared pursuant to the California Environmental Quality Act (CEQA) for the proposed Granite Construction - Rio Del Oro Mining Project (hereafter referred to as "the proposed project"). This MND has been prepared in accordance with the CEQA, Public Resources Code Sections 21000 et seq., and the State CEQA Guidelines.

An Initial Study is conducted by a lead agency to determine if a project may have a significant effect on the environment. In accordance with the CEQA Guidelines, Section 15064, an Environmental Impact Report (EIR) must be prepared if the Initial Study indicates that the proposed project under review may have a potentially significant impact on the environment. A negative declaration may be prepared instead, if the lead agency prepares a written statement describing the reasons why a proposed project would not have a significant effect on the environment, and, therefore, why it does not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a negative declaration shall be prepared for a project subject to CEQA when either:

(a) The Initial Study shows there is no substantial evidence, in light of the whole record before the agency, that the proposed project may have a significant effect on the environment, or

(b) The Initial Study identified potentially significant effects, but:

(1) Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

(2) There is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a significant effect on the environment.

If revisions are adopted into the proposed project in accordance with the CEQA Guidelines Section 15070(b), a Mitigated Negative Declaration is prepared. This document includes such revisions in the form of mitigation measures. Therefore, this document is a Mitigated Negative Declaration and incorporates all of the elements of an Initial Study. Hereafter this document is referred to as an MND.

The City Council certified the Rancho Cordova General Plan EIR (GP-EIR) on June 26, 2006 (State Clearinghouse Number 2005022137). The GP-EIR was prepared as a Program EIR pursuant to State CEQA Guidelines Section 15168. According to Section 15168(a):

(a) General. A program EIR is an EIR which may be prepared on a series of actions that can be characterized as on large project and are related either:

(1) Geographically,

(2) As logical parts in the chain of contemplated actions,

(3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or

(4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

The GP-EIR was intended to evaluate the environmental impacts of the General Plan to the greatest extent possible. The Program EIR is used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with projects in the City. State CEQA Guidelines Section 15168(c) establishes the requirement that the Lead Agency (the City) determine if subsequent projects require additional environmental analysis. According to State CEQA Guidelines Section 15168(c), additional review is required:

(1) If a later activity would have effects that were not examined in the program EIR, a new initial study would need to be prepared leading to either an EIR or negative declaration.

In addition to the rules governing the preparation and use of Program EIRs, other provisions of CEQA govern site-specific review of the proposed project. Public Resources Code Section 21083.3 limits CEQA review of certain projects consistent with an approved general plan, community plan, or zoning action for which an EIR was prepared to environmental effects that are "peculiar" to the parcel or to the project and which were not addressed as significant effects in a prior EIR, or which new information shows will be more significant than described in the prior EIR. The proposed project is a qualified project pursuant to Section 21083.3(a-b), which states:

(a) If a parcel has been zoned to accommodate a particular density of development or has been designated in a community plan to accommodate a particular density of development and an Environmental Impact Report was certified for that zoning or planning action, the application of this division to the approval of any subdivision map or other project that is consistent with the zoning or community plan shall be limited to effects upon the environment which are peculiar to the parcel or to the project and which were not addressed as significant effects in the prior Environmental Impact Report, or which substantial new information shows will be more significant than described in the prior Environmental Impact Report.

(b) If a development project is consistent with the general plan of a local agency and an Environmental Impact Report was certified with respect to that general plan, the application of this division to the approval of that development project shall be limited to effects on the environment which are peculiar to the parcel or to the project and which were not addressed as significant effects in the prior Environmental Impact Report, or which substantial new information shows will be more significant than described in the prior Environmental Impact Report.

The proposed project was generally described in the GP-EIR. However, specific information about the proposed project was not known at the time of the preparation of the GP-EIR and the project-specific impacts resulting from implementation of the proposed project were not fully identified or mitigated in the GP-EIR. Therefore, additional analysis and potential mitigation of the environmental effects of the proposed project are required. State CEQA Guidelines Section

15183 provides guidance as to the scope of this subsequent analysis. State CEQA Guidelines Section 15183 states:

(a) CEQA mandates that projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies.

(b) In approving a project meeting the requirements of this section, a public agency shall limit its examination of environmental effects to those, which the agency determines, in an Initial Study or other analysis:

(1) Are peculiar to the project or the parcel on which the project would be located.

(2) Were not analyzed as significant effects in a prior EIR on the zoning action, general plan, or community plan, with which the project is consistent.

(3) Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action, or

(4) *Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior* EIR.

This Initial Study/Mitigated Negative Declaration addresses project-specific impacts that were not fully addressed in the GP-EIR. Additionally, this IS/MND summarizes the findings of the City relating to the GP- EIR and how the criteria set forth in Guidelines Section 15183 have been met.

The GP-EIR analyzed the environmental effects of the General Plan and the twelve policy elements and the Land Use Map "implementation element". The twelve policy elements concentrated on providing policy guidance in the following areas:

- Land Use
- Urban Design
- Economic Development
- Housing
- Circulation
- Open Space, Parks, and Trails
- Infrastructure, Services, and Finance
- Natural Resources
- Cultural and Historic Resources
- Safety
- Air Quality
- Noise

The "implementation element" concerned the new Land Use Map for the City which combines specific land use designations in some areas of the City and more general descriptions of land uses in special areas planned for future growth referred to as "Planning Areas". The proposed project lies within one of these Planning Areas and is therefore only generally described in the General Plan and the GP-EIR.

In adopting the General Plan and certifying the GP-EIR as complete and adequate, the City Council adopted findings of fact and a statement of overriding considerations for those impacts that could not be mitigated to less than significant levels.

Impacts deemed in the GP-EIR to be significant and unavoidable:

- Conflicts with applicable land use plans.
- Various impacts on agricultural land.
- Conflicts with Williamson Act contracts.
- Substantial population, housing, and employment growth.
- Deficient traffic level of service by 2030.
- Worsening of already unacceptable operations on US-50.
- Conflicts with the Regional Ozone Attainment Plan.
- Significant construction-based pollutant emissions.
- Significant operational pollutant emissions.
- Significant emissions of Toxic Air Contaminants.
- Creation of construction, traffic, and operational noise above standards.
- Creation of new noise-sensitive land uses within airport noise areas.
- Loss of availability of aggregate resources.
- Impacts on water supply (both availability of water and infrastructure required).
- Impacts to habitat and individuals of special status species.
- Impacts to raptors, migratory birds, and other wildlife.
- Impacts to jurisdictional waters of the U.S.
- Impacts to animal movement corridors.
- Loss of native and landmark trees.
- Disturbance of cultural resources and human remains.
- Environmental impacts resulting from the need for more wastewater infrastructure.
- Degradation of the existing visual character of the area.

The GP-EIR also identified several cumulative impacts that would be cumulatively considerable and significant and unavoidable. Those impacts included:

- Conflicts with area land use plans.
- Conversion of farmland to other uses and agricultural/urban interface conflicts.
- Substantial population, housing, and employment growth.
- Significant impacts to area traffic level of service.
- Increases in regional ozone and particulate matter emissions.
- Increases in regional traffic and operational noise.
- Cumulative loss of mineral resources.
- Increased regional demand for water supply and need for water infrastructure.
- Cumulative loss of biological resources.
- Cumulative loss of cultural resources.
- Increases in wastewater treatment capacity and infrastructure.
- Changes in area visual character and landscape.

Detailed information regarding both the project impacts and cumulative impacts identified above is included in the GP-EIR. The GP-EIR is available online at http://gp.cityofranchocordova.org and on request at the City at the following address:

City of Rancho Cordova
Planning Department
2729 Prospect Park Drive
Rancho Cordova, CA 95670

In accordance with State CEQA Guidelines Section 15183, a discussion of each of the impacts found to be significant in the GP-EIR and the relative impact of the proposed project in each of those categories is provided in this MND.

This MND hereby incorporates the GP-EIR by reference. The Rancho Cordova General Plan received final approval by the City Council on June 26, 2006. The City Council certified the GP-EIR as adequate and complete on that date as well. As noted above, the GP-EIR is a Program EIR and the discussions of general issues included in the document are in some cases applicable to the proposed project.

1.2 FINAL MITIGATED NEGATIVE DECLARATION

The original MND for the proposed project was released by the City for public comment on April 27, 2007. The review period for the MND ended May 29, 2007. The City continued to accept comments until June 1, 2007. Comments provided on the IS/MND by the California Regional Water Quality Control Board, the Department of Toxic Substances Control, and the property owner (Aerojet) that provided additional details and concerns for the proposed project.

In order to address this new information and concerns raised in the comments received, minor modification of the discussions, analysis, and mitigation measures included in the original MND were made. These changes are represented in this Final Mitigated Negative Declaration (Final MND). Textual deletions from the original MND are shown in this document as ~~strikethrough~~. Textual additions are shown in <u>underline</u>.

SUMMARY OF CHANGES TO THE ORIGINAL DOCUMENT

The following changes were made for this Final MND:

Section 2

<u>Project Characteristics</u>

Minor clarification as to the physical dimensions of the piles to be mined was added to the project description.

<u>Required Project Approvals</u>

The California Department of Toxic Substances Control (DTSC) and the Sacramento Count Water Agency have been added to the list of agencies whose approval may be required for the proposed project.

Section 3.2

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- The list of agencies whose approval may be required for the proposed project was modified to include DTSC and SCWA, consistent with Section 2.5 (above).

II. Agriculture Resources

- Discussion c) has been modified to account for the fact that, due to clarification of the project characteristics and current site use provided by the applicant and the property owner, the project is expected to affect ongoing cattle grazing in a temporary and limited manner.

III. Air Quality

- The estimated amount of the off-site operational mitigation fee required by mitigation measure **MM 3.1f** was added to discussion b).

IV. Biological Resources

- A sentence was inserted into discussion a) clarifying that the planned elderberry preserves on the project site were both included in areas earmarked to remain undisturbed by the proposed project.

- Mitigation measure **MM 4.1d** was modified to express the fact that the project will be required to prepare and receive approval for a Storm Water Pollution Prevention Plan (SWPPP).

- Additional information regarding the location and condition of cottonwood trees within the project area was added to discussion e).

V. Cultural Resources

- The original document erroneously stated that Aerojet was responsible for the rocket testing activities conducted on the project site in the past. Discussion a) has been modified to state that the Douglas Aircraft Company was responsible for such activities.

VI. Geology and Soils

- Original data described the level of groundwater below the project site as being more than 114 feet from the surface. New information provided by the property owner states 114 feet is the average groundwater depth, not the minimum. Discussion iii) was modified to reflect this new information.

- In order to provide greater clarity as to the existing condition of the site, a change was made to discussion b) categorizing the site's condition as "disturbed but largely undeveloped."

VII. Hazards and Hazardous Materials

- The existing setting has been modified with the correct name of the McDonnell Douglas/Aerojet Inactive Rancho Cordova Test Site (IRCTS). Similar changes were made to discussion d) as well.

- The original MND erroneously stated that the Federal Environmental Protection Agency (EPA) was involved in remediation on the project site. Any mention of the EPA has been removed and the California Regional Water Quality Control Board (CRWQCB) has been inserted in its place.

- During the comment period, specific information as to the background trace minerals experienced on the project site was provided by the CRWQCB. Discussion of this information and its impact on the project site has been added to the Existing Setting. Discussion of the potential impact of this information was added to discussion a).

- Updated information regarding additional school sites planned within the Rio Del Oro Specific Plan area (and thus within the vicinity of the proposed project) was added to discussion c).

- The property owner provided the City with updated information during the comment period regarding the disposition of the environmental constraints areas described in discussion d) as well as additional information on groundwater contamination in the project vicinity and its source. This information has been incorporated into discussion d). CRWQCB has been added as an approving agency for work in the constraint areas, replacing Aerojet. The updated status and planned disposition of the constraints areas has been incorporated into **Table 4** and into mitigation measures **MM 7.2a** and **MM 7.2b**.

- Additional fire protection requirements have been incorporated into mitigation measure **MM 7.3** upon request by the property owner and consent of the project proponent.

VIII. Hydrology and Water Quality

- Additional information regarding the existence and characteristics of Morrison Creek within and in the vicinity of the project area was added to the existing setting and discussion c).

- Clarification as to the source of known groundwater contamination in the project vicinity was made in the existing setting.

- Both DTSC and CRWQCB expressed concerns during public comment over the adequacy of the water supply for the project and its effect on the remediation of Sigma Complex. The City requested that the applicant secure a new source of water and the applicant committed to using water from the South Groundwater Study Area Groundwater Extraction and Treatment Plant (SGSA GET), previously installed by the Boeing Company in compliance with DTSC. Discussions a), b), and i) were modified to account for this new water source and its implications on water quality.

XVI. Utilities and Service Systems

- Discussions b) and d) were modified to account for the installation of infrastructure and use of the newly identified sources of water to be used by the project (the SGSA GET and Sacramento County Water Agency supply) as well as a temporary water connection to SCWA infrastructure located along the project boundary.

REGULATORY GUIDANCE FOR THE FINAL MND

CEQA provides specific guidance as to the requirement for recirculation of a document when modification of the original document is undertaken. State CEQA Guidelines Section 15073.5 (a-b) states:

(a) A lead agency is required to recirculate a negative declaration when the document must be substantially revised after public notice of its availability has previously been given pursuant to Section 15072, but prior to its adoption. Notice of recirculation shall comply with Sections 15072 and 15073.

(b) A "substantial revision" of the negative declaration shall mean:

(1) A new, avoidable significant effect is identified and mitigation measures or project revisions must be added in order to reduce the effect to insignificance; or

(2) The lead agency determines that the proposed mitigation measures or project revisions will not reduce potential effects to less than significance and new measures or revisions must be required.

The modifications described above and shown in the following sections of this Final MND are minor in nature and serve to both clarify previous statements and analyses presented in the original MND as well as to incorporate minor changes in the project characteristics. These modifications did not result in any new impacts, nor did these changes result in any previously impact becoming more severe than originally described. Specifically, State CEQA Guidelines Section 15073.5(c) states:

(c) Recirculation is not required under the following circumstances:

(1) Mitigation measures are replaced with equal or more effective measures pursuant to Section 15074.1.

(2) New project revisions are added in response to written or verbal comments on the project's effects identified in the proposed negative declaration which are not new avoidable significant effects.

(3) Measures or conditions of project approval are added after circulation of the negative declaration which are not required by CEQA, which do not create new significant environmental effects and are not necessary to mitigate an avoidable significant effect.

(4) New information is added to the negative declaration which merely clarified, amplifies, or makes insignificant modifications to the negative declaration.

Section 15073.5(c)(4) applies to the majority of changes made to the document. The modifications made to mitigation measures **MM 4.1d**, **MM 7.2a**, **MM 7.2b**, and **MM 7.3** would result in mitigation measures that are either more protective or as protective as those originally described in the MND, which complies with Section 15073.5(c)(1). In regards to the changes required in the document as a result of new information on background arsenic levels and the new water supply for the project, no new avoidable significant effects resulted from these changes and thus recirculation is not required, pursuant to Section 15073.5(c)(2).

Pursuant to State CEQA Guidelines Section 15073.5, the City has determined that the changes made to the original document in this Final MND constitute only minor modification of the previously circulated document and no recirculation, whole in or part, is required by CEQA. However, in order to ensure that all responsible agencies and commenting agencies are kept abreast of these minor changes, all responsible agencies and all agencies that provided comments on the original MND will be given a copy of this Final MND at least 10 days prior to the public hearing for the project. Likewise, the Final MND will be available on the City's website at least 10 days prior to the hearing.

1.3 LEAD AGENCY

The lead agency is the public agency with primary responsibility over a proposed project. Where two or more public agencies will be involved with a project, State CEQA Guidelines Section 15051 provides criteria for identifying the lead agency. State CEQA Guidelines 15051(b) states:

> (b) If the project is to be carried out by a nongovernmental person or entity, the lead agency shall be the public agency with the greatest responsibility for supervising or approving the project as a whole.
>
> (1) The lead agency will normally be the agency with the general governmental powers, such as a city of county, rather than an agency with a single or limited purpose such as an air pollution control district or a district which will provide public serve or public utility to the project.

As the project is to be carried out by a private construction company and as the City of Rancho Cordova has general governmental powers over the proposed project, the lead agency for the proposed project is the City of Rancho Cordova.

1.4 PURPOSE AND ORGANIZATION OF THE DOCUMENT

The purpose of this Mitigated Negative Declaration is to evaluate the potential environmental impacts of the proposed project.

This document is divided into the following sections:

- **1.0 Introduction -** Provides an introduction and describes the purpose and organization of this document.
- **2.0 Project Description -** Provides a detailed description of the proposed project.
- **3.0 Environmental Setting, Impacts and Mitigation Measures -** Describes the environmental setting for each of the environmental subject areas (as described in

Appendix G of the State CEQA Guidelines), evaluates a range of impacts classified as "no impact," "less than significant," or "less than significant with mitigation incorporation" in response to the environmental checklist, and provides mitigation measures, where appropriate, to mitigate potentially significant impacts to a less than significant level.

- **4.0 Cumulative Impacts -** Provides a discussion of cumulative impacts of this project.
- **5.0 Determination -** Provides the environmental determination for the project.
- **6.0 Report Preparation and Consultations -** Identifies staff and consultants responsible for preparation of this document.
- **7.0 References –** Provides a list of references used to prepare the MND.

1.5 REGULATORY FRAMEWORK AND ASSUMPTIONS

The City of Rancho Cordova was incorporated July 1, 2003. At that time, the City adopted Sacramento County's General Plan by reference until the formal adoption of its own General Plan. On June 26, 2006 the City adopted its first General Plan and certified the Environmental Impact Report for the General Plan at that time (State Clearinghouse Number 2005022137). The proposed project is subject to the policies and designations of the City of Rancho Cordova General Plan (hereafter referred to as the General Plan). Earlier draft versions of the General Plan are no longer valid and were not considered when determining the proposed project's consistency with City Policies.

For the purposes of this document, GP-EIR refers to the entirety of the General Plan EIR, GP FEIR refers to the Final EIR for the General Plan, and GP DEIR refers to the Draft EIR for the General Plan.

2.0 PROJECT DESCRIPTION

EIR/EIS was prepared jointly by the City and the U.S. Army Corps of Engineers. The Draft EIR/EIS was released for public comment on December 8, 2006. The public comment period ended on February 5, 2007. The City of Rancho Cordova is currently considering approval of the Rio Del Oro Specific Plan and the associated plans and entitlements. The consideration of the Rio Del Oro Specific Plan is being considered separately from the proposed project.

2.4 PROJECT CHARACTERISTICS

The project proposes the mining, processing, and export of tailings which were created by previous gold dredge mining operations on the project site. The tailings that are present consist of cobbles intermixed with sand and gravel, and vary from 5 to 75 feet in height with typical base widths ranging from 100 to 300 feet. The majority of dredge piles on the project site do not typically exceed 20 feet above the dredge valleys with some sporadic piles reaching the maximum height of 75 feet. Approximately 600 acres of the 1,300-acre site is expected to be disturbed (see **Figure 2**); however, the actual disturbed acreage may be greater or less, depending on aggregate availability and market conditions. The proposed operation will remove and process these mounds using typical earthmoving equipment (graders, loaders, etc.). After mining, the project proponent will restore elevations similar to the natural elevation of the site that existed prior to the previous gold dredging operations. Some or all of the material mined from the site may be processed by a portable crushing and screening plant that will work its way across the project site as the operation progresses (see **Figure 3**). Material from the site will be loaded into transport trucks and weighed at an on-site scale house, located at an on-site staging and sales area (see **Figure 4**) before entering onto either Douglas Road or White Rock Road. The excess screened fine aggregate material may be used to reclaim some of the excavation areas.

The project is anticipated to last ten years, depending on the status of the proposed urban development of the site and issuance of required permits and approvals. Approximately 5 to 11 million cubic yards are expected to be mined over the duration of the project. Between 30 and 50 percent of the mined and processed material may be used for on-site reclamation activities, if not sold off-site. Due to the presence of sensitive environmental resources on-site, the proposed project will be phased. Phase I would consist of mining of all portions of the site without existing environmental resources such as elderberry bushes or wetlands. During Phase I, no operations or site disturbance will occur within 100 feet of any such environmental resources. Phase II would consist of mining of those portions of the site excluded from mining during Phase I after all required permits and consultations have been acquired and all other mitigation required by both this document and other agencies has been incorporated into the project. Portions of the project site to be avoided until such time as appropriate mitigation has been implemented are shown on **Figure 5**.

As previously mentioned, portions of the mined material may be used for on-site reclamation. Reclamation grades will typically correspond to predicted future development grading elevations. After the proposed mining and reclamation activities are complete, the project site will remain undeveloped open space and will continue to be used for seasonal cattle grazing until such time as development of the Rio Del Oro Specific Plan begins (if approved by the City Council).

2.5 REQUIRED PROJECT APPROVALS

The applicant is requesting approval of an Aerojet Special Planning Area (SPA) Implementation Permit and a Reclamation Plan to allow for surface mining and the commencement of

2.1 PROJECT LOCATION

The Granite Construction - Rio Del Oro Mining Project (hereafter referred to as the proposed project) site consists of a 1,300-acre proposed mining and processing area, situated within a 2,526-acre parcel owned by Aerojet. The site is located within the city limits of Rancho Cordova, directly adjacent and south of White Rock Road, approximately 4,800 feet east of Sunrise Boulevard and approximately 5,100 feet north of Douglas Road. The project's regional and local location is shown in **Figures 1** and **2**.

2.2 EXISTING SITE CONDITION AND SURROUNDING LAND USES

The project site currently consists of rows of mine tailing piles interspersed with some vegetation and trees. On-site vegetation consists mainly of non-native grasses and some limited willows, cottonwoods, and other non-native trees. Portions of the project site contain elderberry shrubs and other potential habitat for special-status species. Some limited wetlands are located on-site. For a full description of these features, see Section 3.0.

The proposed project is located immediately south of the Aerojet operational area to the north. Located immediately adjacent to the project to the west is an existing aggregate mining operation currently being conducted by Teichert (as a separate project). A material transport conveyor traverses the project site from west to east. This elevated conveyor transports aggregate material mined by Teichert in the west to their processing facility across Grant Line Road in the east. Additional mining, also being conducted by Teichert is located to the east of the proposed project. Cattle grazing is being conducted both on portions of the project site as well as immediately to the south of the project site. Further south is Douglas Road, across which lies previously developed homes in the Sunridge Specific Plan area.

2.3 PROJECT PURPOSE AND BACKGROUND

The owner of the project site, Aerojet, plans to eventually develop the project site for industrial, commercial, and residential land uses. This development will be undertaken by GenCorp, Realty Investments (GenCorp). Such development was assumed in the General Plan and the GP-EIR. Prior to this development, mine tailings found on much of the land are available for removal, processing, and use in various roadway and development projects in the region. Mine tailings consist largely of large cobbles and other aggregate material suitable for processing and use in paving and manufacture of construction materials. Aerojet will allow Granite Construction to remove the aggregate material and process it for use in local and regional construction projects. In addition to removing the aggregate material in preparation for development, Granite Construction will restore the topography of the site to roughly the same condition which existed prior to dredge mining of the site.

The reclamation of aggregate resources on the project site and the future development of the land by GenCorp are independent actions. Mining activities conducted as part of the proposed project would still occur regardless of whether development of the Rio Del Oro area by GenCorp occurs or not. Conversely, development of the project area by GenCorp can occur independently of the proposed project. Therefore, the following analysis concerns only the expected environmental effects of the mining and processing of aggregate resources.

The environmental effects of GenCorp's development of the project site have been analyzed in an Environmental Impact Report (EIR) and Environmental Impact Statement (EIS) for the Rio Del Oro Specific Plan (State Clearinghouse Number 2003122057). The Rio Del Oro Draft

processing operations on the site. In addition to the approval of the proposed project by the City Council of the City of Rancho Cordova, the following agency approvals may be required (depending on the final project design):

1) California Department of Fish and Game (CDFG)
2) California Department of Toxic Substances Control (DTSC)
3) Central Valley Regional Water Quality Control Board (CVRWQB)
4) Sacramento County Water Agency (SCWA)
5) Sacramento Metropolitan Air Quality Management District (SMAQMD)
6) Sacramento Resource Conservation District (SRCD)
7) U.S. Army Corps of Engineers (USACE)
8) U.S. Fish and Wildlife Service (USFWS)

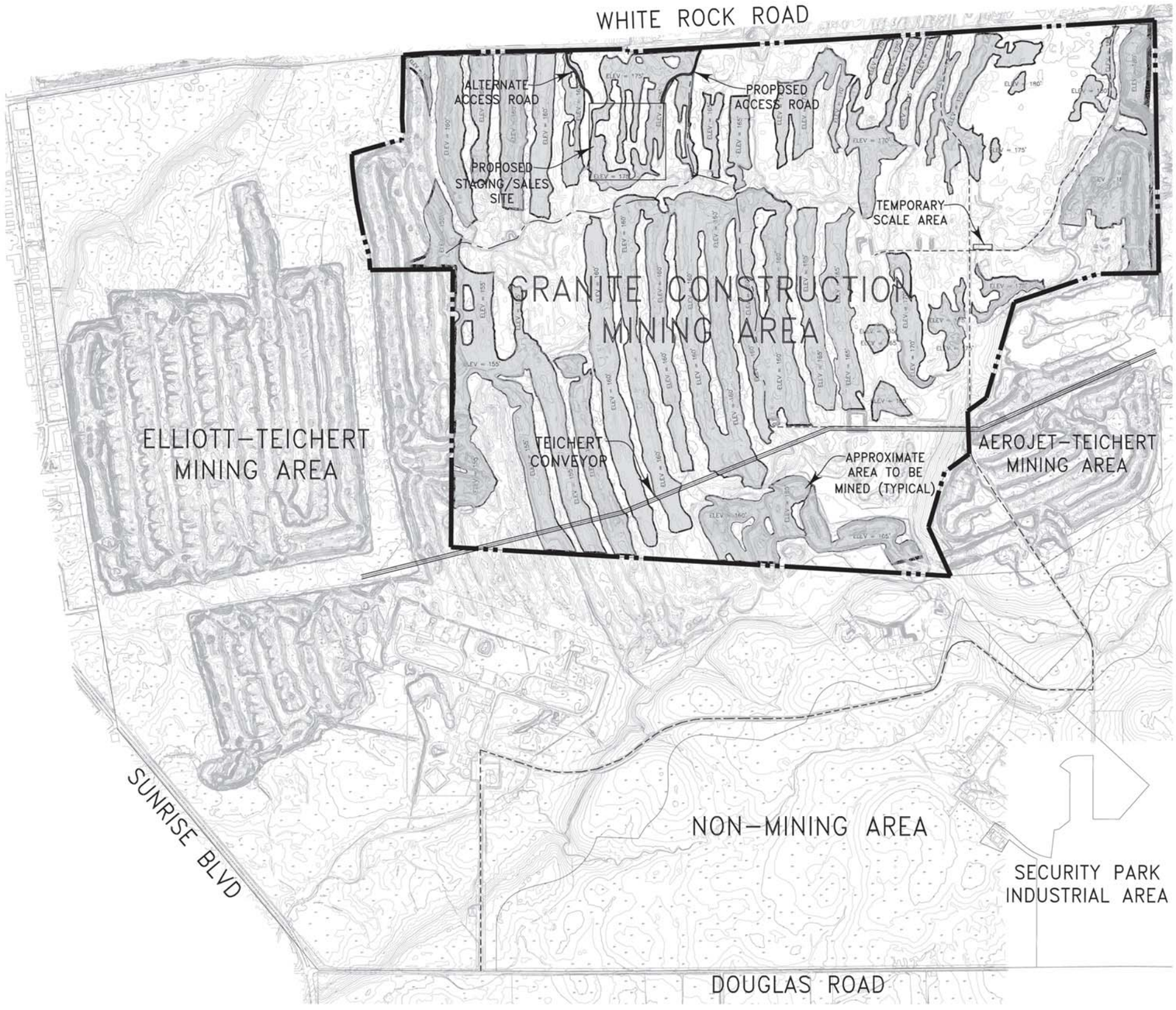
T:\Rancho Cordova\Granite Mining Project\graphic developmental files\Figure 1.ai, January 2007

Source: City of Rancho Cordova

City of Rancho Cordova
Planning Department

Figure 1
Regional Location Map

T:\Rancho Cordova\Granite Mining Project\graphic development\ai files\Figure 2.ai, January 2007

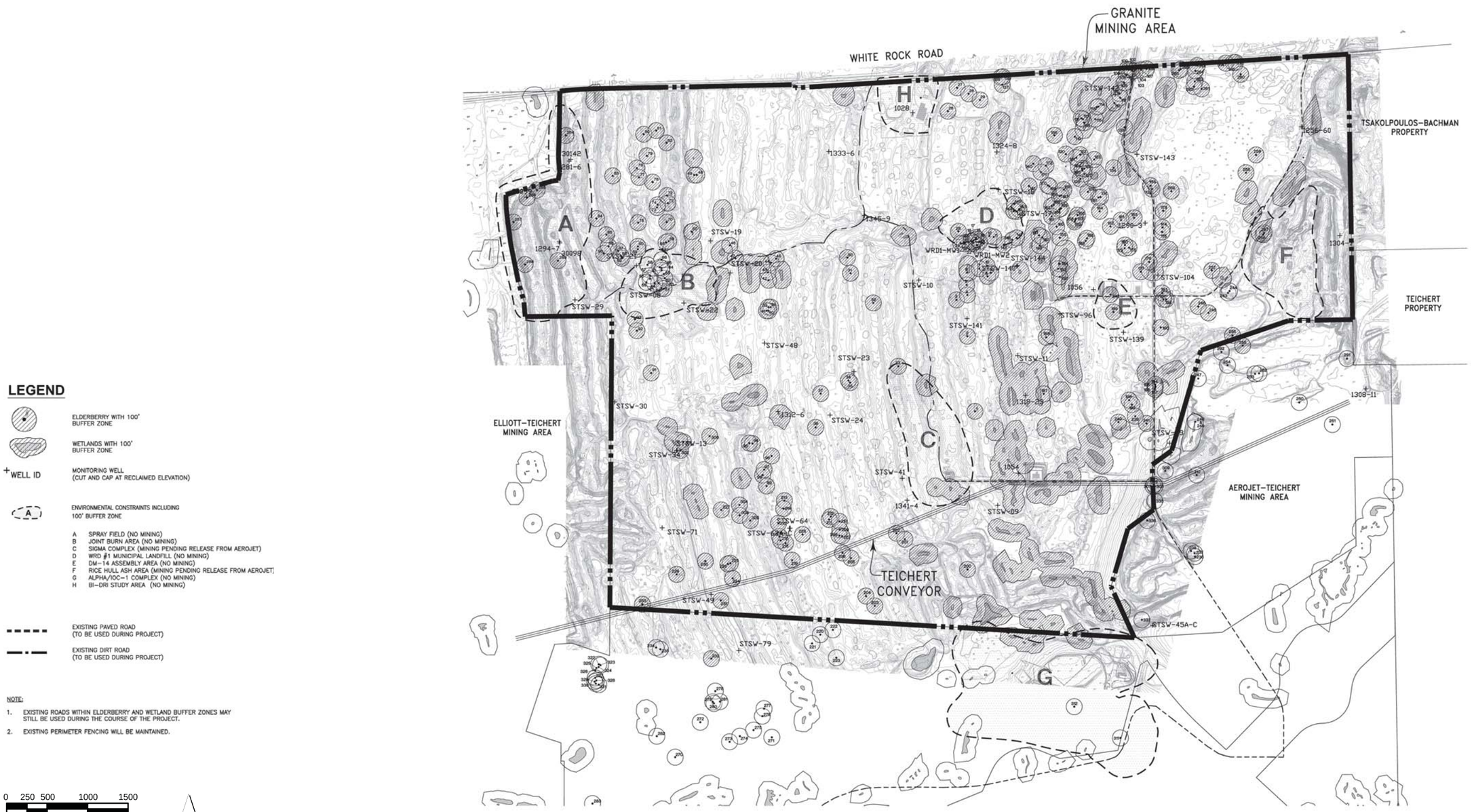


Source: Granite Construction Company, 2006

City of Rancho Cordova
Planning Department

Figure 2
Project Location and Mining Area

T:\Rancho Cordova\Granite Mining Project\graphic development\ai files\Figure 5.ai, January 2007

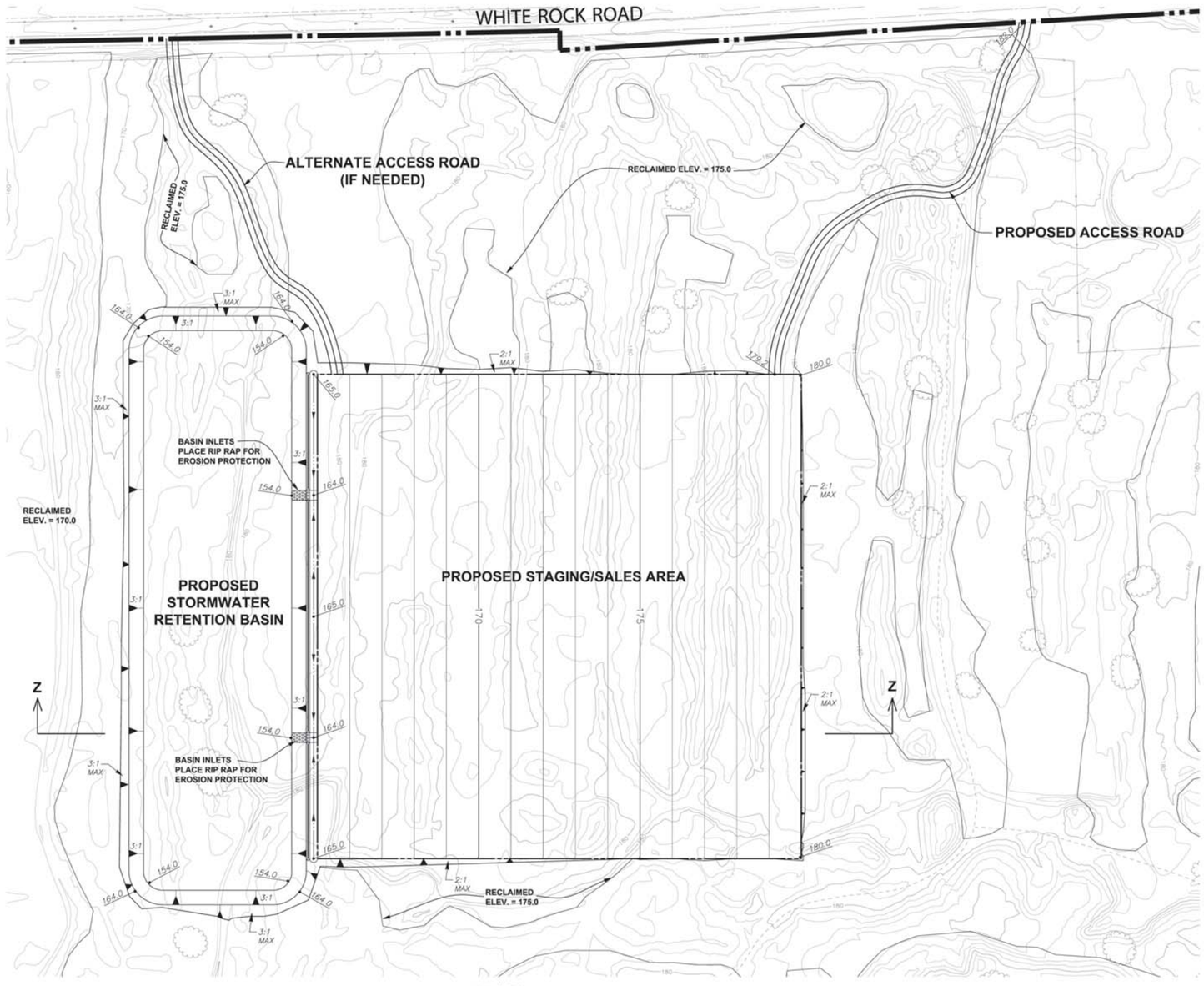


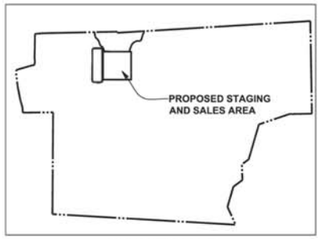
Source: Granite Construction Company, 2006

City of Rancho Cordova
Planning Department

Figure 5
Environmental Constraints Areas

T:\Rancho Cordova\Granite Mining Project\graphic development\ai files\Figure 4.ai, January 2007





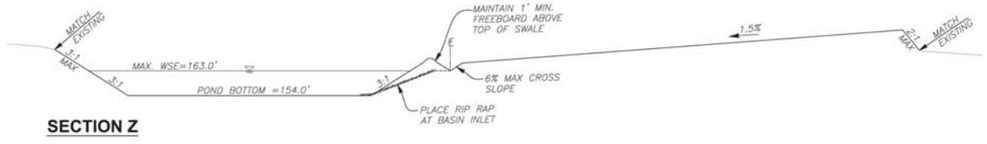
VICINITY MAP

NOTE:

1. THE SIZE OF THE SALES AREA MAY BE ADJUSTED BASED ON MARKET DEMANDS. THE PROPOSED RETENTION BASIN WILL BE RESIZED ACCORDINGLY.
2. FUEL AND LUBRICANTS WILL BE STORED ON SITE IN A DESIGNATED AREA. CONTAINMENT WILL COMPLY WITH ALL FEDERAL AND STATE GUIDELINES. A SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN WILL BE PREPARED BEFORE FUEL OR LUBRICANTS ARE BROUGHT ON SITE.

0 50 100 200 300
FEET

N



SECTION Z

Source: Granite Construction Company, 2006

City of Rancho Cordova
Planning Department

Figure 4
Staging Area Detail

T:\Rancho Cordova\Granite Mining Project\graphic development\ai files\Figure 3.ai, January 2007

Source: Granite Construction Company, 2006

City of Rancho Cordova
Planning Department

Figure 3
Portable Aggregate Processing Equipment

3.0 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

3.1 INTRODUCTION

This section provides an evaluation of the potential environmental impacts of the proposed project, including the California Environmental Quality Act (CEQA) Mandatory Findings of Significance. There are 16 specific environmental issues evaluated in this chapter. Cumulative impacts to these issues are evaluated in Section 4.0. The environmental issues evaluated in this chapter include:

- Aesthetics
- Agriculture
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards & Hazardous Materials
- Hydrology and Water Quality
- Land Use Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Circulation
- Utilities and Services Systems

For each issue area, one of four conclusions is made:

- **No Impact**: No project-related impact to the environment would occur with project development;

- **Less than Significant Impact**: The proposed project would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures;

- **Less than Significant Impact with Mitigation Incorporation**: The proposed project would result in an environmental impact or effect that is potentially significant, but the incorporation of mitigation measure(s) would reduce the project-related impact to a less than significant level; or,

- **Potentially Significant Impact**: The proposed project would result in an environmental impact or effect that is potentially significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

- **Reviewed Under Previous Document:** The impact has been adequately addressed in previous environmental documents, and further analysis is not required. The discussion will include reference to the previous documents.

3.2 INITIAL ENVIRONMENTAL STUDY

1. **Project Title:** Granite Construction – Rio Del Oro Mining

2. **Lead Agency Name and Address:** City of Rancho Cordova
   2729 Prospect Park Place
   Rancho Cordova, CA 95670

3. **Contact Person and Phone Number:** Ben Ritchie (916) 361-8384

4. **Project Location:** See Section 2.1 of this MND.

5. **Project Sponsor's Name and Address:** Grant Williams
   Granite Construction
   4001 Bradshaw Road
   Sacramento, CA 95827

6. **Current Zoning:** Aerojet Special Planning Area

7. **General Plan and Planning Area:** City of Rancho Cordova General Plan
   Rio Del Oro Planning Area
   Residential and Commercial Development

8. **APN Number(s):** 072-0370-070

9. **Description of the Project:** See Section 2.4 of this MND.

10. **Surrounding Land Uses and Setting:** See Section 2.2 of this MND.

11. **Other public agencies whose approval may be required:** (e.g., permits, financing approval, or participation agreement)

    1) California Department of Fish and Game (CDFG)
    2) California Department of Toxic Substances Control (DTSC)
    3) Central Valley Regional Water Quality Control Board (CVRWQB)
    4) Sacramento County Water Agency (SCWA)
    5) Sacramento Metropolitan Air Quality Management District (SMAQMD)
    6) Sacramento Resource Conservation District (SRCD)
    7) U.S. Army Corps of Engineers (USACE)
    8) U.S. Fish and Wildlife Service (USFWS)

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the project, involving at least one impact that is a "Less than Significant Impact with Mitigation Incorporation" or "Potentially Significant/Reviewed Under Previous Document" as indicated by the checklist on the following pages.

☒ Aesthetics	☒ Hazards & Hazardous Materials	☐ Public Services
☒ Agricultural Resources	☒ Hydrology/Water Quality	☐ Recreation
☒ Air Quality	☐ Land Use and Planning	☒ Transportation/Traffic
☒ Biological Resources	☐ Mineral Resources	☐ Utilities & Service Systems
☒ Cultural Resources	☒ Noise	☒ Mandatory Findings of Significance
☒ Geology and Soils	☒ Population and Housing	

PURPOSE OF THIS INITIAL STUDY

This Initial Study has been prepared consistent with CEQA Guidelines Section 15063, to determine if the Granite Construction – Rio Del Oro Mining project (hereafter referred to as the "proposed project"), as proposed, may have a significant effect upon the environment. This document incorporates both an Initial Study and a Mitigated Negative Declaration (MND). The discussion below demonstrates that there are no potentially significant impacts identified that cannot be mitigated to a less than significant level or impacts that have not been fully addressed under a previous environmental document. Therefore, an Environmental Impact Report (EIR) is not warranted.

EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "*No Impact*" answers that are adequately supported by the information sources cited. A "*No Impact*" answer is adequately supported if the referenced information sources show that the impact simply does not apply to a project like the one involved (e.g. the project falls outside a fault rupture zone). A "*No Impact*" answer should be explained where it is based on project-specific factors as well as general standards.

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect, and construction as well as operational impacts.

3) A "*Less than Significant Impact*" applies when the proposed project would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures.

4) "*Potentially Significant Impact*" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "*Potentially Significant Impact*" entries when the determination is made, an EIR is required.

5) "*Less than Significant Impact with Mitigation Incorporation*" applies where the incorporation of mitigation measures has reduced an effect from "*Potentially Significant*

Impact" to a "*Less than Significant Impact*". The initial study must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.

6) "*Reviewed Under Previous Document*" applies where the impact has been evaluated and discussed in a previous document[1]. Discussion will include reference to the previous document. If an impact is reviewed under a previous document, an impact of "Potentially Significant" does not necessarily require an EIR. If the Program EIR identified a significant and unavoidable impact, the following analysis will address any impacts that are peculiar to the proposed project. Pursuant to Pub. Res. Code Section 21083.3 and State CEQA Guidelines Section 15183, if the proposed project would not have any significant effects that are peculiar to the project or parcel(s) on which the project lies, and all other significant impacts were fully addressed in the Program EIR, no additional analysis is required. As such, when the proposed project is found to have a significant effect that was adequately described and addressed in the GP-EIR, the following analysis will find a "*Less than Significant Impact"* that has been "*Reviewed Under Previous Document"*.

7) Earlier analyses may be used where, pursuant to the tiering, program Environmental Impact Report, or other CEQA process, an impact has been adequately analyzed in an earlier EIR or negative declaration.

[1] The "previous document" referred to in this IS/MND is the General Plan EIR, certified and adopted by the City Council of Rancho Cordova on June 26, 2006 (State Clearinghouse Number 2005022137).

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
I. AESTHETICS Would the project:					
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐	☒
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☒	☐	☐	☒

EXISTING SETTING

The project site is located within the proposed Rio Del Oro Specific Plan project area, a large development project to be undertaken by GenCorp Realty Investments (GenCorp) and Elliott Homes. The development of the Rio Del Oro Specific Plan is a separate project within the city, and such development would proceed independent of the proposed project.

The project site is currently undeveloped with some on-site cattle grazing and adjacent aggregate mining being conducted by the Teichert Corporation. The project site is predominantly characterized by piles of mine tailings, resulting from historic gold mining conducted throughout the region. Some portions of the project site exhibit non-native and native trees such as cottonwoods and oaks, as well as non-native grasses and some isolated wetlands.

DISCUSSION OF IMPACTS

a) *Less than Significant Impact/Reviewed Under Previous Document*. The Rancho Cordova General Plan Environmental Impact Report (GP-EIR) identified that impacts to scenic vistas within the City would be less than significant (GP DEIR, p. 4.13-6). The primary scenic vistas identified within the City occur along the American River in the vicinity of the American River Parkway Plan (GP DEIR, p. 4.13-6). The American River Parkway Plan is currently under the jurisdiction of the Sacramento County Municipal Services Agency Department of Regional Parks, Recreation, and Open Space. Because the American River Parkway Plan is not under the jurisdiction of the City, the American River Parkway cannot be modified by development projects in the City.

On exceptionally clear days the Sierra Nevada Mountains are visible to the east of the project site. However, poor air quality and meteorological conditions prevent the mountains from being seen most days. No other scenic vista is visible from the project site. The proposed project would not include the construction or use of any equipment of a height that would block views of the Sierras from local businesses or homes to be constructed to the west of the project site. See **Figure 3** for a depiction of the typical equipment to be used. Because no part of the proposed project would block views of the mountains, and because these views are currently rare due to other factors, the proposed project would result in a *less than significant* impact.

b) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR found that there were no highways within the Planning Area that were designated by State or local agencies as "scenic highways" (GP DEIR, p. 4.13-6). Highway 16 (Jackson Highway), which is listed on the State Scenic Highway list maintained by Caltrans, is located more than three miles south of the proposed project. A small portion of the highway lies within the Rancho Cordova City Limits; however, that portion of the highway is not designated as a state scenic highway. The project site does include some limited rock outcroppings and trees which could be considered scenic resources. However, mining will be limited to existing tailing piles which are not scenic in nature. Therefore, the proposed project would result in a *less than significant* impact.

c) *Less than Significant Impact/Reviewed Under Previous Document*. Impacts relating to the alteration of scenic resources in the City were identified in the GP-EIR and were predominantly associated with the urbanization of the rural and undeveloped portions of the City and areas east of the incorporated boundaries (GP DEIR, pp. 4.13-8 through 4.13-10). Impacts of the General Plan to visual resources were found to be significant and unavoidable (GP DIER, p. 4.13-10).

The project site is currently composed of a mix of open grazing land and mine tailings. The piles of mine tailings are the resultant waste from historic dredge mining in the area, and as such do not represent the natural condition of the site. The proposed project would restore the project site to its original condition of pasture grassland. Several trees would be removed as a part of the proposed project. However, trees to be removed have grown on-site following gold mining and were not natural features of the original site. The proposed project would restore the original topography and covering vegetation that existed on the project site prior to dredge mining conducted in the past. As such the proposed project would have a *less than significant* effect on the visual character of the project site.

d) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. Impacts relating to light and glare were identified in the GP-EIR and were related to both reflective glare from new structures built under the General Plan and the introduction of new sources of light associated with development and redevelopment of the City (GP DEIR, p. 4.13-13). Areas of the City and the City's Planning Area that are currently undeveloped would see the majority of the impact due to the current lack of reflective surfaces and light sources in undeveloped areas (GP DEIR, p. 4.13-14). Due to design guidelines adopted by the City and adherence to City Policy UD.4.2, impacts of the General Plan due to light and glare were found to be less than significant.

This particular project may create possible new sources of light and/or glare that could potentially affect views in the area. The project proponent has requested that they be allowed to operate 24 hours a day, 7 days a week. As such, impacts from lighting at night are a concern. There are currently no homes or other land uses within sight of the proposed project that would be affected by increased nighttime lighting. However, due to the length of the proposed project (5-10 years), it is likely that homes will be constructed and occupied on the Elliott Homes portion of the Rio Del Oro project, immediately west of the project site. Because of this, it is possible that sensitive receptors for nighttime lighting may exist within sight of the proposed project for a least of portion of its operation. Therefore, significant impacts with respect to nighttime lighting may occur.

Mitigation Measure

MM 1.1 The project proponent shall ensure that night time lighting levels be maintained at the minimum level necessary to provide for security and safety at the project site. All night time lighting shall be shielded and aimed appropriately to prevent any direct upward illumination or light directed at adjacent properties. If the City receives complaints from any residents of adjacent areas of nuisance lights, the project proponent shall take immediate action to prevent lights from producing significant light or glare at adjacent properties. All on-site stationary lighting shall comply with this requirement throughout the entirety of operation of the project.

Vehicle and all other mobile equipment lights (except for any lights mounted on the mobile processing plant) are exempt from this requirement for safety reasons. However, the use of high beams shall be limited within 1,500 feet of the western boundary of the project site to those times when they are required for safety reasons. Signs visible to truck drivers shall be posted along any haul roads within 1,500 feet of the western boundary of the project site that state that high beams are to be used only as required for safety. All drivers shall be notified of this requirement prior to operating on-site.

Timing/Implementation: *Throughout project operation once homes are occupied within the Rio Del Oro project or within 1,500 feet of any portion of the project site.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department and Code Enforcement Department.*

Implementation of mitigation measure MM 1.1 would ensure that lighting and glare impacts would be *less than significant*.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
II. AGRICULTURE RESOURCES In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☒
c) Involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☒	☐	☒

EXISTING SETTING

The proposed project is not located on any active agricultural land. According to the State Department of Conservation Important Farmland Map (2000), the proposed project does not reside on land considered to be of agricultural importance. This parcel of land has been used for a variety of historical uses over the course of its ownership, including but not limited to mining, rocket testing operations, and cattle grazing.

DISCUSSION OF IMPACTS

a) *No Impact/Reviewed Under Previous Document*. The GP-EIR identified that a significant amount of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance would be lost with urban development of previously undeveloped portions of the City and of the City Planning Area outside the incorporated boundaries (GP-DEIR, p. 4.2-17 through 4.2-18). Impacts from buildout of the General Plan were found to be significant and unavoidable.

The proposed project is not depicted on the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) as containing any prime farmland, farmland of statewide importance, and/or unique farmland. The soils in the project site consist of Xerothents and dredge tailings, which are not generally suitable for agricultural uses of any kind. Therefore, there would be *no impact* as a result of conversion of significant farmland.

b) *No Impact/Reviewed Under Previous Document*. Just as with other types of farmland, the GP-EIR identified impacts to farmland currently under Williamson Act Contracts (GP-DEIR, pp. 4.2-22 through 4.2-23). Impacts of the General Plan to Williamson Act land were found to be significant and unavoidable due to the significant loss of such land at buildout of the General Plan.

The project site is not zoned for agricultural use. Neither is the project site designated for agricultural use by the General Plan. The project site is not currently under, or has ever been under, a Williamson Act contract. The nearest land still under Williamson Act contract is located within two miles of the project to the east. No project activity will take place on that parcel. Grant Line Road is a major truck route for mining materials sold by the proposed project and borders the Williamson Act land on the east. However, transportation of aggregate resources along that roadway would not impact the land, nor would it preclude the use of the parcel for future agricultural uses. Therefore, the proposed project would have *no impact* to agricultural zoning or Williamson Act contracted farmland.

c) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR stated that impacts could occur to agricultural land uses as a result of urbanization of adjacent areas to operating agricultural operations (GP DEIR, p. 4.2-20). Placing urban development immediately adjacent to agricultural uses can potentially result in interface conflicts between the uses, which could ultimately result in cessation of agricultural uses in those locations (GP DEIR, pp. 4.2-20 through 4.2-21). Impacts to agriculture as a result of the interface conflicts the General Plan would be significant and unavoidable.

The proposed project is located within an area of current cattle grazing. Much of the Rio Del Oro project area, those areas not currently undergoing aggregate mining, is used for this purpose. The project site is also currently being used for cattle grazing. ~~Operation of the proposed project would preclude the use of the land, temporarily, for such cattle grazing. Therefore, the use of the project site for agricultural uses such as cattle grazing would be lost and significant impacts would result. The proposed project is a subsequent project within the scope of activities and land uses studied in the GP-EIR. Loss of agricultural uses on the project site would not result in any project-specific impacts to agricultural zoning that were not identified in the Program EIR. As the GP-EIR found that impacts to agricultural resources were significant and unavoidable and because the proposed project is consistent with and described in the Program EIR, no further environmental analysis is required pursuant to Pub. Res. Code Section 21083.3.~~ Operation of the proposed project would result in small portions of the site being unavailable for grazing during mining and processing. However, the active portion of the site to be mined at any one time is relatively small (when compared to the whole of the project area) and cattle grazing will continue in those areas which have been mined and those areas that remain undisturbed. As such, the loss of agricultural uses within the project area as a result of the proposed project will not be significant and any such loss would be temporary in nature. At the conclusion of mining, the property will be graded relatively flat and reseeded, thereby providing adequate grazing land. Therefore, the proposed project would have a less than significant effect on agricultural uses.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
III. AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐	☒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐	☒

EXISTING SETTING

The project site is located within the boundaries of the Sacramento Metropolitan Air Quality Management District (SMAQMD). SMAQMD establishes thresholds for both project construction and operational emissions based on state and federal air regulations and standards. The Sacramento area has been classified by the California Air Resources Board (CARB) for exhibiting serious non-attainment of state standards for Ozone (both 1 hour and 8 hour standards). The project must comply with SMAQMD construction and operational standards and the City of Rancho Cordova Grading and Erosion Control Ordinance, which are established to reduce related air emissions.

In order to determine the potential emissions of the proposed project and to ascertain the project's potential for impacts to air quality in the vicinity, Sierra Research conducted emissions calculations for the proposed project (October 5, 2006). These calculations included determination of the following:

- Exhaust emissions from the portable aggregate processing plant;
- Exhaust emissions from mobile mining equipment;
- Exhaust emissions from material haul trucks operating within project boundaries;
- Exhaust emissions from support vehicles;
- Fugitive dust emissions from the portable aggregate processing plant; and,
- Fugitive dust emissions from vehicle travel on unpaved surfaces.

Calculations of the above emissions were determined using methodologies required by SMAQMD for the issuance of a permit for rock crushing operations. A permit is required from SMAQMD for the proposed project prior to operation. Emissions were calculated from a combination of the URBEMIS model, procedures specified in SMAQMD's Internal Combustion Engine Policy Manual, and data provided by SMAQMD publications on Stationary Source

Permitting (see **Appendix A**). The emissions estimated by Sierra Research are shown in **Table 1** below.

TABLE 1
SMAQMD CRITERIA EMISSIONS BY THE PROPOSED PROJECT (POUNDS PER DAY)

Pollutant	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Project Emissions	34.5	206.6	176.4	0.55	235.6	43.3

*Source: Sierra Research, 2006 attached as **Appendix A***
Notes: ROG = Reactive Organic Gasses, NOX = Nitrogen Oxides, CO = Carbon Monoxide, SO2 = Sulfur Dioxide, PM10 = Particulate Matter, 10 microns in size, PM2.5 = Particulate Matter, 2.5 microns in size.

DISCUSSION OF IMPACTS

a) *Less than Significant Impact/Reviewed Under Previous Document*. The Sacramento area is currently out of compliance with federal requirements for 8-hour ozone air quality standards and 1-hour ozone air quality standards. The region is in compliance with all other emissions standards. SMAQMD released the final "Sacramento Regional Nonattainment Area 8-Hour Ozone Rate-of-Progress Plan" (Ozone Plan) in February 2006. According to the GP-EIR, projected buildout of the General Plan Planning Area would be consistent with the assumptions used during preparation of the Ozone Plan (GP FEIR, pp. 4.0-5 through 4.0-6). However, because there currently exist no feasible methods to completely offset air pollutant emission increases from land uses under the General Plan, the impact of the General Plan was considered to be significant and unavoidable (GP FEIR, pp. 4.0-6).

SMAQMD has identified specific thresholds of significance for both NO_x and ROG in the project area. Those thresholds are identified in SMAQMD's Guide to Air Quality Assessment in Sacramento County (2004) and are listed in **Table 2** below.

TABLE 2
CURRENT SMAQMD EMISSIONS THRESHOLDS (POUNDS PER DAY)

Pollutant	Threshold of Significance
NO_x During Construction	85
ROG During Operation	65
NO_X During Operation	65

Source: SMAQMD Guide to Air Quality Assessment in Sacramento County, 2004.

As shown in **Table 1** above, the proposed project would result in significant emissions of NO_X. As the area is in non-attainment for oxides of nitrogen, emissions from the proposed project could adversely affect the ability of SMAQMD to reach attainment in the time required by the Air Resources Board and the Environmental Protection Agency. The project proponents are required by SMAQMD to obtain a variety of permits from SMAQMD. As a part of this permitting process, the project proponent will be required to institute measures that would not adversely affect SMAQMD's efforts towards attainment. These measures will include payment of an off-site Operational Mitigation Fee. Funds provided by the Mitigation Fee will be used to fund NO_x reduction incentive programs such as the Carl Moyer Program and the Sacramento Emergency Clean Air Transportation (SECAT) program. Payment of

the off-site Operational Mitigation Fee as well as the provisions and requirements of the required SMAQMD permits would ensure the proposed project would result in a *less than significant* impact related to the local ozone attainment plan.

b) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR identified potential air quality impacts from both construction and operation of new development in the City (GP DEIR, pp. 4.6-17 through 4.6-26). While policies, actions, and mitigation was included in the EIR, development in the Planning Area would still be intensified from current conditions. Therefore, significant and unavoidable impacts were expected as a result of the General Plan (GP DEIR, pp. 4.6-20 and 4.6-26).

The current SMAQMD construction significance threshold is 85 pounds per day (lbs/day) of nitrogen oxides (NOx). The project's construction activities would include access and roadway improvements, installation of a dust control water system, construction of a scale house, truck scale, and sales office, and the assembly of an aggregate plant and ancillary equipment. These activities would include the use dozers, loaders, scrapers and other heavy equipment. Site preparation and construction activities are estimated to last 46 days and would include the use of on-site heavy diesel trucks (i.e., water truck, mechanic service truck, and fuel/lube truck) and result in approximately 53 pounds per day (lbs/day) of NOx, which is below SMAQMD's significance threshold of 85 lbs/day. As described in Section 2.0 "Project Description," the project would operate over a period of five to ten years and result in approximately 206.6 lbs/day of NOx which substantially exceeds SMAQMD's daily operational threshold of 65 lbs/day. In addition to emissions of NOx, the proposed project includes extensive heavy earthmoving and other similar activities within an undeveloped area. Combined with the use of several dirt roads on-site, particulate matter emissions could result in significant impacts.

Mitigation Measures

MM 3.1a The project proponent shall require that the operators water all haul roads and all exposed soils at least twice daily during construction, mining and reclamation activities.

Timing/Implementation: *During all phases of the project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department and SMAQMD.*

MM 3.1b The project proponent shall require that the operators limit vehicle speed for on-site construction vehicles to 15 miles per hour on any unpaved roadways at all times. Signs stating the speed limit and that dust control measures are in effect shall be placed at each entrance/exit of the site and along all haul roads. Truck and equipment operators shall be notified that dust abatement is a concern and of the 15 mph speed limit.

Timing/Implementation: *During all phases of the project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department and SMAQMD.*

MM 3.1c The project proponent shall require that, when transporting materials by truck during mining and reclamation activities, loads shall be covered or two feet of freeboard shall be maintained by the operator. Compliance with this measure shall be enforced by both the City and the project foreman.

Timing/Implementation: *During all phases of the project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department and SMAQMD.*

MM 3.1d The project proponent shall ensure that all exposed soil existing after mining of the project site is seeded with non-invasive species and mulched with certified weed-free straw mulch immediately after mining. The amount of exposed soil at any one time shall me minimized as much as possible. Seeding and straw mulching shall be conducted as the project progresses, immediately following regrading of the soil. All seeding shall be conducted according to California Stormwater Quality Association (CASQA) guidelines, as shown in their California Stormwater BMP Handbook (EC-4). All straw mulch application shall be conducted according to CASQA guidelines, as shown in their California Stormwater BMP Handbook (EC-6). All seeded and mulched areas shall be inspected daily to ensure dust is controlled during the establishment period. Water shall be applied to any areas known or suspected to generate dust during any high wind events (winds greater than 15 miles per hour).

Timing/Implementation: *During all phases of the project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department and SMAQMD.*

The following mitigation measures are included in order to reduce impacts related to ozone and NOx emissions:

MM 3.1e The project proponent shall provide a plan for approval by the City and the Sacramento Metropolitan Air Quality Management District (SMAQMD) demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction and operation of the proposed project will achieve a fleet-averaged 20 percent NOx reduction and a 45 percent particulate reduction compared to the most recent CARB fleet average. The project proponent shall submit to the City and SMAQMD a comprehensive inventory of all off-road equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during the project. The inventory shall include the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no activity occurs; and,

The project proponent shall ensure that emissions from all off-road diesel powered equipment used on the proposed project sites does not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment

found to exceed 40 percent opacity shall be repaired immediately, and the City and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be performed at least weekly by a qualified third-party professional, and a monthly summary of the visual results shall be submitted to the City and SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other SMAQMD or state rules or regulation.

In the event construction equipment meeting the requirements set forth above is determined not to be available, the project proponent shall notify the City and SMAQMD. Upon verification that required low-emission construction equipment is not available, the City may waive this measure. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: *Equipment Inventory shall be submitted prior to site disturbance. Remainder of measure shall be complied with throughout construction and operation of the project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department and SMAQMD.*

MM 3.1f The project proponent shall offset excess emissions (to below the 65 lbs/day threshold of significance) by paying an off-site operational mitigation fee to the Sacramento Metropolitan Air Quality Management District (SMAQMD) Operational Mitigation Fee Program. The final amount of the fee is to be determined by SMAQMD in consultation with the project proponent during the stationary air quality permit process. The project proponent shall provide documentation of the payment of the fee to the City prior to site disturbance.

Timing/Implementation: *Prior to site disturbance.*

Enforcement/Monitoring: *SMAQMD in consultation with the City of Rancho Cordova Planning Department. .*

<u>According to SMAQMD, the current estimated amount for the operational emission off-site mitigation fee is $57,052 (Hurley, 2007).</u> Implementation of mitigation measures MM 3.1a through MM 3.1f would ensure *less than significant* construction and operational air emissions.

c) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR identified that increases in Ozone precursors (NOx and ROG) would result in significant and unavoidable impacts on the region's status of nonattainment (GP DEIR, pp. 4.6-17 through 4.6-26). See discussions a) and b) above as well as Section 4.0 of this MND for more information on the proposed project's contribution to cumulative air quality conditions.

d) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. Sensitive receptors are those parts of the population that can be severely impacted by air pollution. Sensitive receptors include children, the elderly, and the infirm. The GP-EIR identified potential impacts to sensitive receptors due to both mobile and stationary sources of toxic air contaminants (TACs) and odors. Impacts of the General Plan from TACs were reduced by City Policies and Action Items, but the impact remained significant and unavoidable (GP DEIR, p. 4.6-31). Impacts to sensitive receptors from exposure to odors were reduced by City Policies and Action Items to a less than significant level (GP DEIR, p. 4.6-33).

As shown in discussion b) above, the proposed project is expected to emit some pollutants. The proposed project does not include the construction of any facilities or land uses that would be utilized by sensitive receptors to airborne pollutants. No such facilities or land uses are currently located within the vicinity of the proposed project. Several schools are planned for the Rio Del Oro Planning Area, inside which the proposed project is located. However, the construction of these schools cannot occur while mining of the site is ongoing. Construction of schools and housing is expected to the west of the proposed project prior to completion of the mining activities. If mining operations were to occur in the vicinity of these homes and schools once they are occupied, exposure to sensitive receptors could occur.

Mitigation Measure

MM 3.2 Mining conducted by the project proponent shall be phased such that aggregate located generally in the western portion of the project site is mined early in the process. Mining shall be phased so that mining generally progresses from west to east as much as possible during the project life. The project proponent shall coordinate with Elliott Homes and GenCorp Realty Investments to ensure that mining is phased to reduce impacts to new development.

Timing/Implementation: *Throughout all phases of the project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measure MM 3.2 will ensure that impacts to sensitive receptors as a result of the proposed project would be *less than significant*.

e) *Less than Significant Impact/Reviewed Under Previous Document.* See discussion d) above. The project site is vacant and does not contain any substantial sources of odors or odor concentrations. Aggregate mining does not generally produce any significant sources of odor, as is shown by currently operating aggregate mining projects in the City. Therefore, no significant odors are expected and the impact would be *less than significant*.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
IV. BIOLOGICAL RESOURCES Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption or other means?	☐	☒	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	☐	☐	☐	☒	☒

EXISTING SETTING

A Biological Resource Assessment was conducted for the proposed project by ECORP Consulting, Inc. (ECORP) in April 2006 (attached as **Appendix B**). This assessment was conducted in order to identify any Waters of the U.S. on the project site and to assess the potential for occurrence of special-status plant and wildlife species within the project site and general vicinity. The assessment included a review of previous studies conducted for the project site for various reasons in the past. These previous studies included the following:

- Surveys for special-status wildlife species at the Aerojet Property conducted in April 1999;
- A jurisdictional wetland delineation conducted for the Rio Del Oro Property in June 1999;
- Vernal pool branchiopods wet-season surveys conducted on the project site in August 2000 and July 2001;
- An Elderberry survey conducted in September 2000;

- A rare plant survey conducted for the Rio Del Oro Specific Plan project in August 2003;
- A biological assessment for the Rio Del Oro Specific Plan project conducted in September 2003; and
- A wetland delineation conducted for the Rio Del Oro Specific Plan project in December 2004[2].

According to the Biological Resource Assessment, on-site vegetation communities generally occur in the low-lying areas between the tailing piles. Vegetation identified on the project site consists of woodland, scrub, and grassland communities. The project site also contains jurisdictional and non-jurisdictional waters of the U.S. including seasonal wetlands, vernal pools, seasonal wetland swales, ephemeral drainages, and isolated wetlands. Utilizing the data available from the verified wetland delineation for the Rio Del Oro Specific Plan, ECORP provided the total acreage of wetlands and their types in the Biological Resources Assessment. The acreage of wetlands located within the proposed project site is shown in **Table 3** below.

TABLE 3
WATERS OF THE U.S. LOCATED WITHIN THE PROJECT SITE (ACRES)

Type	Jurisdictional	Isolated[1]	Total
Seasonal Wetlands	0.047	8.655	8.702
Vernal Pools	0.000	0.072	0.072
Seasonal Wetland Swales	0.008	0.073	0.081
Ephemeral Drainages	0.169	0.000	0.169
Total	**0.224**	**8.800**	**9.024**

*Source: ECORP Consulting, Inc., 2006 attached as **Appendix B**.*
Notes: [1]Isolated wetlands are not considered to be under the jurisdiction of the U.S. Army Corps of Engineers, according to Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, Case 99-1178.

Due to the fact that the Biological Resource Assessment was prepared during a time of year in which it is not appropriate to survey for several special-status species, the assessment did not include a survey of known occurrences of special-status species on the project site. However, review of the California Natural Diversity Database and other sources as well as study of the habitat types present on the project site point to the potential existence of several special-status species on and in the vicinity of the project site (ECORP, 2006). Potentially occurring species include vernal pool fairy shrimp, vernal pool tadpole shrimp, midvalley fairy shrimp, California linderiella, legenere, western spadefoot toad, western pond turtles, white-tailed kite, Cooper's hawk, Swainson's hawk, northern harrier, burrowing owl, special-status species of songbirds (i.e., loggerhead shrike, lark sparrow, and California thresher), sharp-shinned hawk, ferrugionous hawk, golden eagle, merlin, tri-colored blackbird, Yuma myotis, Townsend's big-eared bat, pallid bat, American badger, and valley elderberry longhorn beetle (VELB).

[2] The wetland delineation for the Rio Del Oro Specific Plan, performed in 1999 by Gibson and Skordal and later updated by ECORP Consulting, Inc. in 2004 has since been verified by the U.S. Army Corps of Engineers in a letter to the property owner (Aerojet) dated January 10, 2005.

While the ECORP assessment did not include an on-site survey of special-status species, some of the previous studies reviewed by ECORP indicted the presence of vernal pool fairy shrimp, California linderiella, and VELB on the project site. Vernal pool tadpole shrimp were also found in pools adjacent to the project site, but not within the project site. (ECORP, 2006)

DISCUSSION OF IMPACTS

a) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR identified potential direct and indirect impacts to special-status species (those species identified in the checklist above) as a result of the implementation of the General Plan (GP DEIR, pp. 4.10-34 through 4.10-48). While City Policies and Action Items would mitigate much of the impact of the General Plan, widespread development of undeveloped portions of the General Plan Planning Area as well as construction of the Circulation Plan would result in a net loss of biological resources. Therefore, the General Plan was found to result in significant and unavoidable impacts to special status species (GP DEIR, pp. 4.10-43 and 4.10-48).

As indicated above, the project site has the potential to provide habitat for several special-status species. Cooper's hawk and legenere are known to exist within one mile of the project site and several other special-status species occur within five miles of the project site. Swainson's hawk have been observed nesting in trees within two miles to the southwest. Swainson's hawk have also been observed foraging on properties to the south, also within two miles. The proposed project would not result in a loss of foraging habitat as the California Department of Fish and Game has determined that dredged areas on the project site do not constitute foraging habitat (Gifford, 2007). However, nesting may occur on-site as there are several trees on the project site.

In addition to the above concerns, the project site also includes vegetation communities that represent potential habitat for special-status species. This includes the existence of several blue elderberry shrubs which can provide habitat for VELB. VELB are entirely dependant on elderberry shrubs for their survival. The proposed project would drastically alter the existing landscape and would remove much of the existing vegetation, including several trees located on-site and approximately 266 elderberry shrubs. The loss of this habitat could result in a significant effect on special-status species in the project vicinity. The proposed Rio Del Oro Specific Plan (currently under CEQA/NEPA review) includes two areas earmarked for Elderberry preserves. Both of these areas are located within the project site. Removal of elderberry shrubs in these areas would render the proposed preserves moot, further impacting VELB on-site. Both sites are located within constraints areas not earmarked for mining (see **Figure 5**).

Considering the potential effects of the proposed project, the following mitigation measures (pursuant to General Plan Policies NR.1.7, NR.2.1, NR.4.1, and NR.4.4) are included to reduce those effects.

Mitigation Measures

MM 4.1a Prior to each phase of construction or mining or any other site disturbance between the dates of March 1 and August 31, a determinate survey shall be conducted to determine if active nesting by birds protected under the Migratory Bird Treaty Act (MBTA) or other special-status bird species is

taking place. Surveys shall be conducted according to the following requirements:

- The survey(s) shall be conducted by a qualified biologist or other equivalent professional.
- The survey(s) shall be conducted no more than 30 days and no less than 14 days prior to site disturbance to occur between March 1 and August 31 for each year the proposed project would operate.
- The survey(s) shall include all areas within 250 feet of the project site.
- A copy of the survey(s) shall be provided to the City of Rancho Cordova no less than 7 business days prior to site disturbance.

If any special-status bird species are found to be nesting within the survey area, the project proponent shall immediately contact the City of Rancho Cordova Planning Department in order to determine the appropriate mitigation, if any, required to minimize impacts to nesting birds. No activity of any kind may occur within 250 feet of any nesting activity or as otherwise required following consultation with the City Planning Department and the California Department of Fish and Game until such time as the young have fledged.

If all activities are to be completed outside the nesting season (identified above), determinate surveys shall not be required.

Timing/Implementation: *All necessary surveys shall be provided to the City of Rancho Cordova Planning Department no less than 7 days prior to site disturbance between March 1 and August 31. Surveys shall be repeated for each year the project plans to operate.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department in consultation with the California Department of Fish and Game.*

MM 4.1b The project proponent shall update determinate surveys for potentially occurring special-status species or their habitat using protocol acceptable to the regulatory agencies with authority over these species, or assume species presence within the area of project activity.

- If any special-status species or their habitat are indicated or assumed, a detailed plan which describes the specific methods to be implemented to avoid and/or mitigate any project impacts upon special-status species to a less than significant level will be required. This detailed Special Status Species Avoidance/Mitigation Plan shall be prepared in consultation with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG), and shall emphasize a multi-species approach to the maximum extent

possible. The Special-Status Species Avoidance/Mitigation Plan shall be submitted to the City Planning Department for approval.

- Where project impacts include take of a State listed animal species, a "2081-incidental take" permit shall be obtained from the CDFG and permit conditions implemented, pursuant to the California Endangered Species Act. Proof of such a permit shall be provided to the City of Rancho Cordova Planning Department prior to site disturbance.

Determinate surveys for potentially occurring special-status species shall be conducted no more than three months prior to site disturbance. A copy of all determinate surveys shall be provided to the City Planning Department no less than seven days prior to site disturbance.

Timing/Implementation: *Determinate surveys shall be performed no more than three months prior to site disturbance. Any required avoidance/mitigation plans or permits listed above shall be provided to the City Planning Department prior to approval of improvement/grading plans or prior to site disturbance, whichever comes first.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department in consultation with the California Department of Fish and Game.*

MM 4.1c No disturbance, during any phase of the proposed project, within 100 feet of any wetlands or ephemeral drainages identified in the wetland delineation for the Rio Del Oro Specific Plan shall take place until such time as the approved mitigation is in place properly addressing the impacts to vernal pools and other seasonal habitats that support vernal pool fairy shrimp and vernal pool tadpole shrimp in such a manger that there will be no net loss of habitat (acreage and function) for these species in the Laguna Formation (pursuant to City Policy NR.2.1).

The project proponent shall prepare and submit an annual Habitat Monitoring Report (HMR) to the City, which documents efforts to avoid sensitive habitat areas and the associated monitoring efforts. Included in the HMR will be the appropriate documentation of GenCorp's (or others) permitting and mitigation efforts. The project proponent will provide all required permits and approvals to the City before impacting sensitive habitat areas.

The HMR shall also include a schedule of planned activities including the following:

- The location of the proposed vernal pool and seasonal wetland habitat site(s) and a detailed map of showing the acreage, distribution, and type of wetlands to be created to ensure no net loss in wetland habitat acreage, values and functions. The compensation wetlands shall be designed to, at a minimum: meet or exceed the

hydrophytic conditions and operating functions of the existing wetlands proposed for impact.

- A monitoring plan to assess whether the compensation wetlands are functioning as intended. Specific performance standards for hydrologic, floral, and faunal parameters shall be proposed to determine success of the created wetlands. The monitoring plan shall specify the corrective measures/modifications to be implemented in the event that monitoring indicates that the performance standards are not being met.

- A maintenance plan for the wetland preservation/mitigation areas describing the measures to be implemented to assure that they are maintained as wetland habitat in perpetuity.

- A requirement that fencing be installed around all existing vernal pools that are within fifty feet of any haul route, spoil zone, stockpile zone, creation zone, or other construction area. The fencing shall be of high visibility material and limit access to the project site. Fencing shall be placed no closer than 10-feet to the delineated, verified perimeter of existing vernal pools.

- A requirement that a qualified biological resources monitor, approved by the City be on the site(s) to ensure compliance with identified mitigation for the duration of all the proposed activities. The construction manager shall submit bi-annual compliance reports to City monitor for review for a period of five years.

- The vernal pool and seasonal wetland habitat site shall be surveyed by a qualified biologist no more than 30 days prior to the onset of construction for the presence of raptor and federal and state listed bird nesting sites, unless it is determined that construction will occur outside of the breeding season for all species likely to occur on site or observed present. If active nesting sites are observed present all state and federal guidelines pertaining to active nesting sites shall be strictly adhered to in consultation with a qualified biologist.

- The project proponent shall grant full access to the vernal pool and seasonal wetland habitat site to the City for the monitoring of construction activities and mitigation compliance. Access shall be granted during all construction activities and the City monitor may issue stop work orders if mitigation non-compliance is identified.

- The project proponent shall specify that measures for reuse or disposal of excavated material are suitable for use at project site. The plan should minimize the elapsed time between excavation and reuse and provide adequate stockpile coverage and protection from wind and water erosion during the entire storage period. If excavated material is unsuitable for reuse at the project site, the plan shall include specific information regarding the eventual reuse or disposal

site, transportation method(s), disposal reuse management, and schedule.

- A spill prevention and response plan to the satisfaction of the City.

- A requirement that all disturbed areas be revegetated by the following methods: hydro seeding, drill seeding, or spreading of upland seed bearing soil. The method of revegetation shall be approved by a qualified wetland specialist and to the satisfaction of the City.

- Incorporation of the use of non-toxic soil stabilizers according to manufacture's specifications to all inactive construction areas. Use non-toxic binders to exposed areas after cut and fill operations and hydro seeded areas. The vernal pool and seasonal wetland habitat site shall be watered as directed by the City of Rancho Cordova Department Public Works and the SMAQMD and the frequency shall be based on the type of operation, soil and wind exposure.

The project proponent shall submit the proposed Habitat Monitoring Plan (HMP) to the City for endorsement prior to grading permit approval or any groundbreaking activity and initiation of mitigation activities (including mitigation land acquisition).

Execution of mitigation measure 3.10-1a of the Rio Del Oro Specific Plan EIR/EIS would constitute compliance with this measure and no additional action will be required, provided that the actions conducted pursuant to mitigation measure 3.10-1a included mitigation for loss of wetlands within the project site (to the standard set by City Policy NR.2.1).

Timing/Implementation: *Prior to approval of grading and improvement plans and construction plans prior to any ground-disturbing activity.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

MM 4.1d The project proponent may conduct construction or operation of the proposed project in those areas that lie more than 100 feet from any trees, elderberry shrubs, wetlands, or ephemeral drainages prior to the satisfaction of mitigation measure MM 4.1c providing that the standard set of best management practices are employed when working in areas within 250 feet of these features including:

- Implementation of erosion control measures during all construction and operation including installation of long-term erosion control devices such as straw wattles, hay bale check dams, and silt fencing as required;

- Removal of cover vegetation as close as practicable to the time of construction or mining;

- Confinement of construction equipment and associated activities to the areas to be mined (as shown in **Figure 2** and excluding those areas identified as "constraints areas" shown in **Figure 5**);

- Reestablishment of stream bank contours following construction and installation of permanent erosion control as needed;

- Prohibiting refueling of construction related equipment within 250-feet of the aquatic environment;

- Maintenance of hazardous materials spill kits in proximity to all aquatic crossings;

- Compliance with state and federal permits;

- Performance of proper sediment control;

- Formulation and adherence to a spill prevention and response plan;

- Monitoring of construction and mining activities near specified features;

- Removal of all construction and operational spoils, remaining materials and miscellaneous litter for proper off-site disposal; and

- Post-construction monitoring and supplemental revegetation of all disturbed areas.

These requirements shall be conducted according to City standards and to California Stormwater Quality Association standards. These measures can be included in ~~a~~ the Stormwater Pollution Prevention Plan (SWPPP) ~~if one is~~ required ~~of the project~~ by the Public Works Department, the County Department of Water Resources, and/or the California Regional Water Quality Control Board. While these measures may be combined with a SWPPP, the project proponent shall ensure that all BMPs required in this measure are complied with throughout the life of the project, regardless of the requirement or contents of a SWPPP.

A qualified biological or stormwater monitor shall be contracted for monitoring of the condition and quality of these measures throughout the life of the project. Quarterly reports shall be submitted to the City Planning Department throughout the life of the project, indicating the presence, use, condition, and replacement (as needed) of all protective BMPs.

If the conditions of mitigation measure 4.1d are met, either through the actions of the project proponent or compliance with mitigation measure 3.10-1a of the Rio Del Oro Specific Plan EIR/EIS by the project proponent for that project, the requirements of this measure will be considered met and the conditions of any actions conducted pursuant to measure 4.1d or 3.10-1a shall be followed instead.

Timing/Implementation: *All BMPs shall be shown on all plans for the proposed project prior to approval. Measure shall be complied with continuously until the end of the project or compliance with mitigation measure 4.1c.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department in consultation with the Public Works Department, Sacramento County Department of Water Resources, and the California Regional Water Quality Control Board.*

MM 4.1e No project activity shall proceed within 100 feet of areas containing VELB habitat (i.e., elderberry shrubs) until a BO has been issued by USFWS, and the project proponent has abided by all pertinent conditions in the BO relating to the proposed project, including conservation and minimization measures, intended to be completed before on-site action. Conservation and minimization measures are likely to include preparation of supporting documentation that describes methods for relocation of existing shrubs and maintaining existing shrubs and other vegetation in the preserve.

Relocation of existing elderberry shrubs and planting of new elderberry seedlings shall be implemented on a no-net-loss basis. Detailed information on monitoring success of relocated and planted shrubs and measures to compensate (should success criteria not be met) would also likely be required in the BO. Ratios for mitigation of VELB habitat will ultimately be determined through the ESA Section 7 consultation process with USFWS, but shall be a minimum of "no net loss." A VELB mitigation plan is currently being developed through ESA Section 7 consultation with USFWS. The mitigation plan will also address the proposed delisting of VELB and any mitigation to be implemented if the delisting occurs prior to project implementation due to requirements under CEQA. Implementation of this plan would satisfy mitigation requirements for the removal of elderberry savanna, a sensitive habitat as identified by DFG, as well as single elderberry shrubs. A copy of the USFWS-approved mitigation plan shall be submitted to the City before the approval of any grading or improvement plans or any ground-disturbing activities within 100 feet of VELB habitat.

Should delisting of VELB occur, a mitigation plan that would compensate for the removal of elderberry savanna, a sensitive habitat as identified by DFG, would still be required. The mitigation plan shall be submitted to and approved by DFG and the City before the approval of any grading or improvement plans or any ground-disturbing activities that would affect elderberry savanna for all project phases.

Execution of mitigation measure 3.10-4b of the Rio Del Oro Specific Plan EIR/EIS would constitute compliance with this measure and no additional action will be required, provided that the actions conducted pursuant to mitigation measure 3.10-1a included mitigation for loss of elderberry shrubs within the project site.

Timing/Implementation: *Prior to the approval of grading permits or any ground-disturbing activity within 100 feet of VELF habitat.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department in consultation with the California Department of Fish and Game and the U.S. Fish and Wildlife Service.*

MM 4.1f The project proponent shall ensure that constraints Area B shown in **Figure 5** is expanded to include the whole of the area to be dedicated as elderberry preserve according to the Rio Del Oro Specific Plan EIR/EIS, as shown on Exhibit 3.10-3 of that document. Updated plans showing this expanded constraints area shall be submitted to the City Planning Department for review and approval prior to initiation of any site disturbance within 250 feet of existing Elderberry shrubs on the project site.

Timing/Implementation: *Prior to site disturbance within 250 feet of any Elderberry shrub on the project site.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measures **MM 4.1a** through **MM 4.1f** would reduce the project's impacts to any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game, or U.S. Fish and Wildlife Service to *less than significant.*

b) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. See discussion a) above for information on identified impacts of the General Plan on special-status species. The GP-EIR combined discussion of special-status species impacts to include impacts to habitat as well as individuals of special-status species. Impacts to habitat from the implementation of the General Plan occurred for the same reasons and in the same intensity as impacts to individuals of any special-status species (GP DEIR, pp. 4.10-34 through 4.10-48).

As described in the Biological Resource Assessment and above, the proposed project would result in the loss of approximately 8.8 acres of wetlands and ephemeral drainages which have been known to provide specific habitat for wetland invertebrate and plant species. While the majority of the project site has been disturbed in the past as a result of dredge-type gold mining and while the wetlands and drainages involved are considered "isolated" from the local hydrology, these habitats have previously exhibited signs of special-status species presence and may contain such species now and during project operation. Therefore, the loss of these wetlands could constitute a significant effect. Implementation of mitigation measures MM 4.1d and MM 4.1e would ensure that no net loss of wetlands would occur, pursuant to City Policy NR.2.1, and a *less than significant* impact would occur.

c) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR addressed potential direct and indirect impacts to Jurisdictional Waters of the U.S. (Jurisdictional Waters) as a result of wide-spread development of the General Plan Planning Area (GP DEIR, pp. 4.10-52 through 4.10-56). Policies and Action Items included in the General Plan would reduce impacts to Jurisdictional Waters, especially

Policy NR.2.1 which requires "no net loss" of wetlands (GP DEIR, p. 4.10-56). While no net loss of wetlands will occur regionally, some loss of Jurisdictional Waters will occur within the General Plan Planning Area (Ibid.). Because of this local loss of Jurisdictional Waters, the impact of the General Plan was found to be significant and unavoidable (Ibid.).

As indicated in a) above, seasonal wetlands and vernal pools on the project site represent potential habitats for vernal pool fairy shrimp, vernal pool tadpole shrimp, midvalley fairy shrimp, and California linderiella. Vernal pool fairy shrimp were identified onsite and vernal pool tadpole shrimp were found in some wetlands adjacent to the site, but not within the project area. California linderiella were observed during surveys in a variety of off-site seasonal wetlands, ponds, and riparian wetlands.

In order to reduce potential impacts to wetlands, the project proposes two phases. Phase I would include mining portions of the site that do not contain wetlands. Phase II would include mining activities in portions of the site containing wetlands. However, approvals and permits from the United States Army Corps of Engineers and the United States Fish and Wildlife Service, the Central Valley Regional Water Quality Control Board, and the California Department of Fish and Game are required prior to the start of any Phase II activities. Regardless of project phasing, operations within 250 feet of wetlands could result in a significant effect to Waters of the U.S. on and in the vicinity of the project site. Implementation of mitigation measures MM 4.1d and MM 4.1e would ensure that the project's impacts on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including vernal pools) are reduced to *less than significant*.

d) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. Impacts to habitat for raptors and other nesting birds were addressed in the GP-EIR (GP-DEIR, pp. 48 through 4.10-52). Raptors are protected by the California Department of Fish and Game and are considered a special-status species under CEQA. Just as with impacts to habitat for other special-status species, wide-spread development of the City and the General Plan Planning Area would result in a net loss of raptor and nesting habitat and a significant and unavoidable impact was expected (GP DEIR, pp. 52). Discussion of impacts to movement corridors was also included in the GP-EIR (GP DEIR, pp. 4.10-56 through 4.10-61). Development of greenfield areas of the General Plan Planning Area would change the biological condition and characteristics of the area, resulting in changes in animal movement throughout the area (GP DEIR, p. 4.10-56). While City Policies and Action Items would reduce this impact, loss and/or modification of movement corridors would still occur and the impact of the General Plan would be significant and unavoidable (GP DEIR, p. 4.10-61).

The onsite vegetation communities discussed above represent potentially suitable habitats for a number of regionally occurring special-status bird species including nesting raptors, nesting songbirds, and wintering or migrant birds. Tree nesting species that may occur onsite and in the surrounding vicinity include white-tailed kite, Cooper's hawk and Swainson's hawk. Both the white-tailed kite and the Cooper's hawk have been documented within the Rio del Oro project area in previous studies, through not within the project site. With the construction and operation of the proposed project, nesting sites and migratory routes for these special-status species as well as for more common bird and mammal species may be directly and indirectly affected. Implementation of mitigation measures MM 4.1a and MM 4.1b would ensure that impacts to nesting sites would be *less than significant*.

e) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR identified potential impacts to trees from implementation of the General Plan (GP DEIR, pp. 4.10-61 and 4.10-62). Development of greenfield areas of the City and the General Plan Planning Area could potentially result in the removal of special-status, landmark, and other trees (GP DEIR, p. 4.10-61). Landmark and oak trees would be adequately protected by City Policies and Action Items, as well as large wooded areas and urban trees. However, some loss of native trees would occur and the overall impact to trees from implementation of the General Plan would be significant and unavoidable (GP DEIR, p. 4.10-62).

Sierra Nevada Arborists conducted a survey of the Rio Del Oro Specific Plan area in 2003. ECORP overlaid the proposed project's site plans on the data provided by Sierra Nevada Arborists and found that 35 native oak trees of 6 inches or greater diameter at breast height (dbh) exist on the project site. While non-oak native species were surveyed, none above 18 inches dbh were identified by the report within the project site. The removal of 35 native oak trees as well as numerous unidentified non-native and native trees of varying sizes would require mitigation, pursuant to the City's Tree Ordinance. Several isolated cottonwood trees are known to exist on the project site within slickens soils found between tailing piles (Rio Del Oro DEIR, 1996). A portion of the project site is characterized as containing a cottonwood-willow riparian forest as well (Ibid.) Outside of this portion of the project, cottonwood trees are described in the Rio Del Oro Draft EIR as being in fair to poor health and limited signs of regeneration and reproduction are exhibited by these isolated cottonwoods. As such, their health is not considered "good" and the removal of these cottonwoods would not result in a significant effect. However, the removal of other trees found on-site may require mitigation, pursuant to the General Plan and the City's Tree Ordinance.

Mitigation Measure

MM 4.2 Prior to any site disturbance, a certified arborist or similarly qualified professional, approved by the City, shall conduct a full tree survey for the project site. The tree survey shall indicate the size, species, and general health of all trees located on the project site that exceed 6 inches diameter at breast height (dbh). If any native oaks or other native trees of 6 inches or greater dbh, multi-trunk native oaks or native trees of 10 inches or greater dbh, or non-native trees of 18 inches or greater dbh that have been determined by a qualified professional to be in good health are found to exist in the project site, such trees shall be avoided if feasible. If such trees cannot feasibly be avoided, the project proponent shall do one of the following prior to site disturbance within 100 feet of any on-site trees:

- All such trees that will be removed or otherwise damaged by project implementation shall be replaced at an inch-for-inch ratio. A replacement tree planting plan shall be prepared by a qualified professional or licensed landscape architect and shall be submitted to the City for approval before removal of trees; or

- The project proponent shall submit a mitigation plan that provides for complete mitigation of the removal of such trees in coordination with the City by a method comparable to an inch-by-inch replacement. The mitigation plan shall be subject to City approval.

If the City adopts a tree preservation ordinance at any time in the future, any future project activities shall be subject to that ordinance instead. If mitigation measure 3.10-3 of the Rio Del Oro Specific Plan EIR/EIS is satisfied, and the actions conducted pursuant to that measure include the proposed project site and the trees within, this measure shall be considered met and no further action is required.

Timing/Implementation: *Prior to approval of grading permits and prior to any site disturbance.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measure MM 4.2 will ensure that the removal of trees is consistent with the City's Tree Ordinances, resulting in a *less than significant* impact.

f) *No Impact/Reviewed Under Previous Document*. The GP-EIR addressed potential impacts related to conflicts between the General Plan and any adopted habitat conservation plan or natural community conservation plan (GP DEIR, pp. 4.10-62 and 4.10-63). While the South Sacramento Habitat Conservation Plan (SSHCP) and the Vernal Pool Recovery Plan are currently being prepared by the County and the U.S. Fish and Wildlife Service (respectively), no such plans have been adopted (GP DEIR, p. 4.10-63). Therefore, no impact was expected as a result of the General Plan.

Sacramento County does not currently have an adopted Habitat Conservation Plan. The South Sacramento Habitat Conservation Plan (SSHCP) is being prepared by the County and will be adopted within the next few years. However, the SSHCP is still being formulated and no portion of the plan has been adopted. Likewise, the Vernal Pool Recovery Plan is currently being prepared and no part of the plan has been adopted. The City has not committed to participating in either plan, though it may commit in the future. No Natural Community Conservation Plans are in effect in the project vicinity. Therefore, the proposed project would have *no impact* on any adopted Habitat Conservation Plans or Natural Community Conservation Plans.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
V. CULTURAL RESOURCES Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☒	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐	☒

EXISTING SETTING

Records searches and field examinations were conducted in preparation for the GP-EIR. The investigations included a records search at the North Central Information Center at California State University, Sacramento, a records search of the University of California, Berkeley Museum of Paleontology collections database, archival research at other repositories (e.g., California State Library), and field investigation of the General Plan Planning Area. The project vicinity was widely used by Native American groups in prehistory, but no evidence was found on-site of any artifacts or prehistoric sites. Developments and planned land uses within the region would contribute to potential conflicts with cultural and paleontological resources. These resources include archaeological resources associated with Native American activities and historic resources associated with settlement, farming, gold mining, and economic development. Because of these activities and resources, a Cultural Resources Inventory was conducted for purposes of the General Plan and found that there were no known cultural resources located on or around the Rio del Oro Planning Area.

The historic mine tailings on-site are the result of placer gold mining conducted in the late 19th century and early 20th century. According to the "Archaeological and Historical Investigations for the City of Rancho Cordova General Plan", mine tailings on-site are located within the American River Gold Mining District (Pacific Municipal Consultants, 2005). The district includes an area of dredge mine tailings extending from Folsom in the north to the eastern boundary of Mather Airport in the south. While the district is made up of several individual sites, the district is listed as historic resource CA-Sac-308-H by the GP-EIR. However, the area has neither been recorded as a district nor formally determined to be a district by the State Historic Preservation Officer. The dredge tailings located in resource CA-Sac-308-H represent mining operations between 1894 and 1962, but the mine tailings located on the project site date to the late 1960's. Therefore, these dredge mining tailings are not of sufficient age to be considered for registration with the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR).

No other historical, archeological, or paleontological resources or evidence of human remains were identified on the project site.

DISCUSSION OF IMPACTS

a) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR identified that known and unknown historic resources within the Rancho Cordova Planning Area could potentially be impacted by implementation of the General Plan (GP DEIR, pp. 4.11-9 through 4.11-14). These impacts were primarily associated with development in undeveloped areas and impacts to unknown resources in portions of the Planning Area that have not been studied. General Plan Policies mitigated some of the potential impacts to historical resources. However, as many resources could be located within the Planning Area that are previously unknown, accidental impacts may still occur and the impact of the General Plan was considered significant and unavoidable (GP DEIR, pp. 4.11-14).

Based on historical record searches conducted by City staff, records searches at the North Central Information Center at California State University, Sacramento, and the findings of the GP-EIR, it was determined that the mine tailings located on the project site do not meet the definition of historical resources provided by the California Code of Regulations, Title 14, Chapter 3, Subsections 15064.5, 15126.4, and 15331. However, the project site does include structures and test sites used by ~~Aerojet~~ the Douglas Aircraft Company (later MacDonnell Douglas, now owned by the Boeing Company) prior to 1960 for rocket testing activities. These test sites may be eligible for listing in the NRHP and the CRHR. Therefore, they are assumed to qualify as historic resources for the project site. Activities undertaken during construction and operation of the proposed project are not expected to result in the destruction of these resources, nor is the proposed project likely to result in total loss of value for these resources. Further protection is provided to some of these resources by a material transport conveyer owned and operated by Teichert to transport mined aggregate from west of the project site to their processing plant to the east. This conveyor includes berms and fencing that would protect many of the sensitive sites from incursion by project traffic and operations. Regardless of the protection granted by the berms and conveyors, the potential for uncontrolled truck traffic or other project activities to adversely affect these resources remains, resulting in a potentially significant impact. The following mitigation measures are provided to ensure that the proposed project avoids known cultural resources and any previously undiscovered cultural resources that may be uncovered during implementation of the proposed project (pursuant to City Action Item CHR.1.3.1).

Mitigation Measures

MM 5.1a The project proponent shall ensure that throughout all phases of the proposed project no mining activities or other ground disturbance occur within 150 feet of any structures or equipment located on-site as a result of historic rocket testing, including concrete pads associated with those activities. These structures are located in the general area of "Environmental Constraints Area C", as identified by the project proponent.

The project proponent shall coordinate with Planning Department staff to ensure that activities are excluded from the proper portions of the project site prior to site disturbance in order to ensure that no activities take place in these locations. All on-site employees and truck drivers shall be notified of those areas to be avoided prior to working on the site.

Timing/Implementation: *Coordination with Planning Department staff shall occur prior to any ground disturbance on-site. Measure shall be in force throughout all phases of the proposed project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

MM 5.1b The City Planning Department shall be notified immediately if any cultural resources (e.g. prehistoric or historic artifacts, structural features, unusual amounts of bone or shell, fossils, or architectural remains) are uncovered during construction. All construction must stop immediately in the vicinity of the find and an archaeologist that meets the Secretary of the Interiors Professional Qualifications Standards in prehistoric or historical archaeology or a paleontologist shall be retained by the project proponent to evaluate the finds and recommend appropriate action. The recommendations of the archaeologist and/or the paleontologist shall be implemented prior to continuing construction.

Implementation/Timing: *Throughout all phases of the proposed project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measures MM 5.1a and MM 5.1b will reduce any project-specific impacts to historical resources to *less than significant*.

b) *Less than Significant Impact with Mitigation Incorporation /Reviewed Under Previous Document*. See discussion a) above. Studies conducted during preparation of the GP-EIR and the Rio Del Oro EIR/EIS did not identify any currently registered or potential archaeological resources on the project site. Implementation of mitigation measure MM 5.1b would ensure that any previously unknown archaeological resources uncovered during construction and operation of the proposed project would be adequately protected. Therefore, the proposed project would result in a *less than significant* impact.

c) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR identified possible impacts to paleontological resources as a result of implementation of the General Plan (GP DEIR, p. 4.11-14). However, no such paleontological resources were identified in the Rancho Cordova Planning Area and City policy would protect unknown resources. For these reasons, the impact of the General Plan was found to be less than significant (GP DEIR, p. 4.11-15).

The Cultural Resources Inventory did not find any evidence of paleontological resources in the project area. The potential exists for unknown paleontological resources to be located on-site and these unknown resources could potentially be impacted during construction and operation of the proposed project. Implementation of mitigation measure MM 5b would ensure that any unknown paleontological resources are protected. Therefore, the proposed project would result in *less than significant* impacts to archaeological resources.

d) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The discussion in the GP-EIR concerning historic resources impacts included discussion of potential impacts to human remains [see discussion a) above]. Impacts were the same in that known resources were adequately protected but unknown human remains

outside established cemeteries could potentially be affected. Therefore, significant and unavoidable impacts as a result of the General Plan were expected (GP DEIR, p. 4.11-14).

There are no known cemeteries on the project site. No sign of abandoned or historic cemeteries was found during the Cultural Resources Inventory conducted for the purposes of the GP-EIR. However, due to the large Native American population known to reside in the general area in the past, the primary concern is the disturbance of hidden or unmarked grave sites. The proposed project area is not expected to contain any such sites, though concrete data on the location of all burial sites is not available. Therefore, there is some potential that activities undertaken on the project site may result in the accidental discovery of human remains. The following mitigation measure is included in order to protect any previously unknown human remains that may be uncovered during the proposed project, pursuant to City Action Item CHR.1.3.2.

Mitigation Measure

MM 5.2 The City Planning Department shall be notified immediately if any human remains are uncovered during construction. All construction must stop immediately in the vicinity of the remains. The Planning Department shall notify the County Coroner according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the procedures outlined in State CEQA Guidelines 15064.5(d-e) shall be followed.

Implementation/Timing: *Throughout all phases of the proposed project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measure MM 5.2 would ensure that any impacts to previously unknown human remains uncovered during the proposed project would be *less than significant*.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
VI. GEOLOGY AND SOILS Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death, involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	☒
iv) Landslides?	☐	☒	☐	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒	☒

EXISTING SETTING

Soils located on the project site consist of gravels that have been mined for gold and aggregate value during the late 1800's through the 1960's. Past dredge mining operations resulted in linear mounds of cobbles (tailings) throughout the project site. These tailing piles vary in height from 5 feet above the original ground surface to more than 75 feet. The base of these piles is typically between 100 and 300 feet wide. Tailing piles consist mainly of rounded cobbles of varying sizes with some fine sediment and clay interspersed between the cobbles. The soil between the tailing piles generally consists of fine grained soils and clays commonly referred to as "slickens". (Granite Construction Company, 2006)

No known active faults or Alquist-Priolo earthquake hazard zones exist in Sacramento County. Accurate seismic activity records for Sacramento County have been kept for the past 150 years and indicate that significant regional seismic activity was recorded in 1869, 1892, 1954, and 1966. Records indicate that the 1869, 1954, and 1966 events were centered in western Nevada and did not result in ground shaking or structural damage in the Sacramento area (GP-EIR, 2006). According to the soil study performed for the proposed Rio Del Oro project by ECORP Consulting, Inc. (which overlays the project site) and the NRCS soil mapping study (USDA,

1993), the soil types that are present on the proposed project site consist of Xerothents (mine tailings), Red Bluff Xerothents, and Slickens.

DISCUSSION OF IMPACTS

a)

i) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR stated that significant seismic shaking was not a concern within the Rancho Cordova Planning Area as there are no active faults within Sacramento County and because the City is not located within an Alquist-Priolo earthquake hazard zone (GP DEIR, p. 4.8-19). However, some minor seismic shaking is a possibility as the City is located within Seismic Zone 3, which is considered an area of relatively low ground shaking potential (GP DEIR, p. 4.8-20). Adherence to City policies as well as the California Building Code (CBC) and the Uniform Building Code (UBC) would ensure less than significant impacts as a result of implementation of the General Plan (GP DEIR, p. 4.8-21).

The proposed project is located within the incorporated boundaries of the City and would likewise not be subject to strong seismic shaking. The potential for impacts to public safety resulting from surface fault rupture, ground shaking, liquefaction or other seismic hazards is not considered to be an issue of significant environmental concern due to the infrequent seismic history of the area. Minor shaking is a concern as, according to the California Geological Survey, the project is located within Seismic Zone 3. No permanent structures would be constructed by the proposed project and mobile equipment such as that required by the proposed project is not strongly affected by seismic shaking and its ancillary effects. Therefore, the proposed project is expected to result in a *less than significant* impact.

ii) *Less than Significant Impact/Reviewed Under Previous Document*. See discussion under i) above.

iii) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR identified that seismic shaking was not a concern in the City [see discussion i) above]. Liquefaction is the process in which water is combined with unconsolidated soils as a result of seismic activities involving ground motions and pressure. Without strong ground motion, liquefaction is unlikely. Additionally, the water table is generally too low in the areas of the City to provide enough moisture for liquefaction to occur (GP DEIR, p. 4.8-20). Therefore, the impact of the General Plan was found to be less than significant.

As identified in the GP-EIR, the project site is located in an area in which strong seismic shaking is unlikely. The soil types underlying the project area are Xerothents (dredge tailings), Red Bluff Xerothents, and Slickens. None of these listed soil types are conducive to liquefaction (ECORP, 1996). Additionally, groundwater below the project site is ~~more than~~ located an average of 114 feet below the surface, further reducing the risk of liquefaction (Reclamation Plan, 2006; Fricke, 2007). Therefore, the proposed project would result in *less than significant* impacts from ground failure and liquefaction.

iv) *Less than Significant Impact with Mitigation Incorporation*. Due to the project's topography, which is characterized by flat terrain and relatively low-lying dredge tailings (between 5 to 75 feet in height), the potential for landslides is considered very low. Slopes within the Rancho Cordova General Plan Planning Area generally range from 0 to 8 percent. However, higher slopes are associated with mine tailings such as those located on the project site. Adjacent properties are comprised of similar topographical characteristics. Mine tailings, as they exist on-site, do not generally fail and do not generally experience landslides. However, as the proposed project could temporarily increase current slopes during the mining process, it is possible that a localized slide could occur during operation of the proposed project. A localized slide would not affect adjacent properties but could result in physical harm to workers on site.

Mitigation Measure

MM 6.1 As mining occurs on the project site, all tailing piles over 20 feet in height shall be cut at a slope of 1.5 horizontal to 1 vertical or shallower. At no time shall mining activity on such piles allow the slope to exceed that amount. If slopes cut at 1.5 to 1 appear to exhibit signs of potential failure (small localized slides, other signs of slope erosion, etc.) then mining shall continue at a grade of 2 feet horizontal to 1 foot vertical, or shallower, thereafter.

Implementation/Timing: *Throughout all phases of the proposed project.*

Monitoring/Enforcement: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measure MM 6.1 would ensure that impacts as a result of landslide or other slope failure would be *less than significant*.

b) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR identified potential impacts related to soil erosion from implementation of the General Plan (GP DEIR, pp. 4.8-21 through 4.8-23). These erosion impacts were generally associated with construction of new roadways and other capital infrastructure and development of undeveloped portions of the City and the Planning Area. Additional impacts were due to increases in runoff due to a net increase in impervious surfaces in the City. However, compliance with the City's Erosion Control Ordinance and the current NPDES permit conditions for the City would ensure that impacts resulting from implementation of the General Plan would be less than significant (GP DEIR, p. 4.8-23).

Construction of the proposed project will likely require typical grading and site preparation activities as well as the improvement and maintenance of paved and unpaved roadways on the project site and in portions of the adjacent area. Such activities can result in removal of topsoil, resulting in disturbance and exposure of underlying soils to erosion from a variety of sources including storm events and the use of water on-site for dust control. As the construction of the proposed project would impact more than one acre of land, a Stormwater Pollution Prevention Plan (SWPPP) will be required by the City of Rancho Cordova Public Works department, in compliance with the City's NPDES permit. Best management practices required by the SWPPP will ensure that erosion impacts are reduced.

During operation of the proposed project, primary actions would consist of standard mining activities on previously disturbed but largely undeveloped land. Mining activities can result in significant erosion related impacts. According to the Soil Survey of Sacramento County, mine tailings have a minimal erosion potential (USDA, 1993). While the proposed project would remove these mine tailings, the underlying soil would be preserved and grading to be conducted following mining would restore the topsoil and provide a level, less erosion prone surface. Additionally, the proposed project would be required to adhere to the City of Rancho Cordova Erosion Control Ordinance and the requirements of the City's NPDES permit. Therefore, the proposed project would result in *less than significant* erosion impacts.

c) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR stated that impacts relating to soil stability as a result of implementation of the General Plan would be minor (GP DEIR, p. 4.8-23). Primary concerns with soil stability in the City are associated with shrink/swell potential – the potential of soils to expand during wet seasons and shrink during dry seasons. Impacts due to soil stability would be mitigated by consistency with the UBC and the CBC (GP DEIR, p. 4.8-24). Therefore, the impact of the General Plan was found to be less than significant.

According to the Biological Resource Assessment (**Appendix B**), the project site consists primarily of one soil type, Xerothents (Dredge Tailings, Red Bluff, and Slickens). This soil type has a subsoil permeability of 60 inches or greater, and has a low to very low water holding capacity. The low probability of seismic activity in the region greatly reduces the chance for soil stability issues such as fracturing, liquefaction, subsidence, or landslide. These types of failures are discussed above. The underlying soil under the mine tailings is expected to consist of the same colloidial clay soils as is evident in adjacent properties. Clay soils commonly point to issues of shrink/swell, where the soil expands and contracts as water is absorbed into the soil during the wet season and evaporated away during the dry season. However, the proposed project does not propose any permanent structures that would be affected by shrink/swell. Considering the characteristics of the soil found on-site and the information provided above, the proposed project would result in *less than significant* impacts related to soil stability.

d) *Less than Significant Impact/Reviewed Under Previous Document*. See discussion c) above.

e) *No Impact/Reviewed Under Previous Document*. The GP-EIR identified potential soils impacts of the General Plan related to the use of alternative wastewater handling systems such as septic systems resulting from development of residential lots of two acres or more (GP DEIR, pp. 4.8-24 through 4.8-26). The portions of the Rancho Cordova Planning Area that could contain such lots exist outside the City boundaries in the outlying Planning Areas. For residential development with lots less than two acres in size, City policy requires the use of the public sewer system (GP DEIR, p. 4.8-26).

The employees of the proposed project will be served by temporary toilets to be supplied under contract by United Site Services. Wastewater generated by the proposed project is transported by United Site Services to the wastewater treatment plant near Elk Grove, to the southwest of the project site. Therefore, no alternative wastewater handling facilities will be required and *no impact* is expected.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
VII. HAZARDS AND HAZARDOUS MATERIALS Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	☐	☐	☒	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐	☒
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	☐
g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒	☐	☐	☒

EXISTING SETTING

Public health is potentially at risk whenever hazardous materials are proposed for use, transportation, or storage. It is necessary to differentiate between the "hazard" of these materials and the acceptability of the "risk" they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment, such as underground storage tanks or nearby airport operations. The risk to health and public safety is determined by the probability of exposure, proximity to a particular hazard, in addition to the inherent toxicity of hazardous materials. For a complete listing of all known hazardous materials sites within the City, refer to the GP-DEIR Section 4.4, Hazards and Human Health. The proposed project is located on the "~~MacDonald~~ McDonnell Douglas/Aerojet Inactive Rancho Cordova Test Site" (IRCTS), known to have surface contamination (ash and other byproducts of rocket testing) as well as groundwater contamination. Cleanup of these materials, pursuant to the requirements of the California Department of Toxic Substances

Control (DTSC) and the ~~Federal Environmental Protection Agency (EPA)~~ California Regional Water Quality Control Board (CRWQCB), is ongoing.

In order to quantify background levels of trace elements in the soils experienced on the project site, GenCorp contracted with Environmental Geoscience Research & Analytical Services (EGRAS) in 1994 to prepare a report titled "Sitewide Background Levels of Soil Trace Elements, Aerojet Propulsion Systems Plant and Adjacent Subsidiary Sites, Rancho Cordova, California." This study included testing of soils throughout the Aerojet properties including the IRCTS and thus the proposed project site. Within tailings located on the project site, arsenic was found at concentrations above both the Residential and Industrial remediation goal for arsenic set by the Environmental Protection Agency (EPA). Of the 15 test boring sites located within the project site, the maximum concentration of arsenic was 12 mg/kg. The minimum concentration encountered was 4.4 mg/kg. The average concentration encountered was 7.5 mg/kg with the higher concentrations located within mine tailings such as those to be collected and processed by the proposed project. The current remediation goal for the EPA is 2.8 mg/kg, an average of 4.7 mg/kg lower than the current concentration of arsenic found at the project site. (EGRAS, 1994)

DISCUSSION OF IMPACTS

a) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR identified potential impacts to the public or the environment through the routine transport, use, or disposal of hazardous materials (GP DEIR, pp. 4.4-23 and 4.4-24). Impacts concerned transportation of hazardous materials on the roadway network within the City and the routine use, storage, and disposal of hazardous materials related to construction during development and redevelopment in the City. Adherence to General Plan policies and federal, state, and local regulations regarding hazardous material were found to reduce potential impacts of the General Plan to a less than significant level (GP DEIR, pp. 4.4-24 and 4.4-28).

The proposed project will require the limited use of hazardous materials usually associated with mining activities. The transportation, use, and storage of these materials (including, but not limited to lubricants, fuels, solvents, diesel fuels, Acetylene gas, and miscellaneous propellants found in aerosol canisters) would be subject to local, State, and federal laws as well as City Safety Policies. Consistency with these laws and policies would limit hazards to the public from the use of these materials. Because the project site is surrounded by open space/undeveloped land, it is relatively isolated from other structures. There are currently homes under construction south of the project site, and more homes are expected to be constructed to the west of the project site during operation of the proposed project. While mining activities do involve the routine transport, use, or disposal of hazardous materials, the potential for a significant hazard is minimized through federal, State, and local policies and regulations (including City Policies and Action Items).

Soils located on the project site have been identified as containing concentrations of arsenic above the remediation goal of the EPA (EGRAS, 1994; MacDonald, 2007). In order to address the potential hazard to people working on the project site and those living and working on adjacent parcels, Integral Consulting, Inc., provided an assessment of the potential risks posed by on-site arsenic. According to the report provided by Integral Consulting (attached as **Appendix D**), arsenic concentrations on-site, while above the EPA's standards, are not elevated when compared with the background concentrations known to exist in the larger vicinity. Much of California exhibits similar levels of arsenic in

both soils and in groundwater (Ibid.). According to Integral Consulting, ingestion of soils containing this concentration of inorganic arsenic would not result in any significant absorption of arsenic by workers on site. Similarly, airborne dust inhaled by workers on-site or people on adjacent parcels would result in insignificant exposure to arsenic.

Dr. Lee Shull prepared "An Evaluation of the Health Implications of Arsenic Soil at the Rio Del Oro Site" in February, 2007 as a result of similar comments received on the Draft EIR for the Rio Del Oro Specific Plan. Of key importance to the proposed project was Dr. Shul's determination that the bioavailability of naturally occurring arsenic on the project site is "generally low" (Shull, 2007). The bioavailability of a substance is a general expression of the materials ability to be absorbed into the body. In the case of arsenic, the portion of the element that cannot be absorbed is excreted from the body without affecting the health of the individual. The particular form and concentration of arsenic found on the project site exhibits a bioavailability of approximately 30 percent, a relatively low level (Ibid.). As such, exposure to this form and concentration of arsenic is less likely to cause any health hazards in workers for the proposed project.

Dust control measures to be implemented by the proposed project would ensure that exposure to dust is at a minimum (Integral Consulting, 2007). Therefore, the proposed project is not expected to constitute a significant hazard to persons on and in the vicinity of the proposed project. As discussed above, the use, storage, and transportation of hazardous materials is expected to be minimal and will be conducted in a manner consistent with local, State, and federal regulations. Considering the above analysis, the proposed project is expected to result in *less than significant* impacts from hazardous materials.

b) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR described potential impacts related to the accidental release of hazardous materials (GP DEIR, pp. 4.4-24 through 4.4-28). Primary sources of potential accidental release concerned PCB-containing transformers, groundwater pollution, and underground storage tanks (USTs). Consistency with City Policies and Action Items, as well as all applicable federal, State, and local regulations would result in a less than significant impact from the General Plan (GP DEIR, p. 4.4-28).

As the proposed project is currently used for agricultural uses such as cattle grazing, and as the property was used previously for rocket testing and other scientific ventures, ~~it is likely~~ the potential exists ~~that~~ for dumped or buried hazardous or waste materials ~~could~~ to be located on-site. Also of concern is the potential for previously unrecorded underground storage tanks (USTs) which can present a hazard during removal if the USTs are currently leaking or compromised in some way. Because agricultural USTs were not required to be registered in Sacramento County, it is impossible to determine if USTs are located on-site or not. The following mitigation measures are included in order to reduce the potential hazards of waste, other materials, and USTs:

Mitigation Measures

MM 7.1a As construction and operation of the proposed project occurs, all debris, trash, refuse, and abandoned, discarded, and/or out-of-service items shall be removed from the proposed project sites and deposited off-site in an appropriate disposal facility and in a timely manner. No storage of any these materials shall occur on those portions of the site designated as environmentally sensitive areas/receptors (e.g. wetlands).

Timing/Implementation: *Measure shall be implemented throughout all phases of construction and operation. All such materials shall be completely removed prior to release of any portion of the site for other uses.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

MM 7.1b If any underground storage tanks (UST) are discovered during construction activities, the City Planning Department must be contacted and all construction activities within 500 feet of the UST shall cease immediately. The UST shall be removed as required by the County Environmental Management Department (EMD), Hazardous Materials Division. In addition, groundwater and soil investigation for contamination and remediation in the tank vicinity shall be conducted if required by the EMD.

Timing/Implementation: *Measure shall be implemented throughout all phases of construction and operation.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measures MM 7.1a and MM 7.1b would ensure that impacts related to accidental release of hazardous materials from implementation of the proposed project are *less than significant*.

c) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR discussed the siting of public schools as being subject to the siting requirements of the California Department of Education (GP-DEIR, p. 4.4-25). In addition to CEQA review, potential school sites will be reviewed by various agencies to ensure the new school site is safe from toxic hazards (GP-DEIR, p. 4.4-25). General Plan policies and actions will reduce the potential impacts of the General Plan from hazardous materials transport, use, and storage from surrounding uses, including school sites, to a less than significant level (GP DEIR, p. 4.4-28).

There are currently no schools located within one-quarter mile of the mining project. However, the GP-EIR identified a public/quasi-public space within one-quarter mile of the site that may possibly be used for a high school at a time after reclamation activities have concluded. Additionally, the Rio Del Oro Specific Plan, currently under consideration by the City, identifies five elementary schools and a middle school on the project site. The Rio Del Oro Specific Plan also identifies a high school and an elementary school within one-quarter mile of the western project boundary. The Folsom Cordova Unified School District (FCUSD) has not indicated that it has accepted ~~the~~ any of these school sites and no construction has begun. Because no known hazardous materials are being handled within the project site at this time, and because the proposed project involves only limited use of hazardous materials, the propose project would result in a *less than significant* impact related to the use of hazardous substances in the proximity of schools.

d) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR included information regarding federal and State listed hazardous materials sites as well as a map of such sites (GP DEIR, pp. 4.4-2 through 4.4-10). These sites included leaking underground storage sites, groundwater contamination plumes, PCB contaminated sites related to prior rocket engine testing (Aerojet/GenCorp), and other

smaller sites (pp. 4.4-5, 4.4-6). Impact discussions were included in discussions of accidental release of hazardous materials [see discussion b) above] and were found to be less than significant due to compliance with federal, State, and local laws and regulations (GP DEIR, p. 4.4-28).

The project site is located on the ~~Aerojet Superfund Site~~ IRCTS, which is listed as having past hazardous materials involvement, pursuant to Government Code Section 65962.5, including those sites identified in the GP-EIR (GP DEIR, pp 4.4-2, 4.4-4, & 4.4-5). The Aerojet groundwater contamination plume is located underneath portions of the project site. Additional groundwater contamination has occurred in the past as a result of testing operations conducted by McDonnell Douglas (then known as the Douglas Aircraft Company). Mining operations will excavate between 5 and 75 feet below surface level, as necessary for each row of mining tails. Depths of the contaminated groundwater supply ~~begin at~~ occurs an average 114 feet below surface level (Reclamation Plan, 2006; Fricke, 2007). Due to the average depth to groundwater, none of the contaminated water is expected to be exposed to the surface soils during mining operations. However, the project proponent proposes to use groundwater obtained from an existing well on-site for dust control and other associated mining operations. The project proponent has applied for a "Report of Waste Discharge" from the California Regional Water Quality Control Board in order to treat and use groundwater extracted from this well for these purposes. Consistency with the requirements and requests of the CRWQCB would ensure that hazards associated with the removal and use of this water would not be significant.

In addition to groundwater contamination, the project site contains several sites that exhibit surface contamination as a result of past mining activities. The DTSC is currently coordinating the removal of these materials as separate projects from the proposed project. If mining were to be undertaken in these contaminated areas, exposure to people on-site as well as off-site during transportation and use of mined aggregates could occur, resulting in a significant exposure. In order to allow for the cleanup and eventual release of some of these sites, the project proponent has designated "environmental constraints areas" in which either no mining will occur or mining may occur only after DTSC has released the site for development. These areas are depicted in **Figure 5**. A general description of these sites and their eventual disposition are listed in **Table 4** below.

TABLE 4
ENVIRONMENTAL CONSTRAINTS AREAS

Area Identifier	Name/Description	Disposition
A	Spray Field	~~Not to be mined.~~ Awaiting release from DTSC and CRWQCB.
B	Joint Burn Area	Northern portion not to be mined. Limited mining in southern portion awaiting release from DTSC and CRWQCB.
C	Sigma Complex	Awaiting release from ~~Aerojet~~ DTSC and CRWQCB.
D	WRD #1 Municipal Landfill	Not to be mined.
E	DM-14 Assembly Area	~~Not to be mined.~~ Awaiting release from CRWQCB.
F	Rice Hull Ash Area	Awaiting release from ~~Aerojet~~ CRWQCB.
G	Alpha/IOC-1 Complex	Not to be mined.
H	Bi-Dri Study Area	~~Not to be mined.~~ Awaiting release from DTSC and CRWQCB.

*Source: Cunningham Engineering, 2006 (See **Figure 5**); Fricke, 2007*
Notes: CRWQCB = California Regional Water Quality Control Board
DTSC = Department of Toxic Substances Control

Mitigation Measures

MM 7.2a No site disturbance shall occur within areas ~~A, B, D, E, G, or H~~ D or G of the Environmental Constraints Areas, as shown in **Figure 5** for the project at any time. No improvements of roads or other infrastructure existing in those areas shall be conducted unless clearance for such activity is provided by the City, ~~and~~ the Department of Toxic Substances Control (DTSC), and the California Regional Water Quality Control Board (CRWQCB) after adequate review of the proposed action and its environmental impacts are assessed by all parties.

New truck travel roads, either permanent or temporary, shall not be constructed within these areas at any time. Nor shall any existing roads within these areas be used during mining operations unless those roads are cleared for such use by the DTSC and CRWQCB.

~~Those portions of areas F and H that are planned for ash removal by the DTSC and Aerojet may be used for travel routes within the project area only after those areas are cleared for use by the DTSC.~~

Timing/Implementation: *Throughout all phases of the proposed project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department, in consultation with the California Department of Toxic Substances Control and the California Regional Water Quality Control Board.*

MM 7.2b No site disturbance shall occur within areas ~~C or F~~ A, B, C, E, F, or H of the Environmental Constraints Area, as shown in **Figure 5**, until such time as the Department of Toxic Substances Control (DTSC) and ~~GenCorp~~ the California Regional Water Quality Control Board (CRWQCB) has released those areas for mining. Documentation stating that those areas are safe for mining and that clearance has been given by both the DTSC and GenCorp must be provided to the City at least 10 days prior to initiation of mining activities or other site disturbance in those areas.

Timing/Implementation: *Throughout all phases of the proposed project.*

Enforcement/Monitoring: *California Department of Toxic Substances Control and the California Regional Water Quality Control Board, in consultation with the City of Rancho Cordova.*

Implementation of the mitigation measures MM 7.2a and MM 7.2b would ensure that the project's impacts on workers and the environment from exposure to contaminated groundwater and soils would be *less than significant*.

e) *Less than Significant Impact/Reviewed Under Previous Document*. The GP EIR identified potential impacts of development within an airport land use plan (GP DEIR, p. 4.4-28). The Mather Airport CLUP Safety Restriction Area overlies several portions of the City, restricting development in those areas to uses allowed within the CLUP. Adherence to General Plan policies, federal regulations, the Comprehensive Land Use Plan, and Mather Airport Planning Area provisions would reduce the potential for safety hazards. Therefore, the General Plan was found to have a less than significant impact (GP FEIR, p. 4.0-29).

The proposed project is located approximately two miles from Mather Airport. In order to provide guidance for land use within the vicinity of the airport in respect to hazards to people and structures on the ground, the Comprehensive Land Use Plan (CLUP) for Mather Airport outlines several Safety Restriction Areas (SRA). Projects located within these SRAs are expected to experience some hazard from aircraft (though generally very small). Areas outside these areas are not expected to be adversely affected by aircraft operating in the vicinity of Mather Airport. As the proposed project is located outside these areas, little or no hazard is expected to people on the ground in the project area as a result of aircraft. Therefore, a *less than significant* impact is expected.

f) *No Impact*. The proposed project is not located within two miles of any private airstrip. The nearest private airstrip to the project area is the Rancho Murrieta Airport, located more than eight miles to the southeast of the project area. Additionally, per the Federal Aviation Administration's requirements, aircraft in the airspace directly over the project area would be under the control of Mather Airport's control tower, not the control of a private airport. Therefore, the proposed project would have *no impact* associated with hazards near private airstrips.

g) *Less than Significant Impact/Reviewed Under Previous Document*. The GP EIR analyzed potential impacts that could impair implementation or physically interfere with the Sacramento County Multi-Hazard Disaster Plan (GP DEIR, p. 4.4-29). The EIR found that implementation of the proposed roadway system within the General Plan would improve city roadway connectivity, allowing for better emergency access to residences as well as

evacuation routes and resulting in a net positive effect on implementation success of the Sacramento County Multi-Hazard Disaster Plan. Therefore, the General Plan was found to have a less than significant impact (GP DEIR, p. 4.4-29).

Typical physical changes to the environment that could impede adopted emergency response plans such as the Sacramento County Multi-Hazard Disaster Plan typically concern impedances to traffic circulation and other associated features that would slow the response to any indicated emergency. The project site would be connected to the City's roadway network at one or more locations along White Rock Road and at one location on Douglas Road. The proposed project would improve existing roadways within the project site as well as some external roadways such as the dilapidated roadway that leads south to Douglas Road. The improvement of these roadways and the addition of new haul roads would provide adequate access on-site for disaster response. Additionally, the proposed project would not include a large number of employees, minimizing the effects of a large disaster and the necessary response to the site. Therefore, the proposed project would result in a *less than significant* impact associated with adopted emergency planning.

h) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP EIR identified potential impacts of safety hazards associated with wildland fires due to the construction of residential areas adjacent to open space and natural areas (GP DEIR, pp.4.12-9). Adoption of General Plan policies and action items, as well as required project review by the Sacramento Metropolitan Fire District (SMFD), would ensure minimal impacts to residential areas from wildland fires, resulting in a less than significant impact from implementation of the General Plan (GP DEIR, p. 4.12-10).

The proposed project is situated on an undeveloped site that includes large areas of non-native grassland either within or immediately adjacent to the project site. As some operations of the proposed project, such as maintenance of vehicles and equipment, may include sources of flame (such as from welding), the potential for wildfire exists as the result of the proposed project. While homes are not located immediately adjacent to the project site, it is conceivable that homes will be constructed directly to the west during the life of the proposed project. In order to prevent fire impacts to these future structures, the following mitigation measure is included:

Mitigation Measure

MM 7.3 No activities that include the use of open flame or sparks, such as welding or burning of waste materials, shall be conducted except in areas previously cleared by mining and devoid of vegetation or within the "sales and staging" area of the project site (as shown in **Figure 4**). Operations that could ignite fires shall be surrounded by a fire buffer of at least 15 feet on all sides. This buffer shall provide protection to any flammable materials including existing vegetation. Operations that could ignite fires shall not be conducted during any high wind events (winds generally in excess of 15 miles per hour).

The project proponent shall ensure that spark arrestors are installed and operating normally within the exhaust system of all engines in mining and processing vehicles and equipment at all times. All vehicles used on the project site shall be equipped with fire extinguishers and all on-site personnel shall receive training in their use and application.

An Emergency Communication Plan shall be developed for the proposed project that describes clear procedures to follow in the event of a fire on the project site. A copy of this plan shall be provided to the City of Rancho Cordova Planning Department for reference purposes prior to the initiation of mining activities.

Timing/Implementation: *Throughout all phases of the proposed project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department and the Sacramento Metropolitan Fire District.*

Implementation of mitigation measure MM 7.3 would ensure that the proposed project would have a *less than significant* impact with regards to wildland fire.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
VIII. HYDROLOGY AND WATER QUALITY Would the project:					
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?	☐	☒	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☒	☐	☐	☒
e) Create or contribute to the potential for discharge of storm water from material storage areas, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas?	☐	☒	☐	☐	☒
f) Create or contribute to the potential for discharge of storm water to impair the beneficial uses of the receiving waters or areas that provide water quality benefit?	☐	☒	☐	☐	☒
g) Create or contribute to the potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and water bodies?	☐	☒	☐	☐	☒
h) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐	☒
i) Otherwise substantially degrade water quality?	☐	☐	☒	☐	☐
j) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒	☒
k) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☒	☐	☒
l) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?	☐	☐	☒	☐	☒
m) Inundation by seiche, tsunami or mudflow?	☐	☐	☐	☒	☐

EXISTING SETTING

The proposed project site currently consists of undeveloped vacant land. Natural drainage of the site flows towards the southwest, though local drainage and surface flows are hampered by the tailing piles and valleys. There are no creeks, streams, or canals within or on the boundaries of the ~~property~~ project site. While Morrison Creek does exist south of the project site, no disturbance to Morrison Creek is planned by the proposed project. The proposed project site is within the area of groundwater contamination ~~from the Mather Groundwater Contamination Plume (RCGP DEIR, Figure 4.4-1)~~ resulting from previous rocket testing and other operations on the IRCTS [see discussion d) of Checklist VII, "Hazards and Hazardous Materials" above]. The proposed project site lies outside of both the 500-year and 100-year Flood Zones (RCGP DEIR, Figure 4.9-2).

DISCUSSION OF IMPACTS

a) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR identified potential surface and ground water quality impacts that would occur as a result of implementation of the General Plan (GP DEIR, 4.9-34 through 4.9-40). Both impacts of the General Plan were found to be less than significant with implementation of City Policies and Action Items as well as compliance with the City's National Pollution Discharge Elimination System (NPDES) Permit conditions.

The proposed project originally included the extraction of groundwater from an existing ~~monitoring~~ water supply well on the project site (well number 1054 of the ~~Inactive Rancho Cordova Test Site~~ IRCTS). The groundwater would be treated using an activated charcoal process in order to remove trace amounts of volatile organic compounds (VOCs) found during preliminary testing of the monitoring well. After treatment, this water would be used in aggregate processing operations and as dust control on the project site. During the public comment period for this document, CRWQCB and DTSC expressed serious concerns about the adequacy of well 1054 to serve the proposed project. Concerns were also raised that use of water from well 1054 would adversely affect remediation efforts underway in the Sigma Complex area. As such, the City requested the project proponent acquire a new source of water for the proposed project.

In 2005 the Boeing Company installed a groundwater extraction and treatment (GET) plant in the southern part of the IRCTS, immediately adjacent to Douglas Road approximately 0.4 miles to the east of the intersection of Douglas Road and Sunrise Boulevard. This groundwater aquifer is known as the Southern Groundwater Study Area (SGSA). The installation of the SGSA GET was conducted as part of a Remedial Action Plan produced by DTSC. The purpose of the Remedial Action Plan was to contain volatile organic compounds (VOCs) found in the groundwater underlying the site. The environmental effects of this groundwater extraction and treatment were documented in a Mitigated Negative Declaration certified by DTSC in January 2005 (State Clearinghouse #2005101077). Upon treatment the groundwater outflow from the SGSA GET is currently released into Morrison Creek just north of the treatment plant location. Rather than release this treated water, the project proponent proposes to use this water as a primary source of water for the project.

In addition to the SGSA GET, the proposed project would require the temporary use of water provided by the Sacramento County Water Authority (SCWA) from an existing water supply line located under White Rock Road along the northern boundary of the project. Water provided by SCWA to the project site meets or exceeds water quality standards for

drinking water. As such, discharge of this water would not result in any violation of water quality standards.

As the proposed project would ~~extract groundwater and~~ discharge ~~that water~~ treated groundwater onto the site, a Waste Discharge application is required by the CRWQCB. ~~This application begins a process mandated by CRWQCB which may include the issuance of a NPDES permit for the project.~~ A Waste Discharge permit and associated Waste Discharge Requirements were placed upon the SGSA GET upon approval by DTSC and CRWQCB. Conditions placed on the project by the CRWQCB ~~prior to approval of discharge~~ would ensure that impacts to surface waters from the proposed project would be *less than significant* and that all actions would be consistent with local and State regulations for waste discharge.

b) *Less than Significant Impact/Reviewed Under Previous Document*. The GP EIR identified potential ground water supply and recharge impacts (GP DEIR, p. 4.9-43 through 4.9-57). Both the addition of impervious material as well as additional use of groundwater in the region would result in significant and unavoidable impacts to groundwater levels from implementation of the General Plan (GP DEIR, p. 4.9-57).

As discussed above, the proposed project includes the ~~extraction of~~ use of groundwater from an existing ~~monitoring well on-site~~ extraction and treatment plant for use during operation of the project. Estimates as to the proposed project's water usage range from between 49.4 acre feet per year and 148.2 acre feet per year. ~~The extraction of this quantity of water from the aquifer is not expected to result in a significant drop in the groundwater level below the site.~~ The wells extracting this groundwater were installed and operating prior to receipt of the application for the proposed project. The environmental effects of such extraction were included in a Mitigated Negative Declaration certified by DTSC in January 2006. The proposed project would not increase the quantity of water extracted at this location. Water usage from SCWA is likewise supplied by previously installed and operating wells. Therefore, effects to the underlying groundwater level are not expected. Groundwater extraction wells for the purpose of serving current or planned development in the City are not located within the vicinity of the proposed project or the SGSA GET, which will serve the project. Therefore, the proposed project is expected to have a *less than significant* impact on local groundwater table levels and availability of groundwater for existing and planned development.

c) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR identified potential impacts due to erosion and siltation as a result of new development in the City and the Planning Area (GP DEIR, p. 4.9-34 through 4.9-39). Adherence to City policies, action items, the conditions of the City's NPDES permit, and the City's Erosion Control Ordinance would result in less than significant impacts related to erosion and siltation as a result of implementation of the General Plan (GP DEIR, p. 4.9-39).

The surface hydrology of the project site was heavily disrupted during historic gold mining of the site. As such, there are no streams or rivers located on-site. However, the upper branches of Morrison Creek are located south of the project site. The access road that will allow project traffic to access Douglas Road would cross this creek at three locations, including an existing culvert, placed by McDonnell Douglas during rocket testing operations. The addition of repetitive truck traffic across ~~this~~ these culverts could result in the partial or complete collapse of the culverts, substantially affecting Morrison Creek in the wet season.

If the culverts were to fail, blockage of the creek would result and effects such as siltation, flooding, erosion, and other typical effects of streambed damage would occur.

Mitigation Measure

MM 8.1 The project proponent shall have a licensed professional engineer evaluate the structural integrity of the crossings of Morrison Creek on the private road north of Douglas Road in order to determine whether the crossings will handle the increased loads associated with the proposed project. Final design and specifications of any improvement of the crossings required is to be approved by the licensed engineer and submitted to the City for review and approval. All required permits shall be obtained for any improvement, including but not limited to a Streambed Alteration Agreement from the California Regional Water Quality Control Board.

Improvements to the crossings are the full financial responsibility of the project proponent. Improvements must be constructed prior to use of the access road to Douglas Road. If this access road is not to be used by the project, no improvement of the crossings is required.

Timing/Implementation: *Prior to use of the southern access road to Douglas Road.*

Enforcement/Monitoring: *City of Rancho Cordova Public Works Department.*

Implementation of mitigation measure MM 8.1 would ensure that impacts to Morrison Creek are *less than significant*. Compliance with the City's NPDES permit, the required SWPPP for the project, and City Policies would ensure that other impacts related to surface water would be *less than significant.*

d) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR identified potential impacts from flooding due to implementation of the General Plan (GP DEIR, p. 4.9-41 through 4.9-43). These impacts were associated with the addition of impermeable surfaces, primarily roads, within the City. City Policies and Action Items would be adequate to reduce any flooding impacts. Therefore, the GP-EIR found that the impact of the General Plan on flooding would be less than significant (GP DEIR, p. 4.9-43). See discussion c) above for project-specific impacts.

e) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. See discussion a) above for information on the GP-EIR and impacts to water quality. Construction and operation of the proposed project would require heavy machinery such as graders, excavators, mobile processing equipment, and other machinery typically required for earthmoving and surface mining. Maintenance and fueling of this machinery could result in impacts to surface waters and runoff from the project site due to accidental spills and minor releases of fuels and lubricants as a result of normal use. An on-site dumpster will be used to collect solid waste and it will be disposed of at existing landfills. Operation of the proposed project will require the limited use of certain lubricants, fuels, and other potentially hazardous materials. Improper material delivery, handling, and removal could also result in a significant impact to surface waters.

Mitigation Measure

MM 8.2 The project proponent shall include the specific BMPs in the Stormwater Pollution Prevention Plan (SWPPP) for the proposed project. Additionally, these BMPs shall be implemented throughout the operation of the proposed project. All BMPs shall be executed to the level of standard published by the California Stormwater Quality Association's Construction Stormwater BMP Handbook. BMPs to be utilized shall include, but are not limited to:

- NS-8 Vehicle and Equipment Cleaning;
- NS-8 Vehicle and Equipment Fueling;
- NS-10 Vehicle and Equipment Maintenance;
- WM-1 Material Delivery and Storage;
- WM-2 Material Use;
- WM-3 Stockpile Management;
- WM-4 Spill Prevention and Control;
- WM-5 Solid Waste Management; and,
- WM-6 Hazardous Waste Management.

Timing/Implementation: *Measures shall be included in the SWPPP for the project and on all improvement, grading, or mining plans. All measures shall be implemented throughout all phases of the proposed project.*

Enforcement/Monitoring: *City of Rancho Cordova Public Works Department in coordination with the County of Sacramento Department of Water Resources.*

Implementation of mitigation measure MM 8.2 as well as the remainder of the SWPPP for the proposed project and the requirements of the City's NPDES permit will ensure that impacts are *less than significant*.

f) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document.* See discussions a), b), and d) above for information on the GP-EIR and stormwater impacts from the General Plan. The project site does not contain any receiving waters or areas of water quality benefit. Additionally, as the proposed project would not increase the current quantity of impervious surfaces on-site and because the soil condition is currently well-drained, additional stormwater than that experienced currently will not be generated as a result of the proposed project. Therefore, runoff from the project site will not be increased. See discussions a), c), and d) above for more information on runoff impacts of the proposed project. Considering the information provided above as well as consistency with City Policy, the proposed project is expected to have a *less than significant* impact to receiving waters.

g) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. See discussion f) above.

h) *Less than Significant/Reviewed Under Previous Document*. As discussed in discussion f) above, the proposed project is not expected to result in a significant increase in stormwater runoff. Little or no impervious surfaces are expected to be added by the proposed project.

The drainage of the site and the high water infiltration rate of the project site lessens the impact of stormwater runoff.

The proposed project would construct a staging and sales area in the northern portion of the site. This staging area would be approximately 23 acres in size. The grading and preparation of this staging area would result in an area of lower permeability than the existing soil. Stormwater runoff from the staging area would be directed to a stormwater retention basin to be constructed immediately adjacent to the staging area. This basin would hold stormwater and allow for the slow release of that water to the existing on-site drainage. The on-site basin would prevent stormwater collected on-site from exceeding the capacity of the on-site hydrology. Therefore, the proposed project would have a *less than significant* impact in regards to stormwater capacity.

i) *Less than Significant Impact*. Water quality impacts from both the construction phase and operation phase of the proposed project have been addressed in the discussions above and found to be less than significant. Adherence to a SWPPP would reduce many of the anticipated impacts to water quality from the construction phase of the proposed project. Adherence to City policies and action items would further reduce any potential water quality impacts. The proposed project would utilize groundwater that is known to be contaminated with perchlorate and ~~other~~ VOCs, byproducts of rocket testing conducted on the site and adjacent sites in the past. However, before that water could be used on site it would be treated to drinkable quality or better by ~~GenCorp~~ the Boeing Company, as enforced by DTSC and ~~the federal Environmental Protection Agency~~ CRWQCB. Therefore, implementation of the proposed project would result in *less than significant* impacts related to water quality.

j) *No Impact/Reviewed Under Previous Document*. The GP-EIR discussed impacts related to flooding, which included consideration of housing within a 100-year flood hazard area (GP DEIR, pp. 4.9-41 through 4.9-43). City Policies and Action Items would prevent either an increase in the 100-year floodplain from the result of the construction of any structures as or the placement of housing within the 100-year floodplain. Therefore, impacts from the General Plan were found to be less than significant (GP DEIR, p. 4.9-43).

The proposed project does not include the construction or provision of any housing. All employees will be housed off-site and no permanent structures are to be constructed by the proposed project. As the proposed project would not construct housing of any kind, the project would result in *no impact* regarding housing in the 100-year floodplain.

k) *Less than Significant Impact//Reviewed Under Previous Document*. See discussion j) above. The situation for residences is identical for other structures on site. Therefore, the impact is identical as well.

l) *Less than Significant Impact/Reviewed Under Previous Document*. See discussions c), d), h), j), and k) above for information on the GP-EIR's findings regarding flooding impacts. As discussed above, flooding impacts on-site and at adjacent sites as a result of actions by the proposed project are not considered to be significant. According to information provided in the GP-EIR (2006) and the City's Redevelopment Plan EIR (2006), the proposed project does not lie within the vicinity of any levies. The Folsom Dam and the Natomas Dam are both within five miles of the proposed project. However, the topography of the region prevents flooding as a result of failure of either of those structures from reaching the project site. The project site is located entirely outside the 100-year and projected 500-year

floodplains, further precluding the risk of flooding. Therefore, a *less than significant* impact is expected.

m) *No Impact*. The proposed project site is not located near the Pacific Ocean, nor is it near a large water body that would be capable of creating seiches or tsunami. All steep slopes on-site are associated with mine tailings, which are not susceptible to mudflow when saturated. Therefore, there would be *no impact* caused by water inundation from seiches, tsunami, or mudflow.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
IX. LAND USE AND PLANNING Would the project:					
a) Physically divide an existing community?	☐	☐	☒	☐	☒
b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒	☒

EXISTING SETTING

The proposed project site lies within the Rio Del Oro Planning Area, as identified in the General Plan. Within the Planning Area, the project site is identified as an area for Residential-Mixed Density (General Plan p.79-82). Residential-Mixed Density indicates a mix of residential densities with target average density in the medium density range (General Plan, p.46). Currently, this Planning Area is entirely undeveloped and is presently designated for surface mining and reclamation activities.

DISCUSSION OF IMPACTS

a) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR described possible impacts related to the division of existing communities (GP DEIR, pp. 4.1-38 through 4.1-40). The GP-EIR states that development and redevelopment described in the General Plan was specifically designed so that barriers between communities would be prevented. Additionally, City policies and action items were included in the General Plan to further prevent divisions of communities. The GP-EIR found that impacts of the General Plan to existing communities would be less than significant (GP DEIR, pp. 4.1-39 and 4.1-40).

The proposed project is located on the eastern edge of development within the City of Rancho Cordova. Properties to the north and east of the project site are currently undeveloped. Development of the proposed project is planned; however such development in independent of the proposed project. The proposed project would not impede the use of any existing roadways in the City, nor would it split two or more areas of existing development. It is located at the current edge of the City's developed area and would be complete prior to development of parcels to the north and east. Therefore, the proposed project is not expected to divide an existing community and a *less than significant* impact is expected.

b) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR included discussion of potential impacts to adopted land use plans, policies, and regulations of other jurisdictional agencies in the area (GP DEIR, 4.1-46 through 4.1-56). Conflicts were identified between the General Plan and the Sacramento County General Plan and the

Mather Airport Comprehensive Land Use Plan (Mather CLUP). While City policies were included in the General Plan to reduce these conflicts, significant and unavoidable conflicts were expected as a result of implementation of the General Plan (GP DEIR, p. 4.1-56; GP FEIR, p. 4.0-4).

The proposed project is located entirely within the current incorporated boundaries of the City of Rancho Cordova. The General Plan includes specific Policies and Actions for the purpose of mitigating or preventing impacts to the environment. Some of these Policies and Actions have been restated as mitigation measures in this MND. The proposed project will be required to adhere to all City Policies and Actions in regards to these policies as part of the approval process for the project. The proposed project has been analyzed by the City Planning Department and has been found to be consistent with both the General Plan and the Aerojet Special Planning Area code, adopted prior to incorporation of the City and incorporated by reference upon incorporation of Rancho Cordova. Therefore, the proposed project would result in a *less than significant* impact in regards to current Policies adopted for the purpose of mitigating or avoiding an environmental effect.

c) *No Impact/Reviewed Under Previous Document*. The GP-EIR addressed potential impacts related to conflicts between the General Plan and any adopted habitat conservation plan or natural community conservation plan (GP DEIR, pp. 4.10-62 and 4.10-63). While the South Sacramento Habitat Conservation Plan (SSHCP) and the Vernal Pool Recovery Plan are currently being prepared by the County and the U.S. Fish and Wildlife Service (respectively), no such plans have been adopted (GP DEIR, p. 4.10-63). Because of this, the General Plan would have no impact on adopted plans (Ibid.).

Sacramento County does not currently have an adopted Habitat Conservation Plan. The South Sacramento Habitat Conservation Plan (SSHCP) is being prepared by the County and will be adopted within the next few years. However, the SSHCP is still being formulated and no portion of the plan has been adopted. Likewise, the Vernal Pool Recovery Plan is currently being prepared and no part of the plan has been adopted. The City has not committed to participating in either plan, though it may commit in the future. No Natural Community Conservation Plans are in effect in the project vicinity. Therefore, the proposed project would have *no impact* on any adopted Habitat Conservation Plans or Natural Community Conservation Plans.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
X. MINERAL RESOURCES Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒	☒

EXISTING SETTING

The primary mineral resources available within the City of Rancho Cordova consist of gravel and soils used for site preparation, paving, and roadway construction in the vicinity. There are no oil and gas resources within the City of Rancho Cordova. The Surface Mining and Reclamation Act (SMARA) (Cal. Pub. Res. Code Section 2710, et seq.) directs the State Geologist to identify and map the non-fuel mineral resources of the State in order to show where economically significant mineral deposits occur and where they are likely to occur based upon the best available scientific data. The California Geological Survey and the State Mining and Geology Board are the state agencies responsible for the classification and designation of areas containing, or potentially containing, significant mineral resources. Areas known as Mineral Resource Zones (MRZs) are classified on the basis of their potential to contain valuable resources. While the project site is known to contain mineral resources, it is not classified as a MRZ.

DISCUSSION OF IMPACTS

a) *No Impact/Reviewed Under Previous Document*. The GP-EIR identified potential impacts resulting from the loss of availability of mineral resources in the General Plan Planning Area (GP DEIR, pp. 4.8-26 through 4.8-27). Only those areas already identified as either MRZ-2 or as containing existing mining operations were expected to be impacted by development of the General Plan Planning Area (GP DEIR, p. 4.8-26). Even with adoption of City Policies and Action Items regarding mineral resources and mining, the General Plan would still have a significant and unavoidable impact (GP DEIR, p. 4.8-27).

While the project site it not listed as an area likely to contain mineral resources, mine tailing piles on-site point to the existence of extensive aggregate resources. The purpose of the proposed project is to mine these resources for use in roadway construction and other paving in the region. Therefore, while the proposed project would remove these resources, they would be used locally and would benefit the City, adjacent Cities, and the County. Therefore, *no impact* from the loss of a mineral resource is expected.

b) *No Impact/Reviewed Under Previous Document*. See discussion a) above.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
XI. NOISE. Would the project result in:					
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?	☐	☒	☐	☐	☒
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐	☒
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	☐

EXISTING SETTING

An Environmental Noise Analysis was conducted in May, 2006 for the proposed project by Brown-Buntin Associates, Inc. (BBA) in order to determine the likely noise impacts on the area as a result of the proposed project (see **Appendix C**). This analysis was updated in February, 2007 after the City identified areas of additional detail that were required. According to the report, operations at aggregate facilities, such as the proposed project, typically consist of the excavation of aggregate material using front-loaders and or self elevating scrapers, the transfer of that material via truck or conveyor to the processing plant, where it is crushed and screened into various sized products, and the load out of the material via heavy trucks. During preparation of the Environmental Noise Analysis, a continuous noise measurement was conducted for the project in November 2005, which measured the ambient daytime noise level at 57.1 decibels of equivalent continuous noise level (dB L_{eq}). Ambient noise sources included cattle vocalizations, distant traffic, aircraft overflights, and other mining operations (not a part of the proposed project).

Noise generated by the site is expected to result from two main sources: (1) the portable aggregate processing equipment and (2) the separation of aggregate material from the mine tailings (mining operations). The noise generation of aggregate processing varies by size, type of equipment, and hours of operation, normally ranging between 80 to 90 dB L_{eq} at a distance of 100 feet from the processing plant equipment (City of Rancho Cordova, 2006). The noise analysis performed by BBA identified that aggregate processing would result in 70 dB L_{eq} at a distance of 600 feet from the center of the processing equipment (2006). Noise generated by

mining operations is expected to result in 70 dB Leq at a distance of 100 feet from the center of mining operations.

Noise is also expected to be generated by truck traffic transporting aggregate materials mined and processed by the proposed project to area projects that utilize such materials. White Rock Road, the primary access road for the proposed project, currently operates at a noise level of 68.4 dB at 50 feet from the centerline of the roadway (BBA, 2006). The addition of project truck traffic would result in an increase of 1.1 dB to 69.5 dB at 50 feet (Ibid.).

DISCUSSION OF IMPACTS

a) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR addressed increases in noise levels as a result of buildout of the General Plan (GP DEIR, pp. 4.7-20 through 4.7-30). Significant and unavoidable impacts were expected due to construction noise, increased traffic noise, and the potential construction of noise generating land uses (GP DEIR, pp. 4.7-22, 4.7-27, 4.7-30). Policies and Actions included in the General Plan would reduce these impacts; however, various factors exist throughout the Planning Area that would make total mitigation impossible. Therefore, the impact of the General Plan remained significant and unavoidable.

Current City standard noise exposure maximums for transportation noise sources such as truck traffic on White Rock Road is 60 dB L_{eq}. White Rock Road is currently operating at a level at which construction of residences, such as those proposed for the Rio Del Oro Specific Plan, cannot occur without mitigation of existing noise levels. The proposed project would only contribute an additional 1.1 dB L_{eq} of noise to White Rock Road, an increase of less than 1.8 percent. This is a minor contribution and is not considered to be a significant increase in noise.

According to the General Plan, impacts to adjacent land uses from stationary sources of noise in the City are limited to 55 dB L_{eq} in daylight hours and 45 db Leq during nighttime hours. A reduction in 5 dB L_{eq} (to 50/40 dB L_{eq}) is mandated for uses that generate tonal, repetitive, or impulsive noise. Impulsive noise is defined as sound of short duration, usually less than one second, with an abrupt onset and decay. Impulsive sounds include explosions, drop forge impacts, and the discharge of firearms. Tonal noises are generally defined as any sound which can be distinctly heard as a single pitch or a set of single pitches. Repetitive noise is generally defined as noises that are regularly repeated in such a manner as to cause annoyance. For example, back-up “beepers” and pile drivers are both sources of repetitive noise.

Noise generated by aggregate mining operations consists of diesel-powered equipment noise, such as that from scrapers, bulldozer, loaders, and trucks, as well as noise generated by the aggregate processing crushers and vibrating screens. Vehicle noises are not expected to be tonal, repetitive, or impulsive. Noise generated by the vibrating screens used in the aggregate processing operation can qualify as tonal at very short range. However, over increasing distances the high-frequency screen noise tends to reduce greatly due to air and ground absorption, resulting in a broad-band, non-tonal sound at distance (BBA, 2007). In order to provide a specific analysis of the noise generated by the aggregate processing equipment to be used on the project site, BBA conducted an analysis of the noise generated by the actual mobile processing plant intended for use on the project site. The results of this analysis are shown in **Figure 6** below.

FIGURE 6
MEASURED FREQUENCY SPECTRUM – MOBILE AGGREGATE PROCESSING PLANT AT 200 FEET

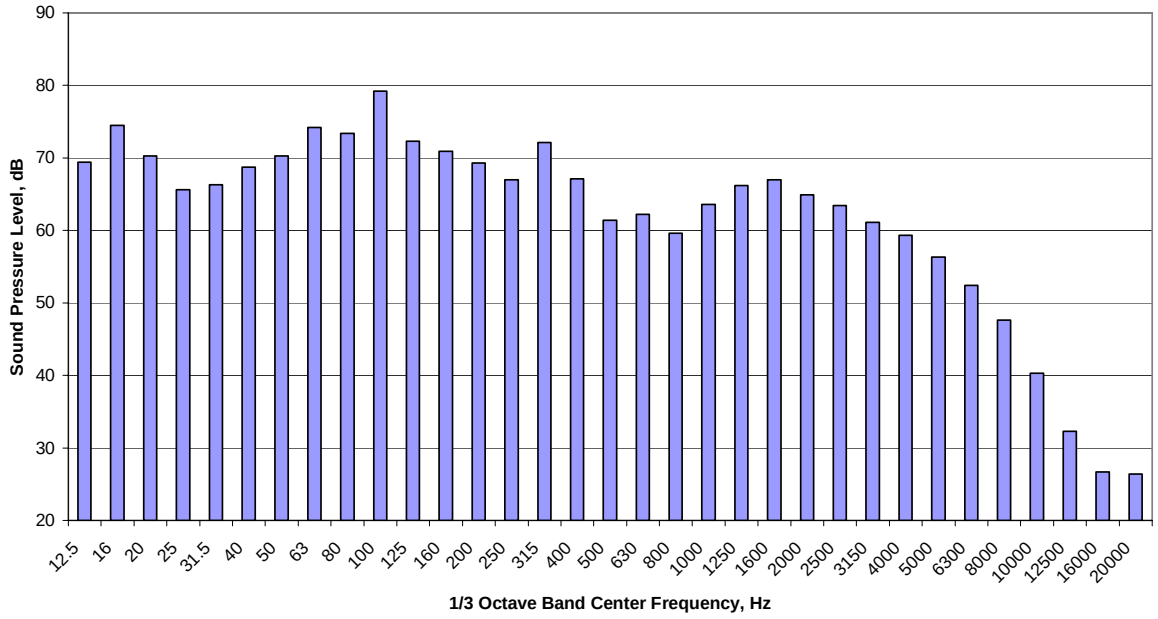


Figure Source: BBA, 2007

As shown in **Figure 6** above, the processing plant is not expected to generate any clear tones at a distance of 200 feet. Therefore, the proposed project is not expected to generate any tonal noises at a distance of 200 feet or greater.

In order to test for impulsive noise, BBA analyzed noise generated by a comparable aggregate processing plant to determine if any significant impulsive noise was generated by the plant at a distance of 700 feet. The results of that analysis are shown in **Figure 7** below.

FIGURE 7
TIME HISTORY OF AGGREGATE PLANT NOISE AT 700 FEET

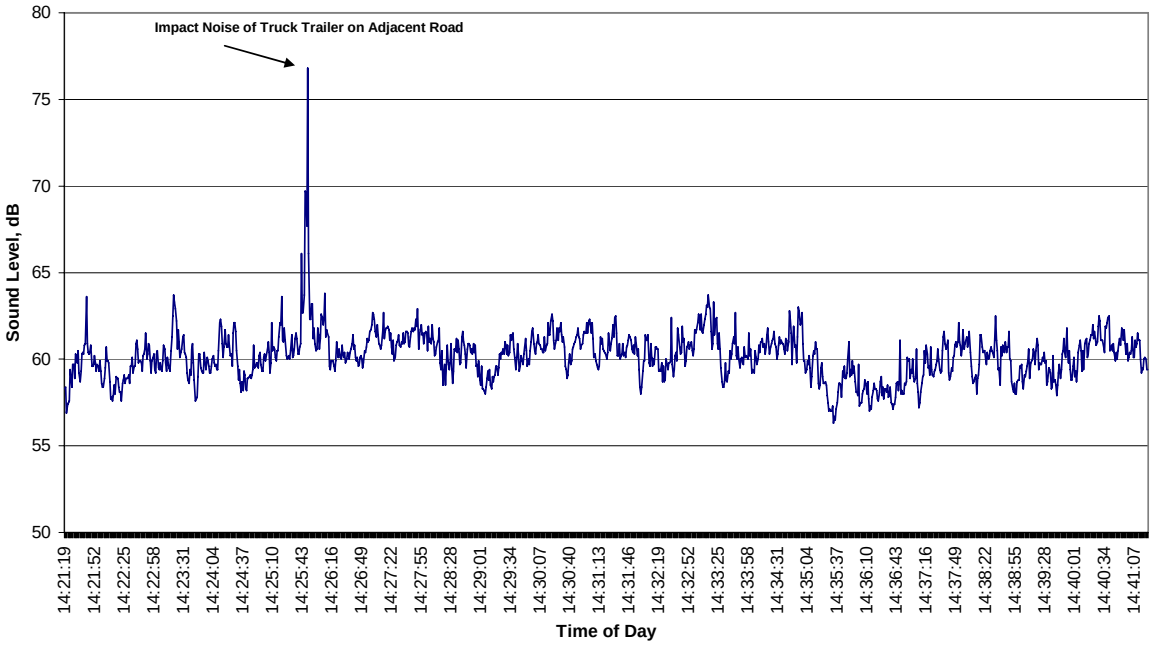


Figure Source: BBA, 2007

As shown in **Figure 7** above, the only impulsive noise recorded during the study was found to be located off-site and not related to the aggregate processing operation. All other noise recorded was generally constant and did not meet the definition of impulsive. Additionally, no evenly spaced repetition of sound was shown and the actual sound level stayed fairly constant throughout the test period. Considering the data provided by BBA, the proposed project is not expected to generate tonal, repetitive, or impulsive noise and the current City noise standards for new projects generating "typical" noise should be enforced. The current City noise standards are shown in **Table 5** below.

TABLE 5
CITY OF RANCHO CORDOVA NOISE STANDARDS (HOURLY LEQ, DB)

Stationary Noise Source Type	Daytime Maximum (7 AM to 10 PM)	Nighttime Maximum (10 PM to 7 AM)
Typical	55	45

Source: City of Rancho Cordova General Plan, Noise Element, p. 12, Table N-2

Using the Environmental Noise Model (ENM), BBA was able to use the data collected during the analysis shown in **Figure 6** and **Figure 7** above to model the expected distances at which noise from both aggregate mining and aggregate processing would likely exceed the City Standards shown in **Table 5**. The distances provided by the ENM assume certain constants for terrain between the listener and the equipment as well as the equipment generating the noise. The results of the ENM provide a good benchmark distance at which significant noise is expected to be encountered (BBA, 2007). The associated distances at which significant noise is expected to be experienced are identified in **Table 6** below.

TABLE 6
PREDICTED DISTANCES TO NOISE CONTOURS (FEET)

Equivalent Sound Level (dB Leq)	Aggregate Mining	Aggregate Processing
45	2,155	1,560
55	1,270	840
70	380	230

Source: BBA, 2007

While no sensitive receptors to noise are located adjacent to the proposed project at this time, the expected duration of mining operations presents the possibility that homes will be constructed and occupied on land immediately west of the project site prior to completion of the operational phase of the proposed project. Homes are planned for the majority of the Rio Del Oro Specific Plan Area, inside which the proposed project is located, and home construction is expected to begin in the western portion of the Specific Plan Area first (EDAW, 2006). Therefore, if the proposed project generates noise of 55 dB L_{eq} during the day or 45 dB L_{eq} during nighttime at the western boundary of the project site, a significant impact is expected.

Implementation of mitigation measure MM 3.2 would reduce the likelihood of operation of either mining equipment or processing equipment within the distances presented in **Table 6**. However, considerable uncertainty remains as to the date of occupation of homes to the west and the progression of mining activities. Therefore, it is assumed that operations may occur inside the distances presented in **Table 6**. The following mitigation measure is included in order to prevent significant noise from impacting adjacent properties:

Mitigation Measure

MM 11.1 Upon occupation of one or more residences in the Rio Del Oro Specific Plan area to the west of the project site, the project proponent shall ensure that no mining or aggregate processing is conducted within the following minimum distances from the nearest occupied residences:

- No mining may occur within 840 feet of the nearest occupied residence in the daytime. No mining may occur within 1,560 feet of the nearest occupied residence in the nighttime.

- No aggregate processing may occur within 1,270 feet of the nearest occupied residence in the daytime. No aggregate processing may occur within 2,155 feet of the nearest occupied residence in the nighttime.

These minimum distances may be revised by the City of Rancho Cordova in the event that the project proponent provides additional data, prepared by a qualified noise professional, which shows that noise levels at or below current City Noise Standards would be, or actually are, experienced at the nearest occupied residence from mining and/or processing operations. Mining operations and aggregate processing may be conducted within these minimum distances only under the following conditions:

- The project proponent shall incorporate temporary noise barriers such as berms or product stockpiles of a sufficient height to block sight lines between occupied homes and processing/mining operations. All temporary noise barriers shall be shown on project plans and submitted to the City Planning Department for review and approval prior to construction.

- The project proponent shall provide an acoustical analysis prepared by a qualified noise professional showing that the temporary noise barriers are sufficient to reduce noise at the project boundary below current City noise standards of 55 dB L_{eq} daytime/45 dB L_{eq} nighttime.

Timing/Implementation: *Throughout operation of the proposed project upon occupation of one or more homes to be constructed in the Rio Del Oro Specific Plan area.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measure MM 11.1 as well as mitigation measure MM 3.2 and compliance with the City's Noise Ordinance is expected to result in a *less than significant* impact related to currently adopted noise standards.

b) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR discussed groundborne noise and vibration concurrently with construction related noise impacts [see discussion a) above; also GP-DEIR, pp. 4.7-20 through 4.7-22]. As large-scale construction of various land uses is ongoing in the City and will continue for some time, guided by the General Plan, significant noise and vibration generation is expected. While City Policies and Action Items would reduce the impact of such vibration and noise, significant and unavoidable impacts as a result of implementation of the General Plan are expected in some cases (GP DEIR, p. 4.7-22).

Typical sources of significant groundborne vibration include the use of explosives and subterranean mining with heavy equipment. The proposed project includes the collection of aggregate resources sitting in piles above the original ground surface that existed prior to gold mining on-site. As such, no deep excavation is required. As the project will not require deep excavation, the use of explosives will not be necessary. No subterranean operations will be conducted as tailing piles do not extend below the surface. Some heavy construction equipment will be used, such as backhoes, bulldozers, excavators, and other mechanized mobile equipment. However, this machinery is of a typical type for construction and would not result in significant groundborne vibration. The implementation of project phasing mandated by mitigation measures MM 3.2 and MM 11.1 would increase the distance between any existing structures or structures planned for construction during the lifetime of the project to such a degree as to further minimize vibration impacts. Therefore, the proposed project would have a *less than significant* impact from groundborne vibration.

c) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. The GP-EIR identified uses that may result in significant stationary (permanent) noise generation (GP DEIR, pp. 4.7-28 through 4.7-30). Uses and equipment that would generate significant permanent noise included loading docks, industrial uses, HVAC equipment, car washes, daycare facilities, auto repair, as well as some recreational uses

(GP DEIR, p. 4.7-28). While the impact of these and other significant sources of permanent noise would be lessoned by Policies and Action Items included in the General Plan, some impacts would remain and the GP-EIR found impacts of the General Plan to be significant and unavoidable (GP DEIR, p. 4.7-30).

The noise impact of the proposed project was analyzed under discussion a) above. While implementation of mitigation measure MM 11.1 would ensure that the proposed project would not have a significant impact related to exceedance of City noise standards, the proposed project would operate at times where resident sensitivity to noise is increased (late night and early morning). Phasing adopted by implementation of mitigation measure MM 3.2 would prevent significant impacts to residents from mining of the project site and operation of the mobile aggregate processing equipment. However, the proposed project includes the hauling of aggregate resources to customers that may be located anywhere in the region. Haul trucks along White Rock Road are not expected to create significant noise as shown in discussion a) above. However, an access road will be used by the project proponent that connects with Douglas Road, south of the proposed project. The use of heavy hauling trucks on Douglas Road at night may result in an increase in existing noise levels at residences that exist along Douglas Road.

Mitigation Measures

MM 11.2a The project proponent shall ensure that the Douglas Road access point is utilized only between the hours of 7:00 AM and 6:00 PM on weekdays and 8:00 AM and 6:00 PM on weekends. The gate at that access point shall remain locked outside of those hours to discourage unauthorized use.

Timing/Implementation: *Throughout all phases of the proposed project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department in consultation with the Sacramento Metropolitan Fire District.*

MM 11.2b Prior to the occupation of homes in any portion of the Rio Del Oro or Westborough developments, the project proponent shall post signage visible to residents providing a name, address, and 24-hour phone number for information and/or complaints regarding the mining activities of the proposed project. Placement of the signage immediately adjacent to White Rock Road is considered sufficiently visible. Signage shall also include the address and main phone number for the City Planning Department.

Signage meeting the above requirements shall also be installed prior to site disturbance at the entrance at Douglas Road in a location plainly visible from Douglas Road.

Timing/Implementation: *Signage shall be posted prior to occupation of homes within the Rio Del Oro or Westborough projects.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department.*

Implementation of mitigation measures MM 3.2, MM 11.1, MM 11.2a, and MM 11.2b would ensure that the proposed project would have a *less than significant* impact in regards to increased noise levels.

d) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document*. See discussion c) above.

e) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR analyzed noise impacts related to airports, specifically the Mather Airport located immediately south and west of the City (GP DEIR, pp. 4.7-30 through 4.7-32). Five planning areas within the City were identified as having potential airport-related noise impacts: Mather Planning Area, Jackson Planning Area, Sunrise Boulevard South Planning Area, Rio del Oro Planning Area, and the Aerojet Planning Area (GP DEIR, p. 4.7-30). Single-event noise impacts were also identified for those portions of the City that lie under the primary flight paths for Mather Airport (GP DEIR, p. 4.7-30). For the five planning areas identified above and areas of the City directly under the approach path for Mather Airport the impact of the General Plan was found to be significant and unavoidable (GP DEIR, p. 4.7-32).

The Mather Airport CLUP identifies areas that will experience significant noise from operations at the airport. The proposed project is located outside this area and would therefore not be impacted by aircraft noise. Workers on-site would be exposed to increased noise levels as a result of the aggregate mining and processing process to a much greater degree than that experienced as a result of aircraft noise (as shown in the Environmental Noise Analysis). Therefore, the proposed project is expected to result in *less than significant* impact associated with aircraft noise exposure.

Portions of the project site are located within two-miles of Mather Airport and in the approach-departure path for this facility. Aircraft noise exposure may affect future sensitive receptors from future residential development. However, based on the ambient noise measurements, the aircraft noise exposure on the project site would be *less than significant*.

f) *No Impact*. The nearest private airport to the project area is Rancho Murrieta Airport, more than eight miles away from the project, to the southeast. Therefore, the proposed project is not located within the vicinity of a private airport and *no impact* would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
XII. POPULATION AND HOUSING Would the project:					
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☒	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☒

EXISTING SETTING

The recently adopted General Plan has designated the project site for residential, industrial, and commercial development as part of the Rio Del Oro specific plan (currently being prepared). The proposed project site is currently vacant and is designated for surface mining under the Aerojet Special Planning Area, established by the County of Sacramento, prior to incorporation of the City. Reclamation of this land will allow for future development, as designated in the General Plan.

DISCUSSION OF IMPACTS

a) *Less than Significant Impact/Reviewed Under Previous Document*. In the GP-EIR the General Plan was found to result in substantial increases in the number of dwellings, residents, and employees in the General Plan Planning Area (GP DEIR, pp. 4.3-10 through 4.3-14). These increases were higher than those previously anticipated by the Sacramento Area Council of Governments (SACOG). Substantial population growth is expected and significant and unavoidable impacts of the General Plan were identified (GP-DEIR, p. 4.3-14).

The proposed project does not include the development of homes or businesses, nor does it extend infrastructure or utilities that would induce growth and development in the planning area. The proposed project would, however, provide needed aggregate resources for infrastructure expansion and development of such uses in the City. As such it is assumed that the proposed project would have a limited potential for inducing growth in the region. However, this expansion of infrastructure and development of urban land uses in the project vicinity comprises subsequent projects within the scope of activities and land uses studied in the GP-EIR. Construction and operation of the proposed project would not result in any project-specific impacts related to growth that were not identified in the Program EIR. As the GP-EIR found that impacts due to growth inducement were significant and unavoidable and because the proposed project is consistent with and described in the Program EIR, no further environmental analysis is required pursuant to Pub. Res. Code Section 21083.3.

b) *No Impact/Reviewed Under Previous Document*. The GP-EIR identified potential impacts due to the displacement of people and housing as a result of implementation of the General Plan (GP DEIR, p. 4.3-14). These impacts were primarily due to the installation of infrastructure such as streets (Ibid). Consistency with State and federal laws relating to displacement of existing residents and housing would ensure that impacts of the General Plan would be less than significant (Ibid.).

The project site is currently undeveloped and does not contain any residential structures. Therefore, implementation of the proposed project would not result in any forced displacement of people or housing and the project would result in *no impact*.

c) *No Impact/Reviewed Under Previous Document*. See discussion b) above.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
XIII. PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:					
a) Fire protection?	☐	☐	☒	☐	☒
b) Police protection?	☐	☐	☒	☐	☒
c) Schools?	☐	☐	☐	☒	☒
d) Parks?	☐	☐	☐	☒	☒
e) Other public facilities?	☐	☐	☐	☒	☐

EXISTING SETTING

The proposed project is located within the following public service districts:

- Fire Protection: Sacramento Metropolitan Fire District (SMFD)
- Police Protection – Rancho Cordova Police Department (RCPD)
- School District – Folsom Cordova Unified School District (FCUSD)
- Park District – Cordova Recreation and Park District (CRPD)
- Electrical Service – Sacramento Metropolitan Utilities District (SMUD)
- Natural Gas Service – Pacific Gas and Electric (PG&E)

DISCUSSION OF IMPACTS

a) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR analyzed the impact of the General Plan on fire protection services and the resulting environmental impact of any additional infrastructure required (GP DEIR, pp. 4.12-5 through 4.12-9). As the General Plan would result in substantial growth, additional fire stations and other infrastructure would be required to serve the increased number of dwellings and urban land uses (GP DEIR, pp. 4.12-5 and 4.12-6). Consistency with City Policies and Action Items would result in a less than significant impact of the General Plan to the environment from construction and provision of additional infrastructure and facilities.

The proposed project would not require additional fire protection services beyond what is already provided to the property by the Sacramento Metropolitan Fire District. No structures are to be constructed by the proposed project and only wildland fire or accident would require the attention of the SMFD. As the proposed project would not result in an increase in need for fire protection services, no additional facilities will be required in order to provide such services and a *less than significant* impact is expected.

b) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR identified potential impacts related to the need for additional police protection infrastructure and facilities (GP DEIR, pp. 4.12-16 through 4.12-20). Just as with fire protection, the substantial growth predicted in the GP-EIR would require additional fire protection

infrastructure and facilities (GP DEIR, pp. 4.12-16 and 4.12-17). Consistency with City Policies and Action Items would result in less than significant impacts resulting from implementation of the General Plan (GP DEIR, p. 4.12-17).

See discussion a) above. Just as the proposed project would not result in the need for additional fire protection services beyond those currently provided, the project would also not require additional law enforcement. Law enforcement staffing and facilities are based on population. As the proposed project would not construct housing of any type, and would therefore not result in an increase in population, no additional personnel, equipment, or facilities will be required by the RCPD in order to serve the project. Therefore, the proposed project would result in a *less than significant* impact.

c) *No Impact/Reviewed Under Previous Document*. The GP-EIR identified potential impacts to all four school districts servicing the General Plan Planning Area as a result of substantial growth expected during the life of the General Plan (GP DEIR, pp. 4.12-77 through 4.12-80). While additional schools would be required as growth in the General Plan Planning Area continues, consistency with City Policies and Action Items, as well as required CEQA and State Board of Education review of future school sites would result in less than significant impacts resulting from implementation of the General Plan (GP DEIR, p. 4.12-80).

See discussions a) and b) above. The proposed project would not increase housing. Therefore, no additional schools will be required to serve the proposed project and the proposed project would result in *no impact* to the provision of schools.

d) *No Impact/Reviewed Under Previous Document*. The GP-EIR identified potential environmental impacts related to the provision of additional parks to serve the growth anticipated in the General Plan (GP DEIR, pp. 4.12-89 through 4.12-96). Adherence to City Policy and Action Items as well as the requirements of the Cordova Recreation and Park District (CRPD) would ensure less than significant impacts from implementation of the General Plan (GP DEIR, pp. 4.12-95 and 4.12-96).

See previous discussions above. The proposed project would not include land uses that utilize parks. Therefore, no new parks are required to serve the proposed project and the proposed project would result in *no impact*.

e) *Less than Significant Impact*. See discussions above. The proposed project does not include, nor does it require, the construction of any other public facilities other than those discussed in discussions a) through d) above. No currently adopted Policies or ordinances of either the City or any Responsible Agency would require such facilities to be constructed as a result of the proposed project. Therefore, *no impact* is expected.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
XIV. RECREATION					
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒	☒
b) Does the project include recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒	☒

EXISTING SETTING

There are currently no park facilities within three miles of the proposed project. A number of parks are planned to the north and south of the proposed project as part of the Heritage Falls project (north) and the Sunridge Specific Plan (south); however none of these parks are in operation. Public parks within the City are generally the responsibility of CRPD to operate and maintain. Any new parks constructed must meet CRPD's standards for dedication prior to CRPD taking responsibility for the park.

DISCUSSION OF IMPACTS

a) *No Impact/Reviewed Under Previous Document*. See discussion d) of checklist XIII, Public Services above for information on the GP-EIR's conclusions as to impacts related to parks and recreation. The proposed project will not create additional housing that will generate expanded use of existing parks. Therefore, *no impact* is expected as a result of project implementation.

b) *No Impact/Reviewed Under Previous Document*. See discussion a) above.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
XV. TRANSPORTATION/TRAFFIC Would the project:					
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐	☒
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☒	☐	☐
g) Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒	☒

EXISTING SETTING

Traffic generated by the proposed project is tied directly to sales of aggregate materials to other projects within the City and the region. Due to the length of the proposed project (5-10 years) and the difficulty with determining the potential traffic generation of the project over time, the project proponent has provided a maximum sales potential for the site. According to the project proponent, mining operations at the project site are expected to result in no more than 500 truck trips daily. These truck trips are directly related to the hauling of aggregate materials from the project site to other projects as they are needed.

The City of Rancho Cordova currently operates under the same traffic study standards as the County of Sacramento. According to the standard practiced by the City Public Works Department, if a project is not expected to result in more than 100 trips during AM or PM peak hours or a total of 1000 trips daily, no traffic study is required and impacts are assumed to be minor. As the proposed project would result in no more than 500 trips a day, spread evenly throughout 24 hours of operation, a traffic study was not required for the proposed project.

DISCUSSION OF IMPACTS

a) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR analyzed traffic impacts to the existing roadway network in the General Plan Planning Area as a result of the population, dwelling unit, and employee increases expected to occur with implementation of the General Plan (GP DEIR, pp. 4.5-27 through 4.5-45). Several new roadways and improvement of existing roadways were described in the General Plan in

order to address the additional expected traffic load. However, even with these improvements and adherence to City Policies and Action Items the impact of the General Plan would remain significant and unavoidable (GP DEIR, p. 4.5-42).

The proposal estimates that a daily maximum of 500 vehicle trips will be generated, based on Granite Construction Company's request to operate 24 hours per day, 7 days per week. According to the Traffic Impact Analysis Guidelines generated by the County of Sacramento and used by the City Public Works department to assign significance, any project that would generate 100 or more peak hour trips or 1000 daily trips may result in a significant impact and further study will be required. Therefore, the proposed project's generation of 500 trips a day, spread evenly throughout 24 hours, is not expected to result in a significant increase in traffic.

The proposed project includes three possible points of ingress/egress from the project site for the use of hauling trucks. Two access points are located along White Rock Road, one in the western portion of the project site and one to the east. A third access point exists on Douglas Road, approximately 0.42 miles east of the intersection of Douglas Road and Sunrise Boulevard. Trucks utilizing this access point may use the intersection of Douglas Road and Sunrise Boulevard to continue on to their destination. The City Public Works Department has indicated that use of this intersection by haul trucks could significantly impact the level of service at this intersection. In order to reduce the proposed project's impact to this intersection, the following mitigation measure is provided:

Mitigation Measure

MM 15.1 The project proponent shall ensure that no trucks traveling to or from the proposed project via the Douglas Road access point utilize the intersection of Sunrise Boulevard and Douglas Intersection between the hours of 7:00 AM and 9:00 AM and between the hours of 4:00 PM and 6:00 PM, except when required by local projects served by the proposed project. All drivers shall be notified of this requirement in writing prior to operation to and from the project site. The project proponent shall post signage at the Douglas Road access point that clearly notifies drivers both entering and leaving the site of the time restriction.

Timing/Implementation: *Throughout operation of the proposed project.*

Enforcement/Monitoring: *City of Rancho Cordova Planning Department and Public Works Department.*

Implementation of mitigation measure 15.1 would ensure that the proposed project would result in *less than significant* impacts to local levels of service.

b) *Less than Significant Impact/Reviewed Under Previous Document*. See discussion a) above.

c) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR analyzed safety and hazards impacts related to the provision of land uses within the Mather Airport Comprehensive Land Use Plan (Mather CLUP) and their impact on safety related to air traffic in and out of the airport (GP DEIR, p. 4.4-28 and 4.4-29). The General Plan established the Mather Planning Area that corresponds to the Master Plan boundaries of the

Mather Airport. Policies included in the General Plan were more stringent than the safety restrictions of the Mather CLUP (GP DEIR, p. 4.4-28). Consistency with City Policies and Action Items as well as the requirements of the Mather CLUP would ensure less than significant impacts from implementation of the General Plan (GP DEIR, p. 4.4-29).

The westernmost portion of the project site is underneath the height restriction area for Mather Airport (Airport Land Use Commission for Sacramento, Sutter, Yolo, and Yuba Counties, 1997). The CLUP, pursuant to Federal Aviation Regulations Part 77 (FAR Part 77), establishes "imaginary surfaces" above the ground in various configurations around the airport. If a structure or any part of the project would be located above these imaginary surfaces, a hazard to aircraft is assumed and specific steps must be taken in order to ensure the safety of aircraft as well as people and structures on the ground. The "conical surface" of Mather Airport is located above the proposed project. The "approach surface" is also located above the project. However, the lowest these surfaces occur above the project surface is 233 feet above mean sea level (msl), in the western-most portion of the project site. The elevation of the project site below the 233 feet msl approach surface is approximately 170 feet msl, resulting in a height restriction of 63 feet (Airport Land Use Commission for Sacramento, Sutter, Yolo, and Yuba Counties, 1997). The proposed project will utilize equipment such as excavators, loaders, bulldozers, and mobile aggregate processing equipment, none of which is expected to exceed 30 feet in height. Therefore, the proposed project would not result in a hazard to aircraft and no change in air navigation would be required. The proposed project would result in a *less than significant* impact.

d) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR analyzed potential impacts related to roadway safety as a result of implementation of the General Plan (GP DEIR, p. 4.5-48). The City's design standards for roadways, as well as the land use planning and other City Policies, would ensure that impacts of the General Plan related to roadway safety are less than significant (Ibid.).

The proposed project would not modify any existing roadways within the city. One or more driveways will be installed along White Rock Road for the use of trucks picking up and hauling away aggregate after processing and for the use of on-site employees. The requirements of the City Public Works department and the SMFD will ensure that these driveways are adequately designed for public safety and emergency access. On-site roadways will be closed to the public, preventing their design from impacting public safety. As these roads are private roads, not the responsibility of the City, Fire Department approval of their design will be required prior to construction. The requirements of the SMFD will ensure that these roads are adequate for emergency response. Therefore, the proposed project will have a *less than significant* impact in regards to safety and roadway/intersection design.

e) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR identified impacts related to emergency access within the General Plan Planning Area (GP DEIR, p. 4.5-48). As the roadway network in the City was to be improved and additional routes were to be added by the General Plan, impacts were found to be less than significant (Ibid.).

See discussion d) above. All roads on-site will require the review and approval of the SMFD. This approval process will ensure that SMFD vehicles can access the site adequately. Therefore, the proposed project will result in *less than significant* impacts with regards to emergency access.

f) *Less than Significant Impact*. The proposed project will not be accessible to the general public. Mining operations are not required by City Code to provide parking to the public for this reason. The project proposes to construct a 23-acre staging area, internal to the project site, which will provide adequate parking for hauling trucks and on-site employees. Therefore, the proposed project would result in *less than significant* parking impacts.

g) *No Impact/Reviewed Under Previous Document*. The GP-EIR analyzed potential impacts to transit, pedestrian, and bicycle provisions within the City (GP DEIR, pp. 4.5-49 through 4.5-53). Development of the City's Transit Master Plan and the City's Pedestrian and Bicycle Master Plan would ensure that impacts of the General Plan to these provisions would be less than significant (GP DEIR, pp. 4.5-49 and 4.5-50).

The project site is not currently served by any transit services, nor is such service required by any adopted Policies or standards. No bus routes or train routes travel through the project site and no transit stops are located along White Rock Road in the vicinity of the project site. Similarly, no bike or pedestrian routes travel through or adjacent to the project site and none are required for uses such as the proposed project. No sidewalks are located along White Rock Road along the project boundary. Therefore, the proposed project would facilitate implementation of the General Plan and would have *no impact* on transit, pedestrian, or bicycle facilities policies or standards.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
XVI. UTILITIES AND SERVICE SYSTEMS Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐	☒
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	☐	☐	☒	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐	☒
g) Comply with federal, state and local statutes and regulations related to solid waste?	☐	☐	☒	☐	☐

EXISTING SETTING

Water supply for the proposed project will be provided by an on-site groundwater extraction well (existing). The proposed project will not be served by any current purveyors in the City. The project will require the use of water for dust suppression purposes only and will transport it on-site as needed. The project site will be served by temporary toilets to be supplied under contract by United Site Services. Wastewater generated by the proposed project is transported by United Site Services to the wastewater treatment plant near Elk Grove, to the southwest of the project site. Solid waste services will be provided under contract by Allied Waste Services. Allied Waste transports solid waste to transfer stations for the removal of recyclable materials before transporting non-recyclable waste to one of three landfills that serve the County.

DISCUSSION OF IMPACTS

a) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR identified potential impacts relating to the capacity of the Sacramento Regional County Sanitation District (SRCSD) treatment facilities to treat wastewater flows from the General Plan Planning Area (GP DEIR, pp. 4.12-45 through 4.12-51). Current capacity at the SRWTP is adequate to meet projected growth by 2020. However, growth beyond that point will require expansion of existing capacity which could result in environmental impacts (GP DEIR, p. 4.12-47). Because of this, the GP-EIR identified the impact of the General Plan as significant and unavoidable (GP DEIR, p. 4.12-51).

Wastewater generated by the proposed project will be collected by United Site Services and transported for treatment to the Sacramento County Regional Wastewater Treatment Plant (SCRWTP) in Elk Grove. Considering the estimated number of employees to be located on-site and the fact that the proposed project could potentially operate 24 hours a day, seven days a week, it is expected that wastewater generated by the project would not exceed 1 equivalent standard dwelling (ESDs) of production. ESDs are the standard unit of measurement for wastewater generation used by regional wastewater treatment providers. According to information provided by the Sewerage Facilities Master Plan, the addition of 1 or less ESDs is not expected to exceed the treatment capacity of the SCRWTP (CSD-1, 2002). Therefore, the proposed project is expected to result in a *less than significant* impact.

b) *Less than Significant Impact/Reviewed Under Previous Document*. In addition to required expansion in treatment capacity, the GP-EIR identified potential impacts associated with the construction of additional wastewater conveyance infrastructure (GP DEIR, pp. 4.12-45 through 4.12-51). CSD-1 has planned expansion of sewerage infrastructure into the General Plan Planning Area and the environmental effects of this expansion were addressed in an EIR (GP DEIR, pp. 4.12-46 and 4.12-47). However, increased growth expected with implementation of the General Plan will require more infrastructure than that currently planned by CSD-1. Therefore, the impact of the General Plan was found to be significant and unavoidable (GP DEIR, p. 4.12-51).

United Site Services is responsible for trucking wastewater generated by the proposed project to the SCRWTP for treatment. On-site toilet facilities will be of the temporary portable toilet type. Therefore, the construction of wastewater collection, conveyance, or treatment infrastructure is not required for the proposed project.

Groundwater extracted ~~on-site~~ for use by the project will ~~require some treatment~~ be treated in order to remove VOCs and perchlorate known to exist in the groundwater as a result of historic rocket testing in the vicinity. ~~Treatment equipment will be constructed on-site.~~ The SGSA GET, which extracts and treats the water to be used by the proposed project, is existing and was constructed according to the Remedial Action Plan adopted by DTSC in January 2006. The environmental effect of constructing this equipment ~~is~~ was included in ~~this~~ the MND for the Remedial Action Plan (State Clearinghouse #2005101077). In order to transport the water from the SGSA GET to the project area the installation of a booster pump at the existing Morrison Creek crossing, a temporary on-ground pipeline, and associated valves and other appurtenances would be required. The environmental effects resulting from the construction of those additional features are included in the analysis and conclusions presented in this Final MND. In addition to the SGSA GET, the proposed project may require the use of provided by the Sacramento County Water Agency (SCWA). This water would only be necessary in the event of failure or major maintenance at the SGSA GET or during mining in locations where trucking water from the SGSA GET would be prohibitive. As a water transmission main operated by SCWA is located adjacent to the project along White Rock Road, physical infrastructure required to deliver SCWA water to the project site would be similar in nature and scope to that expected for the SGSA GET supply (i.e., a boost pump, on-ground pipeline, and associated valves and appurtenances). The environmental effects of construction of these features are likewise included in the analysis and conclusions presented in this Final MND.

The proposed project would require the installation of limited infrastructure in order to provide water to the proposed project. The installation of this infrastructure is not expected

to result in any significant effects on the environment, as shown in the appropriate sections of this analysis. ~~As the proposed project as a whole would not have a significant effect on the environment,~~ Therefore, the proposed project would have a *less than significant* impact related to the provision of wastewater or water infrastructure.

c) *Less than Significant Impact/Reviewed Under Previous Document*. See discussion c) in checklist VII, Hydrology and Water Quality for information on stormwater drainage facilities and their associated environmental effects. Off-site stormwater infrastructure will not be required by the proposed project because it is not expected to significantly increase stormwater runoff. No impervious surfaces are planned to be constructed or laid onsite for the proposed project. There will be some minor improvements to the two project site access points (White Rock Road and Douglas Road); however, no other impervious improvements are planned for the site. These improvements may potentially increase stormwater runoff in those two localized areas, but only by a minimal amount. Also, mining activities may potentially increase stormwater runoff due to removal of topsoil and dredge tailings within the rows. However, due to the high level of water permeability of the soil, increased runoff is expected to be very low to non-existent. Therefore, the proposed project will result in a *less than significant* impact to stormwater runoff and its facilities.

d) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR identified potential environmental impacts related to available water supplies and the increased demand in the City and the General Plan Planning Area (GP DEIR, pp. 4.9-43 through 4.9-57). According to the analysis in the GP-EIR, adequate supplies of water exist through buildout of the current incorporated boundaries of the City (GP DEIR, p. 45). However, new sources of water will be required to serve buildout conditions for those portions of the General Plan Planning Area that lie outside current City boundaries. Significant environmental effects may occur from the acquisition of these additional sources. Therefore, significant and unavoidable impacts of the General Plan are expected (GP DEIR, p. 4.9-57).

The proposed project would be served with water by ~~an~~ existing extraction well~~s~~, ~~number 1054 in the Inactive Rancho Cordova Test Site~~ collectively known as the SGSA GET. ~~This~~ These well~~s~~ are located ~~on-site~~ to the south of the project area, generally along Douglas Road. ~~As discussed in Checklist VIII, Hydrology and Water Quality above, additional entitlements are required by the CRWQCB for the treatment and discharge of the water on-site~~. The environmental effects of extraction, treatment, and use of this water by the proposed project are addressed in this MND as well as an MND certified by DTSC in January 2006 and would be further reduced by the requirements of CRWQCB. Therefore, the proposed project would result in *less than significant* impacts.

e) *Less than Significant Impact/Reviewed Under Previous Document*. See discussions a) and b) above.

f) *Less than Significant Impact/Reviewed Under Previous Document*. The GP-EIR identified potential impacts related to the capacity of local landfills and those landfills to which solid waste from the City and the General Plan Planning Area are shipped (GP DEIR, pp. 4.12-60 through 4.12-63). Current capacity exists at all landfills that serve the General Plan Planning Area and expansion in capacity is not expected to be required (GP DEIR, p. 4.12-61). Consistency with City Policies and Action Items as well as federal, State, and local laws and ordinances would ensure less than significant impacts as a result of implementation of the General Plan (GP DEIR, p. 4.12-63).

The proposed project would be served under contract by Allied Waste Services for the purpose of collecting and disposing of solid waste. As described in the GP-EIR (see above), all three landfills that serve the City have adequate capacity to handle projected growth in the County through buildout of the General Plan. The proposed project is expected to generate only small quantities of solid waste resulting from normal operation of aggregate mining. Solid waste generated will likely consist of paper trash from employee meals and other similar activities. Carbon filter media from the water treatment operation would require disposal as the media is exhausted, however this media is not considered hazardous and it can be disposed of as normal solid waste. The total additional waste generated by the proposed project is expected to be small, well within the capacity of all landfills that serve the County. Therefore, the proposed project is expected to result in a *less than significant* impact in regards to solid waste.

g) *Less than Significant Impact*. Allied Waste Services disposes of all solid waste generated by their clients in accordance with local, State, and federal regulations for solid waste disposal. No hazardous or toxic solid waste will be generated by the proposed project and all solid waste can be disposed of in a normal manner by Allied Waste Services. Therefore, the proposed project is expected to result in a *less than significant* impact.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporation	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
XVII. MANDATORY FINDINGS OF SIGNIFICANCE					
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐	☒
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	☐	☐	☒	☐	☒
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐	☒

DISCUSSION OF IMPACTS

a) *Less than Significant Impact with Mitigation Incorporation/Reviewed Under Previous Document.* As demonstrated in checklists I through XVI above, the proposed project is not expected to result in any significant impacts related to biological or cultural resources. Further, the implementation of the mitigation measures identified in this MND would ensure than the project's impacts are *less than significant.*

b) *Potentially Significant/Reviewed Under Previous Document*. Section 4.0 of this MND addresses the proposed project's contribution to cumulative impacts in the cumulative setting. See Section 4.4 for the project's contribution to cumulative impacts.

c) *Less Than Significant Impact/Reviewed Under Previous Document*. See discussion a) above.

4.0 CUMULATIVE IMPACTS

4.1 INTRODUCTION

This section addresses the proposed project's potential to contribute to cumulative impacts in the region. California Environmental Quality Act (CEQA) Guidelines Section 15355 defines cumulative impacts as "two or more individual effects that, when considered together, are considerable or which compound or increase other environmental impacts." A project's incremental effects are considered significant if they are "cumulatively considerable" (CEQA Guidelines Sections 15065[a][3] and 15130[a]). "Cumulatively considerable" means the incremental effects of the project are considerable when viewed in connection with the effects of past, current, and future projects (see also CEQA Guidelines Appendix G, Section XVII).

4.2 CUMULATIVE SETTING

The Cumulative Setting establishes the area of effect in which the cumulative impact has been identified and inside which it will occur. Different cumulative settings can be established for each individual impact or impact area (checklist area). As the proposed project is a subsequent project identified in the General Plan, and as this MND is tiered from the GP-EIR, the cumulative setting for the proposed project is identical to the cumulative settings identified in the GP-EIR.

4.3 PREVIOUS CUMULATIVE ANALYSIS WITHIN THE CUMULATIVE SETTING

The GP-EIR identified several cumulative impacts where expected development and establishment of the roadway network in the city, when combined with other planned, proposed, and approved development and roadway infrastructure projects in the area, would have a significant impact on the environment. The following impact areas were found in the GP-EIR to have cumulative impacts that would be cumulatively considerable:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Hydrology and Water Quality (water supply)
- Land Use and Planning
- Mineral Resources
- Noise (both traffic related and stationary)
- Population and Housing
- Utilities and Service Systems (water treatment and wastewater infrastructure)
- Transportation/Traffic (traffic congestion)

Areas in which cumulative impacts were found in the GP-EIR to be less than cumulatively considerable were:

- Geology and Soils
- Hazards and Hazardous Materials
- Public Services
- Recreation

4.4 CUMULATIVE IMPACT ANALYSIS

The proposed project is a subsequent project within the scope of activities and land uses studied in the GP-EIR. The proposed project is consistent with the General Plan in use and design. Cumulative impacts identified in the GP-EIR as being cumulatively considerable are largely due to increases in dwelling units, residents, and employees. While the proposed project would not include the addition of any dwelling units, residents, or employees, the proposed project would provide needed aggregate material for the expansion of the City's roadway network and the construction of land uses that increase the number of dwelling units, residents, and employees in the City. Therefore, the proposed project would contribute to cumulative effects associated with provision of new housing and the proposed project's incremental contribution to the cumulatively considerable impacts listed in Section 4.3, above, would be cumulatively considerable.

Consistency with City Policies, Action Items, ordinances, and other requirements would reduce the proposed project's incremental contribution to the above cumulative impacts. However, some contribution would remain. Therefore, the proposed project's incremental contribution to the above cumulative impacts would be *cumulatively considerable*. Regardless of the proposed project's scope or design, the project would facilitate future development to the same degree. Therefore, additional mitigation of the project's cumulative contribution is not feasible.

The proposed project is a subsequent project within the scope of activities and land uses studied in the GP-EIR. Development of the proposed project site would not result in any project-specific contribution to cumulative impacts that were not identified in the Program EIR. As the GP-EIR found that cumulative impacts in the above areas were cumulatively considerable and because the proposed project is consistent with and described in the Program EIR, no further environmental analysis is required pursuant to Pub. Res. Code Section 21083.3.

5.0 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

■ I find that, although the proposed project could have a significant effect on the environment, a **MITIGATED NEGATIVE DECLARATION** is appropriate (i) because all significant and unavoidable effects of the proposed project have been previously examined in a Program EIR prepared pursuant to CEQA Guidelines section 15176, and (ii) because, with respect to any potentially new or additional significant environmental effects associated with the proposed project that have not been previously examined in the Program EIR, revisions to the proposed project have been made by or agreed to by the project proponents that clearly reduce such new or additional significant environmental effects to less-than-significant levels. In addition, I find that a **MITIGATED NEGATIVE DECLARATION** is also appropriate because the proposed project would not cause any significant environmental effects (i) that are "peculiar to the project or the parcel," (ii) that were not analyzed as significant effects in the prior EIR for the Rancho Cordova General Plan, or (iii) that, due to substantial new information not known at the time the Program EIR was certified, are more severe than discussed in the prior Program EIR. [See State CEQA Guidelines, § 15183, subd. (c)]

☐ I find that the proposed project MAY have a significant effect on the environment that cannot be reduced in effect by changed to the proposed project, and an **ENVIRONMENTAL IMPACT REPORT** is required.

☐ I find that the proposed Project **MAY** have a significant effect(s) on the environment, but one or more of such significant effects: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, all potentially significant effects: (a) have been analyzed and adequately addressed in an earlier EIR pursuant to applicable standards, or (b) have been avoided or mitigated pursuant to that earlier EIR, previous Mitigated Negative Declaration, or this Subsequent Mitigated Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project.

Signature: _____ Date: 7/10/07

Printed Name: Ben Ritchie For: City of Rancho Cordova

Per CEQA Section 15070(b)(1), the project proponent for the proposed project has reviewed and agreed to the mitigation measures contained in this Mitigated Negative Declaration.

Signature: _____ Date: 07/10/07

Printed Name: Grant J. Williams For: Granite Construction

6.0 REPORT PREPARATION AND CONSULTATIONS

6.1 REPORT PREPARATION AND REFERENCES

CITY OF RANCHO CORDOVA - LEAD AGENCY

Paul Junker	Planning Director
William Campbell	Principal Planner
Ben Ritchie	Environmental Coordinator
Kevin Freibott	Environmental Planner
Cori Resha	Assistant Environmental Planner
John Nadolski	Cultural Resources Staff

6.2 PERSONS AND AGENCIES CONSULTED

Beth Hendrickson	California Department of Conservation
Alexander MacDonald	Central Valley Regional Water Quality Control Board
Daniel Jones	Sacramento County Water Agency
Jean Young	Sacramento County Water Agency
Jeane Borkenhagen	Sacramento Metropolitan Air Quality Management District
Joseph Hurley	Sacramento Metropolitan Air Quality Management District

7.0 REFERENCES

7.1 REFERENCES (ORIGINAL MND)

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7.2 REFERENCES (FINAL MND)

Department of Toxic Substances Control (DTSC). 2005, August. *Negative Declaration: Interim Remedial Action Plan for Containment of Volatile Organic Compounds and Perchlorate in Groundwater at the Southern Groundwater Study Area and Institutional Controls for Unsaturated Zone Spoils below the Kappa-Gamma/Initial Operating Capability-2 (IOC-2) Complex*. State Clearinghouse Number 2005101077. Available for review at the City of Rancho Cordova on request.

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APPENDIX A

EMISSIONS ESTIMATES

October 5, 2006

sierra research

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Memo to: Brad Estes, Granite Construction Company

From: Allan Daly AD

Subject: Emission Calculations - Aerojet Project

In an effort to assist Granite Construction Company (Granite) in complying with Sacramento Metropolitan Air Quality Management District (SMAQMD) permit requirements and the California Environmental Quality Act (CEQA), Sierra Research is pleased to present the following emission calculations for your Aerojet Mining Project. The attached tables summarize criteria pollutant emissions (NOx, VOC, CO, SOx, PM_{10}, and $PM_{2.5}$) from the sources listed below.

- Exhaust Emissions from Portable Aggregate Processing Plant
- Exhaust Emissions from Mobile Mining Equipment
- Exhaust Emissions from Material Haul Trucks Occurring within Property Boundaries
- Exhaust Emissions from Support Vehicles
- Fugitive Emissions from Portable Aggregate Processing Plant
- Fugitive Emissions from Vehicle Travel on Unpaved Surfaces

Exhaust Emissions from Portable Aggregate Processing Plant

The portable aggregate processing plant will require a Permit to Operate issued by the SMAQMD. Therefore, emissions were calculated using the procedures specified in the SMAQMD's *Internal Combustion Engine Policy Manual*, December 2005 Update. Emissions were calculated for a current scenario using newly purchased Tier II screening engines and for a future scenario using Tier III engines which will become available in 2007. Additionally, maximum operation was limited by the use of a specified quantity of NOx emission reduction credits (ERCs) recently obtained by Granite. These ERCs, which are expected to be applied to the project, are in the amounts of zero lb/Qtr_1, 5,039 lb/Qtr_2, 8,663 lb/Qtr_3, and 4,000 lb/Qtr_4, for a total of 8.85 tons/year. From the allowable/requested quarterly emission limits, the maximum quantity of fuel was calculated. By applying an estimated load factor, the corresponding hours of operation per quarter were also estimated.

It should be noted that the attached tables report the total project NOx emissions calculated two ways. First, the total project NOx emissions are reported (37.7 tons/year). Then, as specified in the SMAQMD's *Guide to Air Quality Assessment*, July 2004 (CEQA Guide), ERCs applied to the project were subtracted from the total project NOx emissions for comparison to the CEQA NOx operational significance threshold. The SMAQMD considers ERCs required by stationary source permitting to mitigate "surplus" project emissions (those emissions above the SMAQMD NOx offset trigger level of 5,000 lb/quarter). Therefore, for CEQA purposes, the project emissions were reduced by the amount of ERCs to be provided, resulting in total project NOx emissions of 28.8 tons/year.

Exhaust Emissions from Mobile Mining Equipment

Mobile mining equipment does not require SMAQMD permits. Exhaust emissions from this equipment were estimated using maximum daily and quarterly expected operation, as provided by Granite. It should be noted that maximum operation of the mobile mining equipment exceeds the maximum operation of the portable aggregate processing plant, and that these two operational limits are independent. Equipment quantity, make, model, and model year were provided by Granite. From this information, emission factors and load factors were taken from the California Air Resources Board's Carl Moyer Program Guidelines, Appendix B, and from AP-42.

Exhaust Emissions from Material Haul Trucks Occurring within Property Boundaries

Exhaust emissions from haul trucks were calculated using the California Air Resources Board's (CARB's) URBEMIS-2002 computation software. The 2006 fleet average emission rate for heavy-heavy duty Diesel trucks operating within Sacramento County was selected. The total number of daily, quarterly, and annual material haul trucks was determined by dividing the anticipated maximum production rates by the capacity of a haul truck. Each truck trip was assumed to have a round-trip length of two miles within the project boundaries. Truck speeds were assumed to be limited to 15 miles per hour while traveling this distance.

Exhaust Emissions from Support Vehicles

Exhaust emissions from support vehicles were calculated in the same manner as material haul trucks, except that vehicle-specific emission rates were substituted. Support vehicles include pickup trucks, water truck, mechanic/service truck, and fuel/lube truck. For this equipment, the quantity, fuel, model year, and maximum operation were provided by Granite.

Fugitive Emissions from Portable Aggregate Processing Plant

Fugitive particulate matter emissions were calculated using AP-42 emission factors from Chapter 11.19 pertaining to construction and aggregate processing, which are accepted emission factors used by the SMAQMD Stationary Source Permitting Section.

Fugitive Emissions from Vehicle Travel on Unpaved Surfaces

Fugitive particulate matter emissions resulting from vehicle travel on unpaved surfaces were calculated using AP-42, Chapter 13.2.2. Emission sources include mobile mining equipment, haul trucks, and support vehicles. Vehicle weights were provided by Granite. A control efficiency was assumed for improving on-site haul roads with aggregate, watering, and limiting vehicle speed to 15 miles per hour.

We hope that the emission estimates and calculations presented in this memo will assist Granite in its planning, review, and permitting decisions. Feel free to contact me at (916) 444-6666 with any questions or concerns about this project.

Table 1. Operation Limits Based on Tier II Screening Engines				
Estimated Maximum Hours of Operation				
hr/Qtr_1	hr/Qtr_2	hr/Qtr_3	hr/Qtr_4	hr/year
490	983	1,338	881	3,692
Requested Maximum Fuel Usage				
gal/Qtr_1	gal/Qtr_2	gal/Qtr_3	gal/Qtr_4	gal/year
32,667	65,602	89,284	58,812	246,365

Table 2. Aerojet Mining Project - Emissions Summary (With Tier II Screening Engines)							
		Plant Engines	Plant Fugitive	Offroad Vehicles	Unpaved Roads	Onroad Vehicles	Totals
VOC	Total (lb/hr)	2.91	-	0.31	-	0.37	3.59
	Total (lb/day)	58.29	-	4.89	-	6.50	69.7
	Total Qtr_1 (lb/qtr)	1,427	-	143	-	215	1,785
	Total Qtr_2 (lb/qtr)	2,865	-	287	-	258	3,410
	Total Qtr_3 (lb/qtr)	3,900	-	390	-	264	4,555
	Total Qtr_4 (lb/qtr)	2,569	-	257	-	258	3,084
	Total (tons/year)	5.38	-	0.54	-	0.42	6.3
NOx	Total (lb/hr)	10.21	-	8.57	-	4.71	23.49
	Total (lb/day)	204.23	-	123.78	-	78.79	406.8
	Total Qtr_1 (lb/qtr)	4,999	-	3,614	-	2,640	11,253
	Total Qtr_2 (lb/qtr)	10,039	-	7,258	-	3,168	20,465
	Total Qtr_3 (lb/qtr)	13,663	-	9,878	-	3,249	26,790
	Total Qtr_4 (lb/qtr)	9,000	-	6,507	-	3,168	18,675
	Total (tons/year)	18.85	-	13.69	-	5.14	37.7
	Less ERCs (tons/year)[1]	-8.85					
	CEQA Emissions (ltons/year)						28.8
	CEQA Emissions (lb/day)[2]						158.0
CO	Total (lb/hr)	8.74	-	8.20	-	1.91	18.84
	Total (lb/day)	174.82	-	126.62	-	31.20	332.6
	Total Qtr_1 (lb/qtr)	4,279	-	3,697	-	1,046	9,022
	Total Qtr_2 (lb/qtr)	8,593	-	7,424	-	1,255	17,273
	Total Qtr_3 (lb/qtr)	11,695	-	10,104	-	1,287	23,087
	Total Qtr_4 (lb/qtr)	7,704	-	6,656	-	1,255	15,615
	Total (tons/year)	16.14	-	14.00	-	2.04	32.2
SOx	Total (lb/hr)	0.01	-	0.01	-	0.01	0.03
	Total (lb/day)	0.28	-	0.20	-	0.10	0.6
	Total Qtr_1 (lb/qtr)	7	-	6	-	3	16
	Total Qtr_2 (lb/qtr)	14	-	12	-	4	29
	Total Qtr_3 (lb/qtr)	19	-	16	-	4	39
	Total Qtr_4 (lb/qtr)	12	-	10	-	4	27
	Total (tons/year)	0.03	-	0.02	-	0.01	0.1
PM_{10}	Total (lb/hr)	0.59	1.69	0.23	29.09	0.18	31.78
	Total (lb/day)	11.78	33.81	3.63	495.46	3.14	547.8
	Total Qtr_1 (lb/qtr)	288	1,691	106	17,154	104	19,343
	Total Qtr_2 (lb/qtr)	579	1,691	213	22,478	125	25,086
	Total Qtr_3 (lb/qtr)	788	1,691	290	24,633	128	27,529
	Total Qtr_4 (lb/qtr)	519	1,691	191	21,991	125	24,517
	Total (tons/year)	1.09	3.38	0.40	37.92	0.20	43.0
$PM_{2.5}$	Total (lb/hr)	0.59	0.22	0.23	4.46	0.18	5.68
	Total (lb/day)	11.78	4.36	3.63	75.97	3.14	98.9
	Total Qtr_1 (lb/qtr)	288	218	106	2,630	104	3,346
	Total Qtr_2 (lb/qtr)	579	218	213	3,447	125	4,581
	Total Qtr_3 (lb/qtr)	788	218	290	3,777	128	5,201
	Total Qtr_4 (lb/qtr)	519	218	191	3,372	125	4,425
	Total (tons/year)	1.09	0.44	0.40	5.81	0.20	7.9

[1] The methodology in the SMAQMD's Guide to Air Quality Assesment, July 2004, Table 4.3, specifies that emissions that have been offset by the use of Emission Reduction Credits (ERCs) required by the permitting process not be included in the project total. These "surplus" emissions are already considered to have been mitigated by the use of ERCs.

[2] The daily emissions for CEQA purposes were determined by dividing the maximum project emissions by 365 days/year.

Table 3. Operation Limits Based on Tier III Screening Engines				
Estimated Maximum Hours of Operation				
hr/Qtr_1	hr/Qtr_2	hr/Qtr_3	hr/Qtr_4	hr/year
584	1,173	1,596	1,051	4,404
Requested Maximum Fuel Usage				
gal/Qtr_1	gal/Qtr_2	gal/Qtr_3	gal/Qtr_4	gal/year
34,664	69,613	94,743	62,408	246,629

Table 4. Aerojet Mining Project - Emissions Summary (With Tier III Screening Engines)							
		Plant Engines	Plant Fugitive	Offroad Vehicles	Unpaved Roads	Onroad Vehicles	Emission Totals
HC	Total (lb/hr)	2.92	-	0.31	-	0.37	3.59
	Total (lb/day)	58.35	-	4.89	-	6.50	69.7
	Total Qtr_1 (lb/qtr)	1,704	-	143	-	215	2,061
	Total Qtr_2 (lb/qtr)	3,421	-	287	-	258	3,966
	Total Qtr_3 (lb/qtr)	4,657	-	390	-	264	5,311
	Total Qtr_4 (lb/qtr)	3,067	-	257	-	258	3,582
	Total (tons/year)	6.42	-	0.54	-	0.42	7.4
NOx	Total (lb/hr)	8.56	-	8.57	-	4.71	21.84
	Total (lb/day)	171.22	-	123.78	-	78.79	373.8
	Total Qtr_1 (lb/qtr)	4,999	-	3,614	-	2,640	11,253
	Total Qtr_2 (lb/qtr)	10,039	-	7,258	-	3,168	20,465
	Total Qtr_3 (lb/qtr)	13,663	-	9,878	-	3,249	26,790
	Total Qtr_4 (lb/qtr)	9,000	-	6,507	-	3,168	18,675
	Total (tons/year)	18.85	-	13.69	-	5.14	37.7
	Less ERCs (tons/year)[1]	-8.85					
	CEQA Emissions (ltons/year)						28.8
	CEQA Emissions (lb/day)[2]						158.0
CO	Total (lb/hr)	8.75	-	8.20	-	1.91	18.86
	Total (lb/day)	175.05	-	126.62	-	31.20	332.9
	Total Qtr_1 (lb/qtr)	5,111	-	3,697	-	1,046	9,854
	Total Qtr_2 (lb/qtr)	10,264	-	7,424	-	1,255	18,943
	Total Qtr_3 (lb/qtr)	13,969	-	10,104	-	1,287	25,360
	Total Qtr_4 (lb/qtr)	9,201	-	6,656	-	1,255	17,112
	Total (tons/year)	19.27	-	14.00	-	2.04	35.3
SOx	Total (lb/hr)	0.01	-	0.01	-	0.01	0.03
	Total (lb/day)	0.28	-	0.20	-	0.10	0.6
	Total Qtr_1 (lb/qtr)	8	-	6	-	3	17
	Total Qtr_2 (lb/qtr)	17	-	12	-	4	32
	Total Qtr_3 (lb/qtr)	23	-	16	-	4	42
	Total Qtr_4 (lb/qtr)	15	-	10	-	4	29
	Total (tons/year)	0.03	-	0.02	-	0.01	0.1
PM_{10}	Total (lb/hr)	0.59	1.69	0.23	29.09	0.18	31.78
	Total (lb/day)	11.80	33.81	3.63	495.46	3.14	547.8
	Total Qtr_1 (lb/qtr)	344	1,691	106	17,154	104	19,399
	Total Qtr_2 (lb/qtr)	692	1,691	213	22,478	125	25,198
	Total Qtr_3 (lb/qtr)	941	1,691	290	24,633	128	27,682
	Total Qtr_4 (lb/qtr)	620	1,691	191	21,991	125	24,617
	Total (tons/year)	1.30	3.38	0.40	37.92	0.20	43.2
$PM_{2.5}$	Total (lb/hr)	0.59	0.22	0.23	4.46	0.18	5.68
	Total (lb/day)	11.80	4.36	3.63	75.97	3.14	98.9
	Total Qtr_1 (lb/qtr)	344	218	106	2,630	104	3,402
	Total Qtr_2 (lb/qtr)	692	218	213	3,447	125	4,694
	Total Qtr_3 (lb/qtr)	941	218	290	3,777	128	5,354
	Total Qtr_4 (lb/qtr)	620	218	191	3,372	125	4,525
	Total (tons/year)	1.30	0.44	0.40	5.81	0.20	8.2

[1] The methodology in the SMAQMD's Guide to Air Quality Assesment, July 2004, Table 4.3, specifies that emissions that have been offset by the use of Emission Reduction Credits (ERCs) required by the permitting process not be included in the project total. These "surplus" emissions are already considered to have been mitigated by the use of ERCs.

[2] The daily emissions for CEQA purposes were determined by dividing the maximum project emissions by 365 days/year.

Table 5. Mobile Aggregate Processing Plant Technical Data.

Engine #	Description	Make	Model	Tier	Max HP	BSFC g/BHP-h[1]	Load Factor[2]	Maximum Fuel Use							Maximum Hours of Operation					
								gal/hr	gal/day	gal/Qtr$_1$	gal/Qtr$_2$	gal/Qtr$_3$	gal/Qtr$_4$	gal/year	hr/day[3]	hr/Qtr$_1$	hr/Qtr$_2$	hr/Qtr$_3$	hr/Qtr$_4$	hr/year
1	Crusher	CAT	C-15	3	540	161.0	0.78	21.2	424.1	10,381	20,847	28,373	18,690	78,291						
2	Crusher	CAT	C-15	3	540	161.0	0.78	21.2	424.1	10,381	20,847	28,373	18,690	78,291						
3	Screen	Perkins	3056	2	173.7	163.0	0.78	6.9	138.1	3,381	6,789	9,240	6,087	25,497	20	490	983	1,338	881	3,692
4	Screen	Perkins	3056	2	173.7	163.0	0.78	6.9	138.1	3,381	6,789	9,240	6,087	25,497						
5	Screen	Perkins	3056	2	173.7	163.0	0.78	6.9	138.1	3,381	6,789	9,240	6,087	25,497						
6	Feeder	Deutz	2012	2	93.8	157.3	0.78	3.6	72.0	1,762	3,539	4,817	3,173	13,291						
3A	Alternate	CAT	C6.6	3	174.3	163.0	0.78	6.9	138.6	4,047	8,126	11,060	7,285	25,585						
4A	Alternate	CAT	C6.6	3	174.3	163.0	0.78	6.9	138.6	4,047	8,126	11,060	7,285	25,585	20	584	1,173	1,596	1,051	4,404
5A	Alternate	CAT	C6.6	3	174.3	163.0	0.78	6.9	138.6	4,047	8,126	11,060	7,285	25,585						
Total								66.7	1334.6	32,667	65,602	89,284	58,812	246,365						
Total (Alternate Screens)								66.8	1336.0	32,702	65,672	89,379	58,875	246,629						
Requested Permit Limit										**32,667**	**65,602**	**89,284**	**58,812**	**246,365**						
Requested Permit Limit (Alternate Screens)										**34,664**	**69,613**	**94,743**	**62,408**	**246,629**						

[1]Worst-case (highest) BSFC over power range from manufacturer. Where BSFC curve not available, 163.0 g/BHP-h (7,000 BTU/BHP-hr) was substituted from AP-42, Table 3.3.1.
[2]From CARB's Carl Moyer Program Guidelines, Appendix B-13 for Crushing/Processing.
[3]Maximum Daily Operation Estimated by Granite Construction Company

Table 6. Portable Aggregate Processing Plant Emission Factors[1]

Permit Emission Factors Based on Tier II Screen Engines							Permit Emission Factors Based on Tier III Engines						
grams/bhp-hr[1]							grams/bhp-hr[1]						
Engine #	HC	NOx	CO	SOx	PM10	PM2.5[3]	Engine #	HC	NOx	CO	SOx	PM10	PM2.5[3]
1	1.0	3.0	2.6	0.005	0.15	0.15	1	1.0	3.0	2.6	0.005	0.15	0.15
2	1.0	3.0	2.6	0.005	0.22	0.22	2	1.0	3.0	2.6	0.005	0.22	0.22
3	1.0	4.2	3.7	0.005	0.22	0.22	3A	1.0	2.3	3.7	0.005	0.22	0.22
4	1.0	4.2	3.7	0.005	0.22	0.22	4A	1.0	2.3	3.7	0.005	0.22	0.22
5	1.0	4.2	3.7	0.005	0.22	0.22	5A	1.0	2.3	3.7	0.005	0.22	0.22
6	1.0	5.6	3.7	0.005	0.30	0.30	6	1.0	5.6	3.7	0.005	0.30	0.30
grams/gallon[2]							grams/gal[2]						
Engine #	HC	NOx	CO	SOx	PM10	PM2.5[3]	Engine #	HC	NOx	CO	SOx	PM10	PM2.5[3]
1	19.86	59.59	51.64	0.10	2.98	2.98	1	19.86	59.59	51.64	0.10	2.98	2.98
2	19.86	59.59	51.64	0.10	4.37	4.37	2	19.86	59.59	51.64	0.10	4.37	4.37
3	19.62	81.81	72.59	0.10	4.32	4.32	3A	19.62	45.52	72.59	0.10	4.32	4.32
4	19.62	81.81	72.59	0.10	4.32	4.32	4A	19.62	45.52	72.59	0.10	4.32	4.32
5	19.62	81.81	72.59	0.10	4.32	4.32	5A	19.62	45.52	72.59	0.10	4.32	4.32
6	20.32	113.82	75.20	0.10	6.10	6.10	6	20.32	113.82	75.20	0.10	6.10	6.10

[1]Emission Factors from SMAQMD IC Engine Policy Manual with the exception of SOx, which is based on 15 ppm S in fuel.

[2]Based on BSFC shown in Table 5.

[3]All engine PM is assumed to be $PM_{2.5}$

Table 7. Portable Aggregate Processing Plant Emissions

	Emissions Based on Tier II Screen Engines (lb/hr)							Emissions Based on Tier III Screen Engines (lb/hr)					
Engine #	HC	NOx	CO	SOx	PM10	PM2.5	Engine #	HC	NOx	CO	SOx	PM10	PM2.5
1	0.93	2.79	2.41	0.00	0.14	0.14	1	0.93	2.79	2.41	0.00	0.14	0.14
2	0.93	2.79	2.41	0.00	0.20	0.20	2	0.93	2.79	2.41	0.00	0.20	0.20
3	0.30	1.25	1.11	0.00	0.07	0.07	3A	0.30	0.70	1.11	0.00	0.07	0.07
4	0.30	1.25	1.11	0.00	0.07	0.07	4A	0.30	0.70	1.11	0.00	0.07	0.07
5	0.30	1.25	1.11	0.00	0.07	0.07	5A	0.30	0.70	1.11	0.00	0.07	0.07
6	0.16	0.90	0.60	0.00	0.05	0.05	6	0.16	0.90	0.60	0.00	0.05	0.05
Total (lb/hr)	2.91	10.21	8.74	0.01	0.59	0.59		2.92	8.56	8.75	0.01	0.59	0.59
Total (lb/day)	58.29	204.23	174.82	0.28	11.78	11.78		58.35	171.22	175.05	0.28	11.80	11.80
Total Qtr_1 (lb/qtr)	1,427	4,999	4,279	7	288	288		1,704	4,999	5,111	8	344	344
Total Qtr_2 (lb/qtr)	2,865	10,039	8,593	14	579	579		3,421	10,039	10,264	17	692	692
Total Qtr_3 (lb/qtr)	3,900	13,663	11,695	19	788	788		4,657	13,663	13,969	23	941	941
Total Qtr_4 (lb/qtr)	2,569	9,000	7,704	12	519	519		3,067	9,000	9,201	15	620	620
Total (tons/year)	5.38	18.85	16.14	0.03	1.09	1.09		6.42	18.85	19.27	0.03	1.30	1.30

Table 8. Aggregate Processing Plant Fugitive Emissions

Sand and Aggregate Processing Emissions Points	Throughput[1]					Emission Factors[2] PM10	Emission Factors[2] PM2.5	PM10 Emissions				PM2.5 Emissions			
	ton/hr	fraction	ton/day	ton/qtr	ton/yr	lb/ton	lb/ton	lb/hr	lb/day	lb/qtr	ton/yr	lb/hr	lb/day	lb/qtr	ton/yr
Unloading Transfer from Trucks (F1)	600	1.00	12,000	600,000	2,400,000	4.60E-05	1.30E-05	0.03	0.55	27.60	0.06	0.01	0.16	7.80	0.02
Vibrating Grizzly Feeder Transfer (F1-VG1)	600	1.00	12,000	600,000	2,400,000	4.60E-05	1.30E-05	0.03	0.55	27.60	0.06	0.01	0.16	7.80	0.02
Conveyor Transfer Point (F1-C1)	600	1.00	12,000	600,000	2,400,000	4.60E-05	1.30E-05	0.03	0.55	27.60	0.06	0.01	0.16	7.80	0.02
Screening #1 (S1)	600	1.00	12,000	600,000	2,400,000	7.40E-04	5.00E-05	0.44	8.88	444.00	0.89	0.03	0.60	30.00	0.06
Conveyor Transfer Point (S1-C1)	600	1.00	12,000	600,000	2,400,000	4.60E-05	1.30E-05	0.03	0.55	27.60	0.06	0.01	0.16	7.80	0.02
Conveyor Transfer Point (S1-C2)	0	0.00	0	0	0	4.60E-05	1.30E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conveyor Transfer Point (S1-C3)	270	0.45	5,400	270,000	1,080,000	4.60E-05	1.30E-05	0.01	0.25	12.42	0.02	0.00	0.07	3.51	0.01
Conveyor Transfer Point (S1-C4)	330	0.55	6,600	330,000	1,320,000	4.60E-05	1.30E-05	0.02	0.30	15.18	0.03	0.00	0.09	4.29	0.01
Screening #2 (S2)	330	0.55	6,600	330,000	1,320,000	7.40E-04	5.00E-05	0.24	4.88	244.20	0.49	0.02	0.33	16.50	0.03
Conveyor Transfer Point (S2-C1)	330	0.55	6,600	330,000	1,320,000	4.60E-05	1.30E-05	0.02	0.30	15.18	0.03	0.00	0.09	4.29	0.01
Conveyor Transfer Point (S2-C2)	313	0.52	6,260	313,000	1,252,000	4.60E-05	1.30E-05	0.01	0.29	14.40	0.03	0.00	0.08	4.07	0.01
Conveyor Transfer Point (S2-C3)	17	0.03	340	17,000	68,000	4.60E-05	1.30E-05	0.00	0.02	0.78	0.00	0.00	0.00	0.22	0.00
Primary Crushing (RC1)	192	0.32	3,840	192,000	768,000	5.40E-04	1.00E-04	0.10	2.07	103.68	0.21	0.02	0.38	19.20	0.04
Vibrating Grizzly Feeder (RC1-VG1)	313	0.52	6,260	313,000	1,252,000	4.60E-05	1.30E-05	0.01	0.29	14.40	0.03	0.00	0.08	4.07	0.01
Conveyor Transfer Point (RC1-C1)	192	0.32	3,840	192,000	768,000	4.60E-05	1.30E-05	0.01	0.18	8.83	0.02	0.00	0.05	2.50	0.00
Conveyor Transfer Point (RC1-C2)	121	0.20	2,420	121,000	484,000	4.60E-05	1.30E-05	0.01	0.11	5.57	0.01	0.00	0.03	1.57	0.00
Conveyor Transfer Point (RC1-C3)	313	0.52	6,260	313,000	1,252,000	4.60E-05	1.30E-05	0.01	0.29	14.40	0.03	0.00	0.08	4.07	0.01
Screening #3 (S3)	559	0.93	11,180	559,000	2,236,000	7.40E-04	5.00E-05	0.41	8.27	413.66	0.83	0.03	0.56	27.95	0.06
Conveyor Transfer Point (S3-C1)	559	0.93	11,180	559,000	2,236,000	4.60E-05	1.30E-05	0.03	0.51	25.71	0.05	0.01	0.15	7.27	0.01
Conveyor Transfer Point (S3-C2)	246	0.41	4,920	246,000	984,000	4.60E-05	1.30E-05	0.01	0.23	11.32	0.02	0.00	0.06	3.20	0.01
Conveyor Transfer Point (S3-C3)	0	0.00	0	0	0	4.60E-05	1.30E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conveyor Transfer Point (S3-C4)	313	0.52	6,260	313,000	1,252,000	4.60E-05	1.30E-05	0.01	0.29	14.40	0.03	0.00	0.08	4.07	0.01
Secondary Crushing (RC2)	246	0.41	4,920	246,000	984,000	5.40E-04	1.00E-04	0.13	2.66	132.84	0.27	0.02	0.49	24.60	0.05
Conveyor Transfer Point (RC2-C1)	246	0.41	4,920	246,000	984,000	4.60E-05	1.30E-05	0.01	0.23	11.32	0.02	0.00	0.06	3.20	0.01
Conveyor Transfer Point (RC2-C2)	246	0.41	4,920	246,000	984,000	4.60E-05	1.30E-05	0.01	0.23	11.32	0.02	0.00	0.06	3.20	0.01
Conveyor Transfer Point (RC2-C3)	246	0.41	4,920	246,000	984,000	4.60E-05	1.30E-05	0.01	0.23	11.32	0.02	0.00	0.06	3.20	0.01
Stacking Conveyor Transfer Point (SC1)	270	0.45	5,400	270,000	1,080,000	4.60E-05	1.30E-05	0.01	0.25	12.42	0.02	0.00	0.07	3.51	0.01
Stacking Conveyor Transfer Point (SC2)	17	0.03	340	17,000	68,000	4.60E-05	1.30E-05	0.00	0.02	0.78	0.00	0.00	0.00	0.22	0.00
Stacking Conveyor Transfer Point (SC3)	313	0.52	6,260	313,000	1,252,000	4.60E-05	1.30E-05	0.01	0.29	14.40	0.03	0.00	0.08	4.07	0.01
Stacking Conveyor Transfer Point (SC4)	0	0.00	0	0	0	4.60E-05	1.30E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Loader Transfer to Trucks	600	1.00	12,000	600,000	2,400,000	4.60E-05	1.30E-05	0.03	0.55	27.60	0.06	0.01	0.16	7.80	0.02
Total								**1.69**	**33.81**	**1,690.51**	**3.38**	**0.22**	**4.36**	**217.77**	**0.44**

[1]From Granite Construction Company

[2]From AP-42, Section 11.19.2, Controlled Emission Factors

Table 9. Mobile Mining Equipment Technical Data

Engine #	Description	Make	Model	Tier	Max HP	Year	Load Factor[1]	Maximum Operation[2] hrs/day	hr/Qtr$_1$	hr/Qtr$_2$	hr/Qtr$_3$	hr/Qtr$_4$	hrs/yr
1	Dozer	CAT	D-9	2	405	2002	0.59	20	584	1,173	1,596	1,051	4,404
2	Plant Feed Loader	CAT	988	3	475	2006	0.55	20	584	1,173	1,596	1,051	4,404
3	Loadout Loader	CAT	988	3	475	2006	0.55	20	584	1,173	1,596	1,051	4,404
4	Plant Feed/Loadout Loader	CAT	988	2	475	2002	0.55	10	292	586	798	526	2,202
5	Motor Grader	CAT	14	1	215	1996	0.61	5	146	293	399	263	1,101

[1]From CARB's Carl Moyer Program Guidelines, Table B-13

[2]Maximum daily operation from Granite Construction Company. Maximum quarterly and annual operation derived from portable aggregate processing plant permit limits.

Table 10. Mobile Mining Equipment Emission Factors							
		grams/BHP[1]					
Engine #	Description	HC	NOx	CO	SOx	PM10	PM2.5
1	Dozer	0.12	3.79	2.60	0.005	0.088	0.088
2	Plant Feed Loader	0.12	2.32	2.60	0.005	0.088	0.088
3	Loadout Loader	0.12	2.32	3.70	0.005	0.088	0.088
4	Plant Feed/Loadout Loader	0.12	3.79	3.70	0.005	0.088	0.088
5	Motor Grader	0.12	5.93	3.70	0.005	0.120	0.120
[1]From CARB's Carl Moyer Program Guidelines, Table B-12							

Table 11. Mobile Mining Equipment Emissions						
Engine #	HC	NOx	CO	SOx	PM10	PM2.5
1	0.06	2.00	1.37	0.003	0.05	0.05
2	0.07	1.34	1.50	0.003	0.05	0.05
3	0.07	1.34	2.13	0.003	0.05	0.05
4	0.07	2.18	2.13	0.003	0.05	0.05
5	0.03	1.71	1.07	0.001	0.03	0.03
Total (lb/hr)	0.31	8.57	8.20	0.012	0.23	0.23
Total (lb/day)	4.89	123.78	126.62	0.20	3.63	3.63
Total Qtr_1 (lb/qtr)	143	3,614	3,697	6	106	106
Total Qtr_2 (lb/qtr)	287	7,258	7,424	12	213	213
Total Qtr_3 (lb/qtr)	390	9,878	10,104	16	290	290
Total Qtr_4 (lb/qtr)	257	6,507	6,656	10	191	191
Total (tons/year)	0.54	13.69	14.00	0.02	0.40	0.40

Table 12. Unpaved Roads and Surfaces - Technical Data

Vehicle Description	Avg. Vehicle Wt. (Tons)[1]	Avg. Silt Content (%)[2]	Vehicle Miles Traveled (VMT)[3]							Emission Factors[2] PM_{10}	Emission Factors[2] $PM_{2.5}$	Control Efficiency[4]
			VMT/hr	VMT/day	VMT/Qtr$_1$	VMT/Qtr$_2$	VMT/Qtr$_3$	VMT/Qtr$_4$	VMT/yr	lb/VMT	lb/VMT	%
Mobile Mining Equipment												
CAT D-9 Dozer	54.40	8.3	3.00	60.0	1752	3518	4788	3154	13,212	3.97	0.61	93
CAT 988 Plant Feed Loader	61.65	8.3	3.00	60.0	1752	3518	4788	3154	13,212	4.20	0.64	93
CAT 988 Loadout Loader	61.65	8.3	3.00	60.0	1752	3518	4788	3154	13,212	4.20	0.64	93
CAT 988 Plant Feed/Loadout Loader	61.65	8.3	3.00	30.0	1752	3518	4788	3154	13,212	4.20	0.64	93
CAT 14H Motor Grader	20.51	8.3	3.00	15.0	1752	3518	4788	3154	13,212	2.56	0.39	93
On-Road Vehicles												
F3600 Water Truck[5]	17.00	8.3	3.00	40.0	2600	3120	3200	3120	12,040	2.35	0.36	93
2.5T Mechanic/Service Truck[5]	13.00	8.3	3.00	3.0	195	234	240	234	903	2.08	0.32	93
Chevy 2500 Fuel/Lube Truck	7.42	8.3	3.00	3.0	195	234	240	234	903	1.62	0.25	93
Ford F-150 Gasoline	5.36	8.3	1.00	20.0	1300	1560	1600	1560	6,020	1.40	0.21	93
Ford F-250 Diesel	7.90	8.3	1.50	30.0	1950	2340	2400	2340	9,030	1.66	0.26	93
Ford F-250 Diesel	7.90	8.3	1.50	30.0	1950	2340	2400	2340	9,030	1.66	0.26	93
Worker Trips	5.4	8.3	30	75.0	4875	5850	6000	5850	22,575	1.40	0.21	93
Haul Trucks[5]	27.5	8.3	100	2,000	65,000	78,000	80,000	78,000	250,000	2.92	0.45	93
Total			58.0	426.0					376,560			

[1]From Manufacturer's Data

[2]From AP-42, Chapter 13.2.2 (December 2003)

[3]Assumed 3 mph average speed for loaders, dozers, and graders. Based Truck Calculations on 7500 VMT/yr or 5000 VMT/yr, 200 days worked at 20 hours a day.

[4]Reductions due to limiting vehicle speed to 15 mph, improving surfaces with aggregate and watering , from Fugitive Dust Control Technology, Orlemann et.al., Noyes Data Corporation, 1983.

[5]Weight Estimated

Table 13. Unpaved Roads and Surfaces - Emissions														
	PM_{10} Emissions							$PM_{2.5}$ Emissions						
Vehicle Description	lb/hr	lb/day	lb/Qtr$_1$	lb/Qtr$_2$	lb/Qtr$_3$	lb/Qtr$_4$	ton/yr	lb/hr	lb/day	lb/Qtr$_1$	lb/Qtr$_2$	lb/Qtr$_3$	lb/Qtr$_4$	ton/yr
Mobile Mining Equipment														
CAT D-9 Dozer	0.83	16.66	486	977	1329	876	1.8	0.13	2.55	75	150	204	134	0.281
CAT 988 Plant Feed Loader	0.88	17.62	514	1033	1406	926	1.9	0.14	2.70	79	158	216	142	0.297
CAT 988 Loadout Loader	0.88	17.62	514	1033	1406	926	1.9	0.14	2.70	79	158	216	142	0.297
CAT 988 Plant Feed/Loadout Loader	0.88	8.81	514	1033	1406	926	1.9	0.14	1.35	79	158	216	142	0.297
CAT 14H Motor Grader	0.54	2.68	313	630	857	564	1.2	0.08	0.41	48	97	131	87	0.181
On-Road Vehicles														
F3600 Water Truck	0.49	6.58	428	513	526	513	1.0	0.08	1.01	66	79	81	79	0.152
2.5T Mechanic/Service Truck	0.44	0.44	28	34	35	34	0.1	0.07	0.07	4	5	5	5	0.010
Chevy 2500 Fuel/Lube Truck	0.34	0.34	22	26	27	26	0.1	0.05	0.05	3	4	4	4	0.008
Ford F-150 Gasoline	0.10	1.96	127	153	157	153	0.3	0.02	0.30	20	23	24	23	0.045
Ford F-250 Diesel	0.17	3.49	227	273	280	273	0.5	0.03	0.54	35	42	43	42	0.081
Ford F-250 Diesel	0.17	3.49	227	273	280	273	0.5	0.03	0.54	35	42	43	42	0.081
Worker Trips	2.94	7.34	477	572	587	572	1.1	0.45	1.13	73	88	90	88	0.169
Haul Trucks	20.42	408.43	13,274	15,929	16,337	15,929	25.5	3	63	2,035	2,442	2,505	2,442	3.914
Total	29.09	495.46	17,154	22,478	24,633	21,991	37.9	4.46	75.97	2,630	3,447	3,777	3,372	5.81

Table 14. On-Road Vehicles - Technical Data

Onsite Heavy Duty Diesel Trucks

								Maximum Operation					
Truck #	Description	Make	Model	Category	Max HP	Year	Avg. Speed (mph)	VMT/day	VMT/Qtr_1	VMT/Qtr_2	VMT/Qtr_3	VMT/Qtr_4	VMT/yr
1	Water Truck		F3600	54,000 GVWR	340	2000	15	40	2,600	3,120	3,200	3,120	12,040
2	Mechanic/Service Truck		2.5T	54,000 GVWR	300	2005	15	3	195	234	240	234	903
3	Fuel/Lube Truck		2500	26,000 GVWR	330	2003	15	3	195	234	240	234	903

Onsite Medium Duty Trucks

								Maximum Operation					
Truck #	Description	Make - Fuel	Model	Category	Max HP	Year	Fuel	VMT/day	VMT/Qtr_1	VMT/Qtr_2	VMT/Qtr_3	VMT/Qtr_4	VMT/yr
4	Pickup	Ford - Gasoline	F-150	6,250 GVWR	202	2004	Gasoline	20	1,300	1,560	1,600	1,560	6,020
5	Pickup	Ford - Diesel	F-250	9,600 GVWR	325	2006	Diesel	30	1,950	2,340	2,400	2,340	9,030
6	Pickup	Ford - Diesel	F-250	9,600 GVWR	325	2002	Diesel	30	1,950	2,340	2,400	2,340	9,030

Onsite Aggregate Haul Trucks

	Maximum Material Transferred		Trip Dist.		Average	Peak	Peak	Maximum Operation					
Truck #	TPD	TPY	miles	tons/trip	trips/day	trips/day	trips/yr	VMT/day	VMT/Qtr_1	VMT/Qtr_2	VMT/Qtr_3	VMT/Qtr_4	VMT/yr
Haul	22,000	2,750,000	2.0	22	500	1,000	125,000	2,000	65,000	78,000	80,000	78,000	250,000

Table 15. On-Road Vehicle Emissions						
	Emissions Factors (grams/mile)[1]					
Engine #	HC	NOx	CO	SOx	PM10	PM2.5
1	0.51	17.58	6.85	0.011	0.403	0.403
2	0.26	11.63	6.85	0.011	0.252	0.252
3	0.08	5.39	4.55	0.021	0.216	0.216
4	0.08	0.24	1.51	0.011	0.05	0.05
5	0.36	5.27	1.43	0.005	0.10	0.10
6	0.58	6.44	2.12	0.005	0.13	0.13
Haul	1.45	17.31	6.85	0.021	0.70	0.70
Total (lb/hr)	0.37	4.71	1.91	0.01	0.18	0.18
Total (lb/day)	6.50	78.79	31.20	0.10	3.14	3.14
Total Qtr_1 (lb/qtr)	215	2640	1046	3	104	104
Total Qtr_2 (lb/qtr)	258	3168	1255	4	125	125
Total Qtr_3 (lb/qtr)	264	3249	1287	4	128	128
Total Qtr_4 (lb/qtr)	258	3168	1255	4	125	125
Total (tons/year)	0.42	5.14	2.04	0.01	0.20	0.20

[1]Emission factors from CARB's Carl Moyer Program Guidelines and from EMFAC2002.

APPENDIX B

BIOLOGICAL RESOURCE ASSESSMENT

Biological Resource Assessment

For

Aerojet Mining

Sacramento County, California

April 7, 2006

Prepared for:
Granite Construction Company

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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Aerojet Mining

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INTRODUCTION

The 1,319±-acre Aerojet Mining project site (project site) is located south of White Rock Road, north of Douglas Road, and east of Sunrise Boulevard (Figure 1. *Project Site and Vicinity Map*). The site corresponds to unsectioned portions of Townships 8 North and 9 North, Range 7 East (MDBM) of the "Buffalo Creek, California" 7.5-minute quadrangle (U.S. Department of the Interior, Geological Survey, 1967, photorevised 1980). The site is located at approximately 38° 34' 50" North and 121° 13' 00" West within the Lower American River Watershed (#18020111, U.S. Department of Interior, Geological Survey 1978).

The purpose of this biological resource assessment is to identify waters of the U.S. and to assess the potential for occurrence of special-status plant and wildlife species within the project site.

For the purposes of this assessment, "special-status" refers to those species which:

- Have been designated by the Fish and Game Commission or the U.S. Fish and Wildlife Services (USFWS) as either *rare, threatened,* or *endangered*; and are legally protected under the California and/or federal Endangered Species Acts; or

- Are proposed or candidate species being considered for listing under either the California or federal Endangered Species Acts; or

- Are of expressly stated interest to resource regulatory agencies, or local jurisdictions, such as California Department of Fish and Game (CDFG) species of special concern, federal species of concern, or California Native Plant Society (CNPS) List 1 and 2 species.

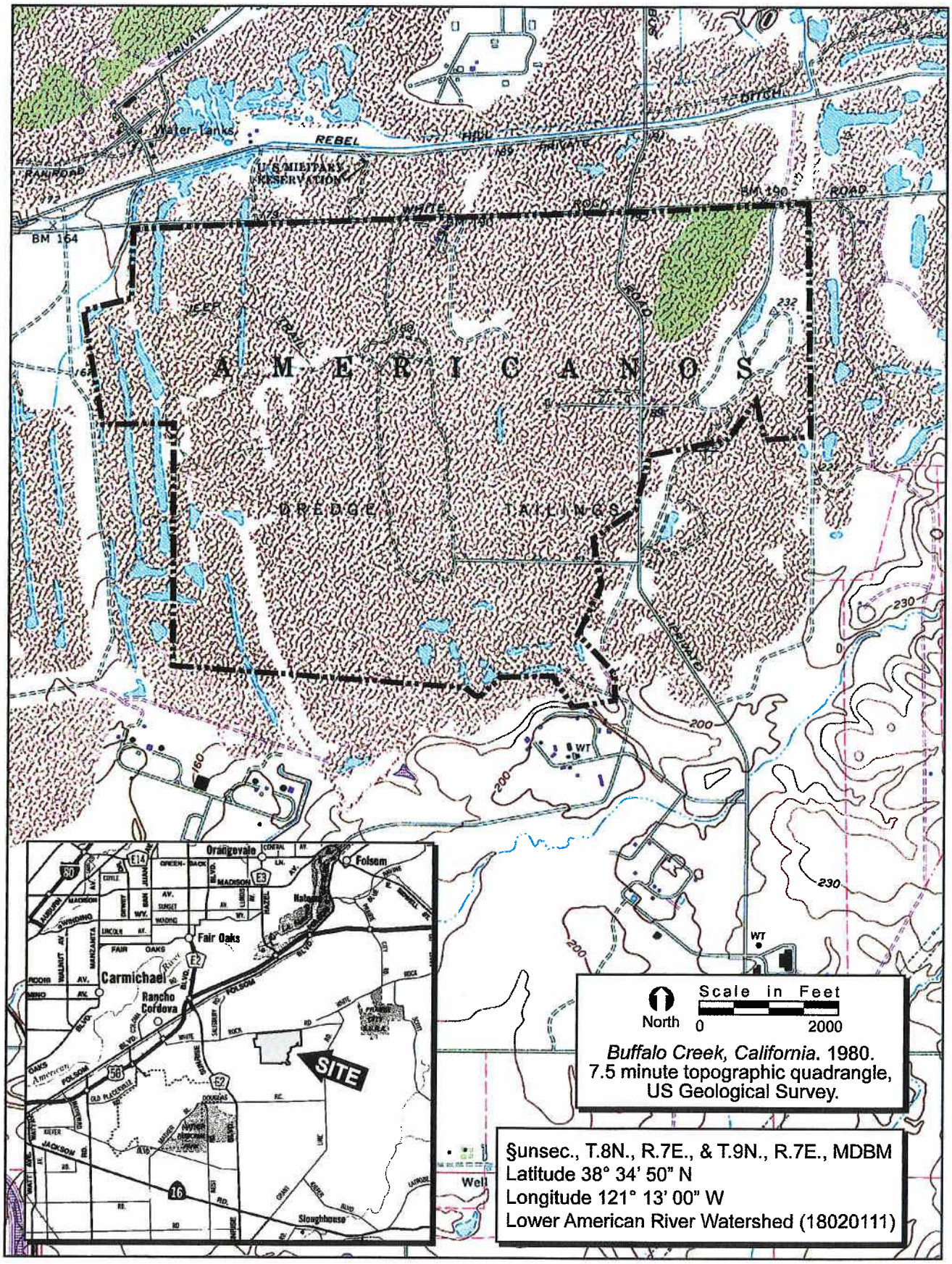

FIGURE 1. Project Site and Vicinity Map

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Previous Studies

A variety of references were obtained and reviewed in an effort to incorporate biological information previously collected within the project site and its immediate vicinity. The project site is contained within the Rio Del Oro property. Several surveys have been previously conducted on-site. The following reports were used in the preparation of this biological resource assessment:

- *Results of Surveys for Special-Status Wildlife Species at the Aerojet Property, Sacramento County, California* (Miriam Green Assoicates, April 1999)
  A series of wildlife surveys were conducted on the 3,860-acre Aerojet Property south of White Rock Road and north of Douglas Road during February and March of 1999. The purpose of these surveys was to search for special-status wildlife species and to identify whether suitable habitat for any of these species is present on the site.

- *Jurisdictional Delineation Rio del Oro Property* (Gibson and Skordal, June 1999)
  A wetland delineation of the 3,860-acre Rio Del Oro property was conducted to identify potential waters of the U.S.

- *Listed Vernal Pool Branchiopods Wet Season Survey* (Gibson and Skordal, August 2000)
  Protocol surveys for listed vernal pool branchiopods were conducted during the year 2000 wet season within an approximately 1,800-acre portion of the 3,860-acre Rio Del Oro property.

- *Listed Vernal Pool Branchiopods Wet Season Survey* (Gibson and Skordal, July 2001)
  Protocol surveys for listed vernal pool branchiopods were conducted during the year 2001 wet season throughout a portion (subset of the lands surveyed in 2000) of the 3,860-acre Rio Del Oro property.

- *Elderberry Survey* (Gibson and Skordal, September 2000)
  A focused survey for elderberry (*Sambucus mexicana*) shrubs located within the 3,860-acre Rio Del Oro property was conducted during July and August 2000.

- *Rio del Oro, Rancho Cordova, California – Rare Plant Survey* (ECORP Consulting, Inc., August 2003)
  Rare plant surveys were conducted throughout potentially suitable habitats located within the 3,892±-acre Rio Del Oro property during various dates in May 2003.

- *Biological Assessment for Rio del Oro* (ECORP Consulting, Inc., September 2003)
  A biological assessment was prepared for the 3,892±-acre Rio Del Oro property. The purpose of this assessment was to identify potential waters of the U.S. and to assess the potential for occurrence of special-status plant and wildlife species within the property.

- *Wetland Delineation for Rio del Oro* (ECORP Consulting, Inc., December 9, 2004)
  A wetland delineation of the 3,893±-acre Rio Del Oro project area was conducted to identify potential waters of the U.S. The site was previously delineated by Gibson and Skordal in 1999 and subsequently verified by the U.S. Army Corps of Engineers on January 5, 2000. Due to the pending expiration of the original verification, the project area was re-delineated in June 2004.

Existing Site Conditions

The site was used for gold mining operations from the 1920s through the 1950s. The mining activities consisted of dredging ancient alluvial deposits. The areas that were mined are marked today by alternating piles of dredge tailings and lower areas where the finer sediment settled out. Linear dredge tailing piles, some reaching 60 feet in height, are prevalent throughout the site (Figure 2. *Aerial View of Project Site*). The cobble piles themselves are xeric environments characterized by cobble and remnant soils with sparse vegetation. Vegetation communities occur primarily within the low-lying areas between the tailing piles. Vegetation communities identified within the project site can generally be grouped into three categories: woodland, scrub, and grassland communities.

FIGURE 2. Aerial View of Project Site

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Annual Grassland

Non-native, naturalized Mediterranean grasses represent the predominant species within this community. Species commonly encountered include soft brome (*Bromus hordeaceus*), wild oat (*Avena fatua*), medusahead grass (*Taeniatherum caput-medusae*), Italian ryegrass (*Lolium multiflorum*), and little quaking grass (*Briza minor*). Other herbaceous species that occur in this community include yellow star-thistle (*Centaurea solstitialis*), Italian thistle (*Carduus pychocephalus*), milk thistle (*Silybum marianum*), filaree (*Erodium botrys*), rose clover (*Trifolium hirtum*), sticky tarweed (*Holocarpha virgata*), and common vetch (*Vicia sativa*).

Woodland Communities

Woodland communities present within the project site can further be defined as Fremont cottonwood woodland, Fremont cottonwood-willow woodland, willow woodland, and oak woodland. These communities generally occur within the depressions between the tailing piles and have relatively open tree canopies. Fremont cottonwood (*Populus fremontii*), willows (*Salix* spp.), and interior live oaks (*Quercus wislizenii*) are the predominant tree species. The understory of these communities also tends to be relatively open. Species commonly observed in the understory include a variety of annual grasses, coyote brush (*Baccharis pilularis*), and willow.

Scrub Communities

Scrub communities present within the project site include coyote brush scrub, willow scrub, and mixed scrub. These communities generally occur within low-lying areas between tailing piles. Coyote brush and willow are typically the dominant species, forming shrub layers that range from relatively dense to open. An herbaceous understory, consisting of a variety of annual grasses and forbs, typically occurs in the openings between shrubs.

According to the *Soil Survey of Sacramento County, California* (U.S. Department of Agriculture, Soil Conservation Service 1993), four soil units, or types, have been mapped within the project site (Figure 3. *Natural Resources Conservation Service Soil Types*). These are: (159) Hicksville gravely loam, occasionally flooded, 0-2% slopes; (196) Red Bluff-Xerorthents, 2-50% slopes; (223) Slickens; and (245) Xerorthent, dredge tailings, 2-50% slopes. Of these soil types, only (223) Slickens contain a listed hydric component. Although the components of the remaining three soil types are non-hydric, they are known to contain hydric inclusions.

RESULTS AND DISCUSSION

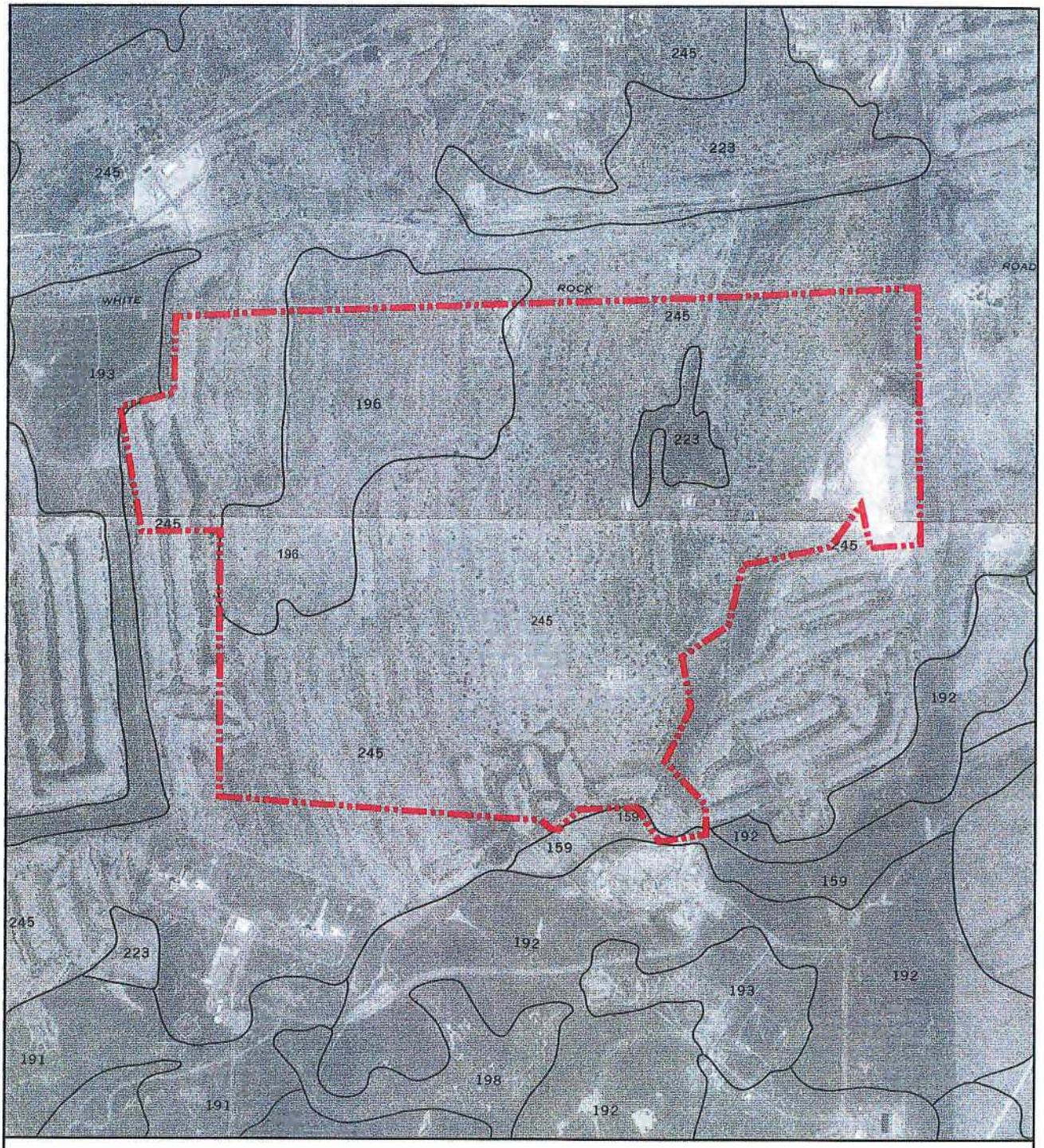
Waters of the U.S.

A wetland delineation of Rio Del Oro, including the project site, was first conducted by Gibson and Skordal in 1999 and was later revised by ECORP Consulting, Inc. on October 21, 2004. A field verification was conducted with the U.S. Army Corps of Engineers (Corps) on September 30, 2004, and the delineation was subsequently verified on January 10, 2005. A total of 0.224 acre of jurisdictional waters of the U.S. were identified within the project site (Table 1, Figure 4. *Wetland Delineation*, Attachment A). In addition, 8.800-acres of non-jurisdictional (isolated) wetlands were identified in the project site.

Table 1. Waters of the U.S.

Type	Acreage[1]		
	Jurisdictional	Isolated	Existing
Wetlands			
Seasonal Wetlands	0.047	8.655	8.702
Vernal Pool	0.000	0.072	0.072
Seasonal Wetland Swale	0.008	0.073	0.081
Other Waters			
Ephemeral Drainage	0.169	0.000	0.169
Total:	**0.224**	**8.800**	**9.024**

[1] The waters of the U.S. acreages were verified by the Corps in a letter dated January 10, 2005.



159* Hicksville gravely loam, occassionally flooded, 0-2% slopes
196* Red Bluff-Xerorthents, 2-50% slopes
223** Slickens
245* Xerorthents, dredge tailings, 2-50% slope

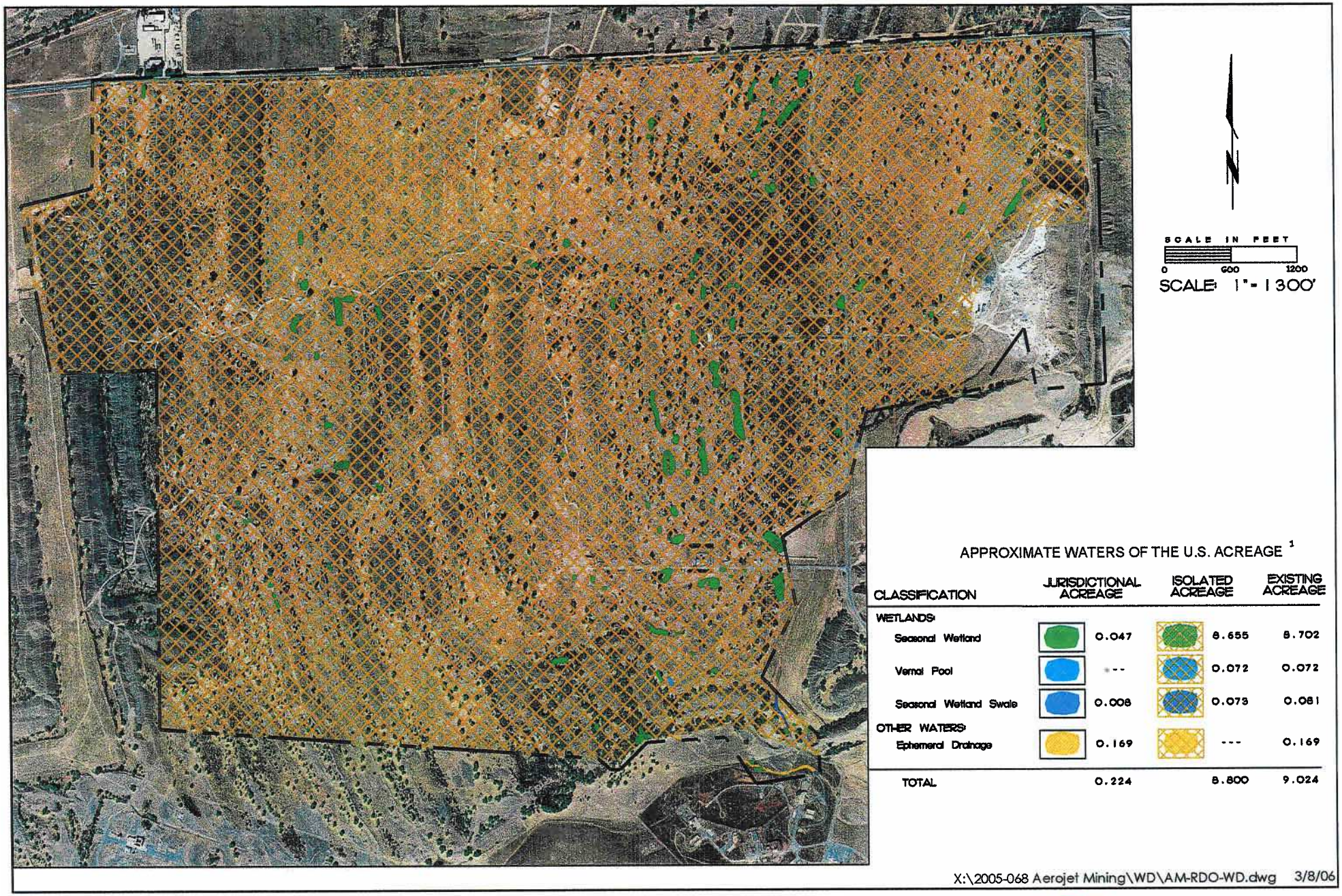
** Soil unit contains listed hydric inclusions.*
*** Soil unit consists of listed hydric components.*

NRCS Soil Survey, Sacramento County, California, 1993.

North

Scale in Feet
0 2000

FIGURE 3. Natural Resources Conservation Service Soil Types



APPROXIMATE WATERS OF THE U.S. ACREAGE [1]

CLASSIFICATION	JURISDICTIONAL ACREAGE	ISOLATED ACREAGE	EXISTING ACREAGE
WETLANDS:			
Seasonal Wetland	0.047	8.655	8.702
Vernal Pool	---	0.072	0.072
Seasonal Wetland Swale	0.008	0.073	0.081
OTHER WATERS:			
Ephemeral Drainage	0.169	---	0.169
TOTAL	0.224	8.800	9.024

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FIGURE 4. Wetland Delineation

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Wetlands

Seasonal Wetlands

Seasonal wetlands are ephemerally wet areas where surface runoff and rainwater accumulate within low-lying areas. They become inundated during the winter and fall but dry completely during the summer months. Seasonal wetlands are commonly dominated by non-native wetland generalist plants, such as Italian ryegrass, Mediterranean barley (*Hordeum marinum*), dock (*Rumex* spp.), and annual rabbit-foot grass (*Polypogon monspeliensis*). Less common are native species such as Baltic rush (*Juncus balticus*) and creeping spikerush (*Eleocharis macrostachya*).

Vernal Pools

A limited number of vernal pools are located within the annual grassland portions of the project site. Vernal pools are topographic basins that are typically underlain with an impermeable or semi-permeable hardpan or duripan layer. Vernal pools are typically inundated through the wet season and dry by late spring through the following wet season. Plant species observed within vernal pools include Carter's buttercup (*Ranunculus bonariensis*), Vasey's coyote-thistle (*Eryngium vaseyi*), creeping spikerush, and slender popcorn-flower (*Plagiobothrys stipitatus*).

Seasonal Wetland Swales

Seasonal wetland swales are linear wetland features that do not exhibit an ordinary high water mark and lack defined bed-and-bank characteristics. Plant species found within seasonal wetland swales include a variety of non-native naturalized species such as Italian ryegrass, Mediterranean barley, and dock, as well as native annual species including Vasey's coyote-thistle.

Other Waters

Ephemeral Drainage

Ephemeral drainages are seasonal, linear features that convey runoff for short periods of time, immediately following rain events and do not receive supplemental water from groundwater sources. In general, they exhibit bed-and-bank characteristics and are largely un-vegetated due to the scouring effects of flowing water. Occasionally however, some hydrophytic vegetation is present along the upper edges, and/or in areas where sediment accumulation provides suitable substrate for plant establishment.

Isolated Wetlands

A significant proportion of the wetland features (vernal pools, seasonal wetlands, and seasonal wetland swales) identified within the project site were mapped as non-jurisdictional because they were considered 'isolated' wetlands per the SWANCC decision (Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, No. 99-1178 [January 9, 2001]). According to the SWANCC decision, wetlands that are 'non-navigable, isolated, and intrastate' may fall outside of the Corps' jurisdiction. Isolated wetlands are those wetlands that are not part of (or adjacent to) the tributary system of traditional navigable waters or interstate waters. 'Adjacent' is defined by regulation as "bordering, contiguous, or neighboring." Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes, and the like are 'adjacent wetlands' [33 C.F.R. §328.3(d)].

Special-Status Species

A list of potentially occurring special-status species was developed for the project site, based on vegetation communities and conditions present on-site, species' known distributive data, prior site studies, and various reference sources (e.g., CNPS 2001, CDFG 2003, Jennings and Hayes 1994) (Attachment B). A number of regionally occurring special-status species have been previously documented within the "Buffalo Creek, California" 7.5-minute quadrangle (CDFG

2003, Attachment C). California Natural Diversity Database occurrence records located within 5-miles of the project site are depicted on Figure 5 (*CNDDB Special-Status Species Map*).

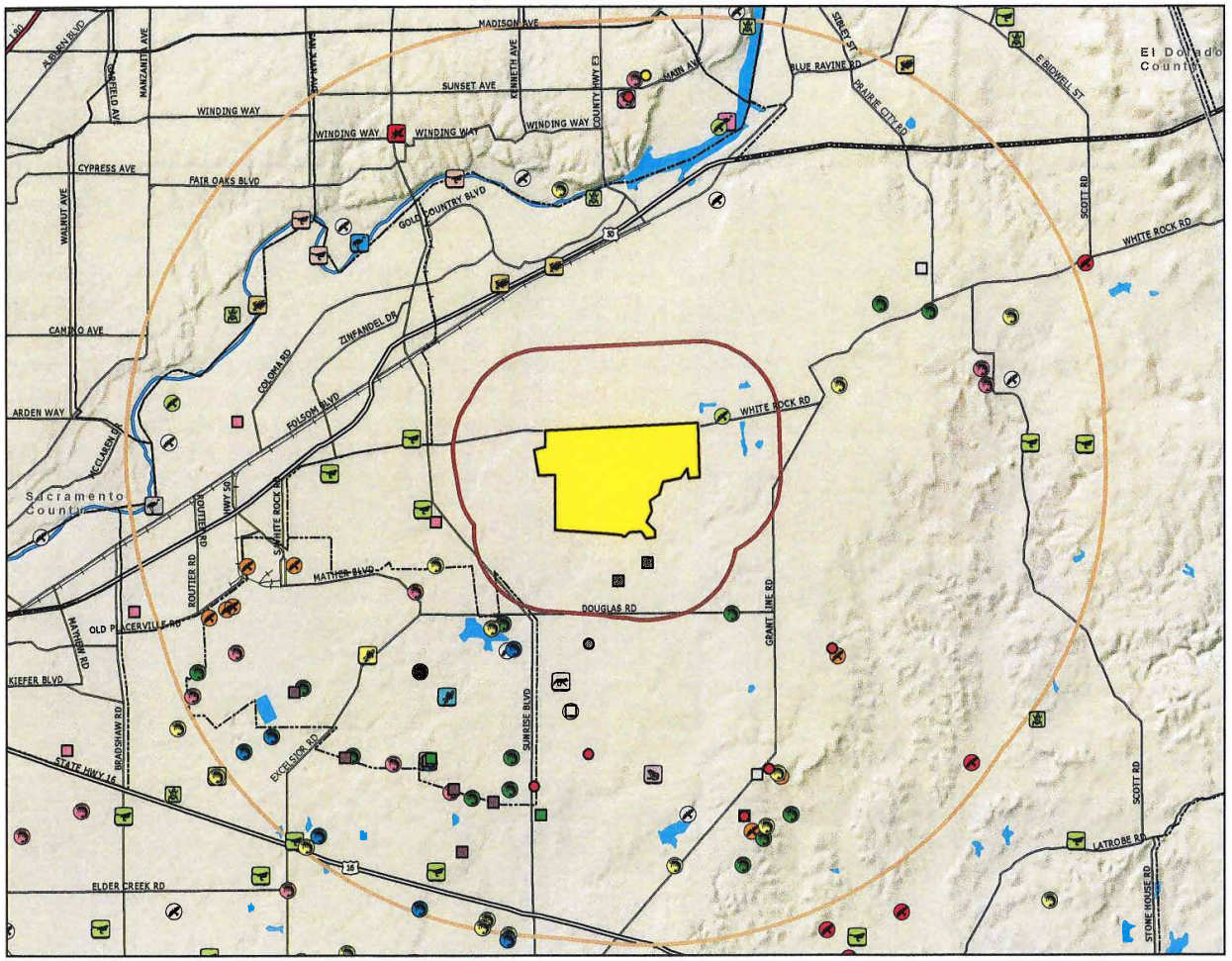
Plants

Special-status plant species with potential to occur on the project site include: dwarf downingia (*Downingia pusilla*, CNPS List 2 species); Boggs Lake hedge-hyssop (*Gratiola heterosepala*, California endangered and CNPS List 1B species); Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*, federal species of concern and CNPS List 1B species); Greene's legenere (*Legenere limosa*, federal species of concern and CNPS List 1B species); pincushion navarretia (*Navarretia myersii* ssp. *myersii*, federal species of concern and CNPS List 1B), slender Orcutt grass (*Orcuttia tenuis*, federal threatened, California endangered, and CNPS List 1B species); and Sacramento Orcutt grass (*Orcuttia viscida*, federal endangered, California endangered, and CNPS List 1B species. Of these, Boggs Lake hedge-hyssop, slender Orcutt grass, and Sacramento Orcutt grass are listed and protected pursuant to the California and/or federal Endangered Species Acts. Dwarf downingia, Greene's legenere, pincushion navarretia, and Ahart's dwarf rush are not listed and protected pursuant to either the California or federal Endangered Species Acts. However, these species may be considered by local jurisdictions during the CEQA review process.

No special-status plant species were observed within the project site during the spring 2003 surveys performed by ECORP Consulting, Inc. However, Greene's legenere was observed within the greater Rio Del Oro property.

Invertebrates

The seasonal wetlands and vernal pools on the project site represent potential habitat for the vernal pool fairy shrimp (*Branchinecta lynchi*, federal threatened), vernal pool tadpole shrimp (*Lepidurus packardi*, federal endangered), midvalley fairy shrimp (*Branchinecta mesovaliensis*, federal species of concern), and California linderiella (*Linderiella occidentalis*, federal species of concern). Gibson and Skordal conducted wet season surveys during 2000 and 2001 on portions



Map Features

Administrative Boundaries
- City Boundary
- County Boundary
- [1] Project Boundary

Buffers
- 1 mile
- 5 mile

Transportation Network
- Interstate
- State Highway
- Roads
- Railroads

Hydrologic Features
- Lakes and Reservoirs
- Rivers

[1] CNDDB Occurrences

Plants
- pincushion navarretia
- slender orcutt grass
- Sacramento orcutt grass
- Ahart's dwarf rush
- Sanford's arrowhead
- Boggs Lake hedge-hyssop
- legenere

Invertebrates
- *Dumontia oregonensis*
- Ricksecker's water scavenger beetle
- *Andrena subapasta*
- midvalley fairy shrimp
- vernal pool fairy shrimp
- vernal pool tadpole shrimp
- California linderiella
- valley elderberry longhorn beetle

Reptiles / Amphibians
- western spadefoot toad
- northwestern pond turtle

Birds
- Cooper's hawk
- Swainson's hawk
- burrowing owl
- white-tailed kite
- double-crested cormorant
- great egret
- great blue heron
- bank swallow
- tricolored blackbird

Mammals
- American badger

NOTES

[1] CDFG California Natural Diversity Database (CNDDB), January 2006 Update (GIS Shapefile)

Map Projection: California State Plane Zone II (NAD83) feet

Map Extents Located on USGS 7.5' Quadranges: Citrus Heights, Folsom, Clarksville, Carmichael, Buffalo Creek, Folsom SE, Sloughhouse and Carbondale, CA

SCALE IN FEET
6,000 3,000 0 6,000
1 " equals 8,000 '

VICINITY MAP

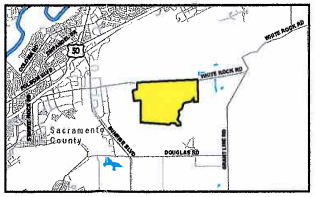


FIGURE 5. CNDDB SPECIAL-STATUS SPECIES MAP

2005-068 Aerojet Mining

Location: J:\GIS_Maps\2005-068_Aerojet_Mining\	Map Name: AM_CNDDB.mxd	Project Manager: BALLARDA
Original Production Date: 03/07/06	Revision:	GIS Specalist: JDS
Printing Date: 03/07/06	Scale: 1 " equals 8,000 '	

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of the project site. Vernal pool fairy shrimp and vernal pool tadpole shrimp were found in a limited number of surveyed wetlands in the open grassland communities adjacent to but not within the dredger tailing piles (Gibson and Skordal 2000a, 2001). Vernal pool fairy shrimp were documented in two seasonal wetlands located within the project site (SD100 and SD103 [SW123 and SW129, respectively, on the 2005 verified delineation]). Vernal pool tadpole shrimp were documented in five features located adjacent to, but not within, the project site (P2, P3, SD31, SD32, and SD33 [P1, P2, SW46, SW47, and SW48, respectively, on the 2005 verified delineation]). California linderiella were observed during both survey years in a variety of seasonal wetlands, ponds, and riparian wetlands (Gibson and Skordal 2000a, 2001). Midvalley fairy shrimp were not observed on-site during these survey efforts. The USFWS is ultimately responsible for making the determination of potentially suitable habitat.

Blue elderberry shrubs (*Sambucus mexicana*) present on-site, represent suitable habitat for the federally-threatened Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). The Valley elderberry longhorn beetle is completely dependent on its host plant, elderberry, which occurs in riparian and other woodland communities in California's Central Valley and associated foothills (USFWS 1999). Gibson and Skordal (2000b) conducted an elderberry survey on Rio Del Oro, including the project site, during July and August of 2000. A total of 266 elderberry shrubs were located on the project site (Figure 6. *Elderberry Locations*). A summary of the stem count data for these shrubs is provided in Attachment D. Evidence of Valley elderberry longhorn beetle occurrence (i.e., exit holes) was observed on 37 (14 percent) of these shrubs (Attachment D). Elderberry surveys are valid for a period of two years (USFWS 1999).

Fish

There is no habitat for special-status fish species on the project site.

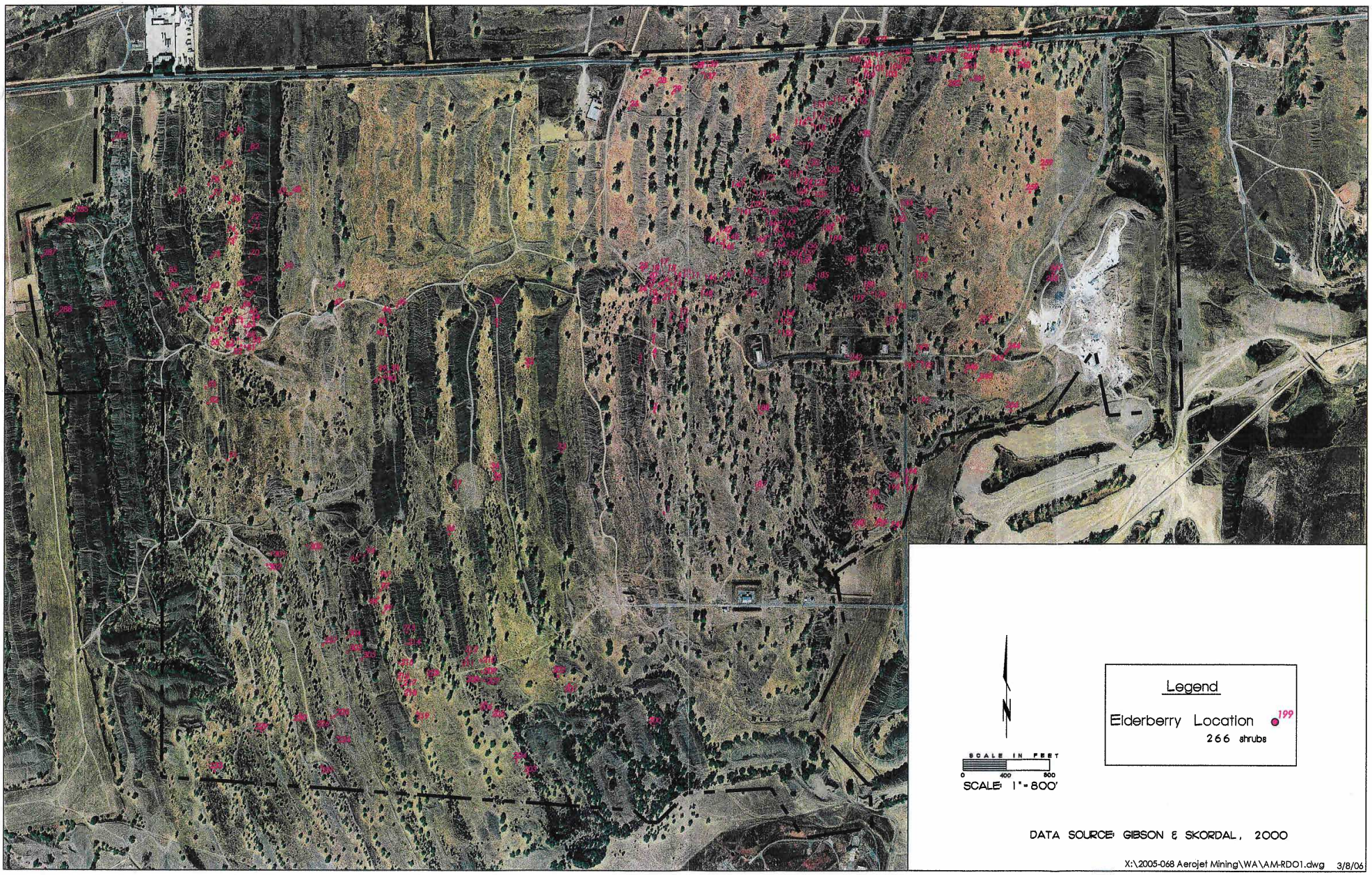

FIGURE 6. Elderberry Locations

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Amphibians

The vernal pools and adjacent grasslands on-site represent potentially suitable habitat for the western spadefoot toad (*Spea hammondi*, federal species of concern and CDFG species of special concern). The western spadefoot toad utilizes ephemeral pools and drainages, which are typically absent of larger predatory fish and bullfrogs (*Rana catesbeiana*), for egg-laying and larval development. Upon metamorphosis, the adults are largely terrestrial in nature and will burrow underground using the hardened "spades" on the hind feet.

Miriam Green Associates observed western spadefoot toads on-site during surveys conducted in 1999 for special-status wildlife species. Based on the location descriptions provided in the report, two of the occurrences appear to be located within or adjacent to the project site. "One adult male was noted chorusing in the intermittent drainage near the northern end of the property along the north-south road from White Rock Road to Douglas Road on the night of February 26, 1999. Larval western spadefoot toads were first noted on March 4, 1999 in a shallow pool devoid of vegetation located in the northeastern corner of the property (Rio Del Oro). This pool exists in the center of the mineral mining operations presumably run by the Clark Cattle Company and can best be described as a puddle in the roadway" (Miriam Green Associates 1999).

Reptiles

Western pond turtles (*Emys* [=*Clemmys*] *marmorata*, federal species of concern and CDFG species of special concern) typically occur in perennial streams, creeks, ponds, marshes, and irrigation ditches with aquatic vegetation (CDFG 2003). The availability of basking sites and suitable upland environments for egg laying are important components of suitable habitat for this species. Western pond turtles were not observed during the 1999 special-status species surveys conducted by Miriam Green Associates. However, a pond located in the northeastern corner of the project site was identified as potentially suitable habitat for the species (Miriam Green Associates 1999). The pond appears to have received artificial discharge based on the presence of decomposing flex-hoses that lead into the feature. In the absence of the artificial water source, the pond has since dried up completely and was subsequently not included in the

verified wetland delineation. Therefore, as this feature has reverted to an upland setting, it is unlikely that it continues to represent potentially suitable habitat for western pond turtles.

Birds

Plant communities on-site represent potentially suitable habitat for a number of regionally occurring special-status bird species. Potentially occurring special-status birds include nesting raptors, nesting songbirds, and wintering or migrant birds.

Nesting Raptors

All raptors or birds of prey (owls, hawks, falcons), including common species, and their nests, are protected from take pursuant to Section 3503.5 of the Fish and Game Code of California, as well as, protected by the Federal Migratory Bird Treaty Act. In addition, the Swainson's hawk (*Buteo swainsoni*, California threatened) is protected pursuant to the California Endangered Species Act. Although not listed in accordance with either the California or federal Endangered Species Acts, with the exception of Swainson's hawk, the raptors described below may be considered during the CEQA review process. Nesting raptors include both tree nesting and ground nesting species. Nesting generally occurs from February – August. The lead agency may require pre-construction surveys on the project site.

Tree nesting species that may occur on-site are white-tailed kite (*Elanus leucurus*, federal species of concern and Fish and Game Code fully protected), Cooper's hawk (*Accipiter cooperii*, CDFG species of special concern), and Swainson's hawk. Both the white-tailed kite and Cooper's hawk have been documented within the Rio Del Oro property (Miriam Green Associates 1999, ECORP pers. obs.). In addition, the CNDDB contains a Cooper's Hawk record along White Rock Road, located immediately to the east of the project site (CDFG 2003) (refer to Figure 5). There are no previously documented occurrences of Swainson's hawk within project site, or the greater Rio Del Oro property. Two adult and two juvenile (already fledged) Swainson's hawks were observed in July 2005 approximately 1-mile west of the project site (ECORP pers. obs.). The juveniles were observed perching in and soaring above a cottonwood, located approximately 400 feet north of White Rock Road, where a nest of appropriate size and

structure was observed. Based on the observation of a number of pellets and the remains of other prey items on the ground below the nest, and the apparent close association of the juveniles to the tree where the nest was located, it is likely that this site represented an active Swainson's hawk nest during the 2005 nesting season.

The annual grassland areas on-site represent potential nesting habitat for two ground-nesting species: northern harrier (*Circus cyaneus*, CDFG species of special concern) and western burrowing owl (*Athene cunicularia*, federal species of concern, USFWS Bird of Conservation Concern, and CDFG species of special concern). Northern harriers have been documented within the Rio Del Oro property (Miriam Green Associates 1999, ECORP pers. obs.). Although no burrowing owls were observed during the 1999 surveys (Miriam Green Associates 1999), potentially suitable habitat is present on-site.

Nesting Songbirds

Loggerhead shrikes (*Lanius ludovicianus*, federal species of concern, USFWS Bird of Conservation Concern, and CDFG species of special concern) and lark sparrows (*Chondestes grammacus*, CNDDB) nest in small trees and shrubs within savannah and grassland communities. Both of these species have been previously observed within the Rio Del Oro property (Miriam Green Associates 1999, ECORP pers. obs.).

California thrashers (*Toxostoma redivivum*, federal species of concern) are typically associated with chaparral and riparian scrub communities. Coyote brush scrub, willow scrub, and mixed scrub communities present within the project site represent potentially suitable habitat. There are no documented occurrences of this species within the project site.

Non-Nesting Species

Other special-status birds that may occur on-site are not known to nest in this region and/or suitable nesting habitat is not present on-site. However, grasslands, woodlands, and other communities present on-site represent potential foraging habitat for these remaining species. These are sharp-shinned hawk (*Accipiter striatus*, CDFG species of special concern), ferruginous

hawk (*Buteo regalis*, federal species of concern, USFWS Bird of Conservation Concern, and CDFG species of special concern), golden eagle (*Aquila chrysaetos*, USFWS Bird of Conservation Concern, Fish and Game Code fully protected, and CDFG species of special concern), merlin (*Falco columbarius*, CDFG species of special concern), and tricolored blackbird (*Agelaius tricolor*, federal species of concern, USFWS Bird of Conservation Concern, and CDFG species of special concern).

Although not listed pursuant to either the California or federal Endangered Species Acts these species are designated as federal species of concern and/or CDFG species of special concern and as such may be considered during the CEQA review process.

Mammals

The project site may provide foraging and roosting habitat for three special-status bats that are known to occur in this region. These are: Yuma myotis (*Myotis yumanensis*, federal species of concern), Townsend's big-eared bat (*Corynorhinus townsendii*, federal species of concern and CDFG species of special concern), and pallid bat (*Antrozous pallidus*, CDFG species of special concern). Typical roost sites for these species include trees, snags, appropriate cliffs, abandoned and occupied buildings, caves, mines, and bridges.

Annual grasslands within the project area represent potentially suitable habitat for the American badger (*Taxidea taxus*, CDFG species of special concern). This species is an uncommon, permanent resident of suitable environments throughout most of the state (Zeiner et al. 1990b). There are no documented occurrences of this species within the project area. The nearest CNDDB occurrence is located approximately 2 miles to the south of the project site (CDFG 2003) (refer to Figure 5).

Although these mammalian species are not listed and protected pursuant to either the California or federal Endangered Species Acts, they are designated as federal species of concern and/or CDFG species of special concern. Therefore, these species may be considered during the CEQA review process.

Native Oak Trees

While not considered a special-status species as defined above, native oak trees are regulated pursuant to the Sacramento County Tree Preservation and Protection Ordinance. In accordance with this ordinance, a "tree" refers to any living native oak tree having at least one trunk of six inches or more in diameter measured four and one-half (4.5) feet above the ground (dbh), or a multi-trunked native oak tree having an aggregate dbh of ten inches or more. Sierra Nevada Arborists completed a cruise-type inventory of native trees for the Rio Del Oro property. A total of 35 oak trees with a dbh greater than 6-inches have been documented on the project site (Sierra Nevada Arborists 2003). Tree locations within the project site are represented in Figure 7. The methods and results of the tree inventory are presented under separate cover.

CONCLUSION

A wetland delineation of Rio Del Oro, which includes the project site, was first conducted by Gibson and Skordal in 1999 and was later revised by ECORP Consulting, Inc. on October 21, 2004. A field verification was conducted with the Corps on September 30, 2004, and the delineation was subsequently verified on January 10, 2005. Approximately 9.024 acres of waters of the U.S. were identified within the project site. Of the total acreage, the Corps determined that approximately 0.224 acre was jurisdictional waters of the U.S., while the remaining 8.800 acres were isolated wetlands and therefore are not under the Corps jurisdiction. The jurisdictional waters of the U.S. consist of seasonal wetland (0.047 acre), seasonal wetland swale (0.008 acre), and ephemeral drainage (0.169 acre). The isolated wetlands consist of seasonal wetlands (8.655 acres), vernal pool (0.072 acre), and seasonal wetland swale (0.073 acre). Although impacts to isolated wetlands would not require permitting pursuant to Section 404 of the federal Clean Water Act, discharges to wetlands and other "waters of the state" must be reported to the Regional Water Quality Control Board, pursuant to the California Porter-Cologne Water Quality Control Act.

FIGURE 7. Tree Locations

2005-068 AEROJET MINING

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

The vegetation communities present on-site represent potentially suitable habitat for several regionally occurring special-status species. Plants include: dwarf downingia, Boggs Lake hedge-hyssop, Ahart's dwarf rush, pincushion navarretia, Greene's legenere, slender Orcutt grass, and Sacramento Orcutt grass. Vernal pool fairy shrimp, vernal pool tadpole shrimp, midvalley fairy shrimp, and California linderiella may occur in vernal pools and seasonal wetlands. Elderberry shrubs on the project site represent habitat for the Valley elderberry longhorn beetle. Vernal pools and adjacent grasslands may provide habitat for the western spadefoot toad. Potentially suitable habitat for the coast horned lizard occurs within the project site. Potential nesting habitat is present for special-status raptors (white-tailed kite, Cooper's hawk, Swainson's hawk, northern harrier, burrowing owl, and other common raptor species) and special-status songbirds (loggerhead shrike, lark sparrow, and California thrasher). Other special-status birds that may occur in the project site, but are not known to nest in the region and/or suitable habitat is not present in the project site are: sharp-shinned hawk, ferruginous hawk, golden eagle, merlin, and tricolored blackbird. Special-status mammals that may occur in the project site include Yuma myotis, Townsend's big-eared bat, pallid bat, and American badger. Determinant surveys, conducted during the appropriate survey periods, will be required to ascertain the presence/absence of these species within the project site.

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APPENDIX C

ENVIRONMENTAL NOISE ANALYSIS

ENVIRONMENTAL NOISE ANALYSIS

RDO AGGREGATE PROCESSING SITE
Rancho Cordova, California

BBA Project No. 05-253

Prepared For

Granite Construction Company
P.O. Box 15287
Sacramento, CA 95851-0287

March 13, 2006

Prepared By

Brown-Buntin Associates, Inc.
Fair Oaks, California

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BROWN • BUNTIN
ASSOCIATES, INC.

INTRODUCTION

Granite Construction proposes to develop an aggregate mining operation on rural property located at 12300 White Rock Road in the City of Rancho Cordova, CA. The project site is located south of the main Aerojet property, and is adjacent to aggregate mining projects operated by Teichert, Inc.

The project would include operation of a portable aggregate plant consisting of crushers and screens, along with associated conveyors and loaders. The mining activity would employ front end loaders, wheel-tractor scrapers and bulldozers. Although it is not proposed at this time, it is possible for the project site to accommodate an asphalt batch plant and a concrete batch plant. This equipment would produce noise that could affect the compatibility of nearby noise-sensitive land uses. Operations could occur at any time of the 24-hour day.

The portable aggregate plant could be located on any portion of the project site as development progresses to minimize haul distances. The mining activities could also occur on nearly any portion of the project site, as the dredger tailing piles that comprise the aggregate source are spread over most of the project site.

Appendix A provides definition of the acoustical terminology used in this report. Unless otherwise stated, all sound levels reported in this analysis are A-weighted sound pressure levels in decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighted sound levels, as they correlate well with public reaction to noise.

SIGNIFICANCE CRITERIA

Local Regulations

The City of Rancho Cordova currently applies the Sacramento County Zoning Ordinance and other relevant noise standards to projects within the city limits. The Sacramento County Code, Section 235-60, states that:

"Unless otherwise provided by ordinance, the sound level created by the mining use at the boundary line of the authorized mining area shall not exceed 70 dBA except along a boundary contiguous to another area authorized to mine for sand or aggregates. A violation of the noise standard will occur if the noise level at the property line exceeds:

(a) The noise limit for a cumulative period of more than thirty minutes in any hour, or;

(b) The noise limit plus 5 dBA for a cumulative period of more than one minute in any hour, or the noise limit plus 20 dBA for any period of time."

For continuously-operating noise sources, subsection (a) of this noise standard effectively applies to the median noise level measured for a given noise source. In this analysis, the predicted

average noise level (L_{eq}) due to the project noise sources will be compared to the 70 dBA noise standard.

Significance of Changes in Ambient Noise Levels

Some guidance as to the significance of changes in ambient noise levels is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON), which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The FICON recommendations are based upon studies that relate aircraft and traffic noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a summary measure of the general adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment.

The rationale for the FICON recommendations is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of DNL. The changes in noise exposure that are shown in Table II are expected to result in equal changes in annoyance at sensitive land uses. Although the FICON recommendations were specifically developed to address aircraft noise impacts, they are used in this analysis for traffic noise described in terms of DNL.

TABLE II
MEASURES OF SUBSTANTIAL INCREASE FOR TRANSPORTATION NOISE EXPOSURE

Ambient Noise Level Without Project (DNL)	Significant Impact Assumed to Occur if the Project Increases Ambient Noise Levels By:
<60 dB	+ 5 dB or more
60-65 dB	+3 dB or more
>65 dB	+1.5 dB or more

Source: FICON, 1992, as applied by Brown-Buntin Associates, Inc. (BBA).

For non-transportation noise sources affecting noise sensitive land uses, an increase in ambient noise levels of 5 dBA is usually considered to be potentially significant.

Construction Noise Levels

Noise due to construction activities may be considered to be insignificant if:

- the construction activity is temporary;
- use of heavy equipment and noisy activities is limited to daytime hours;
- no pile driving or surface blasting is planned; and
- all industry-standard noise abatement measures are implemented for noise-producing equipment.

NOISE IMPACT ASSESSMENT

Ambient Noise Levels

To describe the ambient noise levels in the vicinity of the project, BBA conducted continuous and short-term noise level measurements.

Noise measurement equipment consisted of Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters equipped with a B&K Type 4176 ½" microphones. The sound level meters were calibrated immediately before use, and meet the specifications of the American National Standards Institute (ANSI) for Type 1 sound measurement systems.

The continuous noise measurement location was near the Bi-Dri Study Area, as shown by Figure 1. Figure 2 shows the results of the hourly noise level measurements on November 22-23, 2005. The measured DNL value was 57.1 dB. Ambient noise levels were affected by traffic on White Rock Road, cattle and aircraft overflights. Nighttime noise levels were lower than daytime noise levels, with background noise levels (L_{90}) as low as 28 dB. Ambient noise sources included cattle vocalizations, distant traffic, aircraft overflights and distant mining operations.

As noted above, aircraft fly over or near the project site on approach to, or in the touch-and-go pattern for, Mather Airport. BBA requested an analysis of aircraft flight tracks for Mather Airport from the Sacramento County Airport System for the period of the long-term noise measurements. The results of that analysis are shown by Appendix B, and indicate that 107 Mather Airport aircraft operations occurred in the vicinity of the project site during the time of 10 a.m. November 22, 2005, to 11 a.m. November 23, 2005. The flights were generally spread over a corridor about 2 miles wide. The majority of the aircraft altitudes were in the range of 1100-1400 feet MSL. The aircraft in the vicinity of the project site included a wide range of single- and twin-engine propeller aircraft and about 18 jet aircraft, including 11 transportation category aircraft. None of the loudest noise events recorded at the noise monitoring site were correlated with aircraft operations, but were likely due to cattle vocalizations. Based upon the ambient noise measurements, the aircraft noise exposure at the project site does not appear to be significant for the project at this time, but the presence of aircraft overflights could be of concern to any future sensitive land uses.

Existing traffic noise along White Rock Road was quantified using a combination of noise measurements and traffic noise modeling. The traffic noise measurement was performed approximately 50 feet from the centerline of White Rock Road to calibrate the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) for traffic noise near that roadway.

The U.S. DOT Traffic Noise Model (TNM) was employed for the prediction of traffic noise levels. The TNM is the analytical method currently favored for traffic noise prediction by most state and local agencies. It is applied to federal and state roadway projects by the California Department of Transportation (Caltrans). The model is based upon the CALVENO noise emission factors for automobiles, medium trucks and heavy trucks, with consideration given to

vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site.

The TNM was developed to predict hourly L_{eq} values for free-flowing traffic conditions, and is considered to be accurate within 1.5 dB. To predict DNL values, it is necessary to determine the day/night distribution of traffic and to adjust the traffic volume input data to yield an equivalent hourly traffic volume.

The short-term traffic noise level measurement was conducted on November 22, 2005. The purpose of the noise measurement was to determine the accuracy of the TNM in predicting traffic noise for the roadway affecting the project site. The temperature was in the range of 70 degrees Fahrenheit, and the sky was clear. Humidity was low, and wind was approximately 0-5 mph. A traffic count was conducted during the measurement period.

The noise measurement was conducted in terms of the L_{eq}, and the measured value was later compared to the value predicted by the TNM using the observed traffic volume, speed, and distance to the microphone. Table III compares the measured and modeled noise levels for the observed traffic conditions.

TABLE III
NOISE MEASUREMENT SUMMARY
AND TNM CALIBRATION

Roadway	Vehicles per Hour			Posted Speed (mph)	Distance (feet)*	Measured L_{eq}, dB	Modeled L_{eq}, dB**
	Autos	Medium Trucks	Heavy Trucks				
White Rock Road	104	0	40	55	50	65.3	66.6

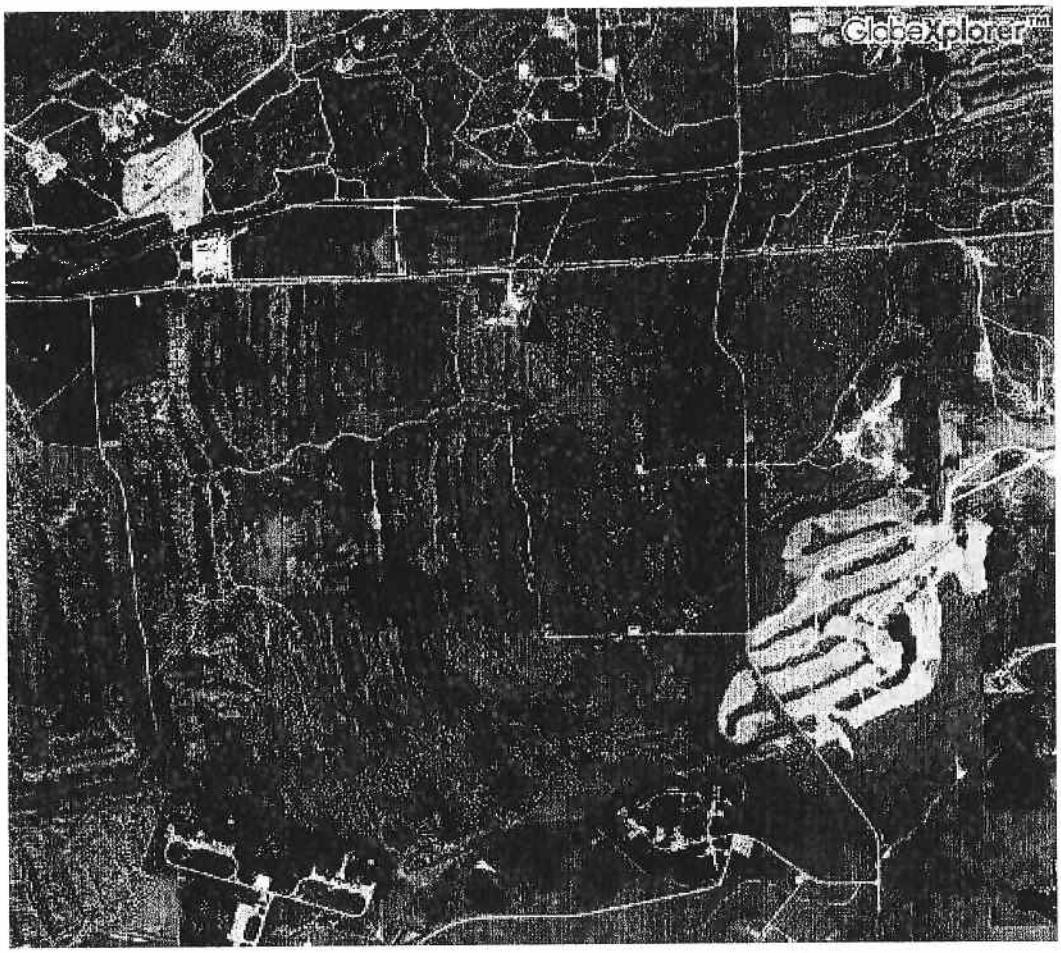
* Distance is measured from the roadway centerline.
** Acoustically "soft" site assumed

The TNM over-predicted the measured average noise levels for traffic on White Rock Road by 1.3 dB. This is a reasonable discrepancy considering the relatively low traffic volume.

For the traffic noise impact analysis, it was assumed that worst-case noise exposures would occur at a reference distance of 50 feet from the centerline of the arterial roadways. Existing traffic volume and truck mix for White Rock Road were estimated from the short-term traffic counts. Granite has projected 273 average daily truck trips for this project. This truck traffic volume was added to the existing traffic to represent existing plus project conditions. Day-night distribution of traffic noise was estimated to be 90%/10%, based on the ambient noise measurement data collected November 22-23, 2005.

The TNM was run to predict existing and future traffic noise levels for White Rock Road. Table IV lists the TNM traffic volume input assumptions and the predicted noise levels at the reference distance of 50 feet from the roadway centerline.

Figure 1
Continuous Noise Measurement Site



▲ Ambient Noise Measurement Site 11/22-23/05

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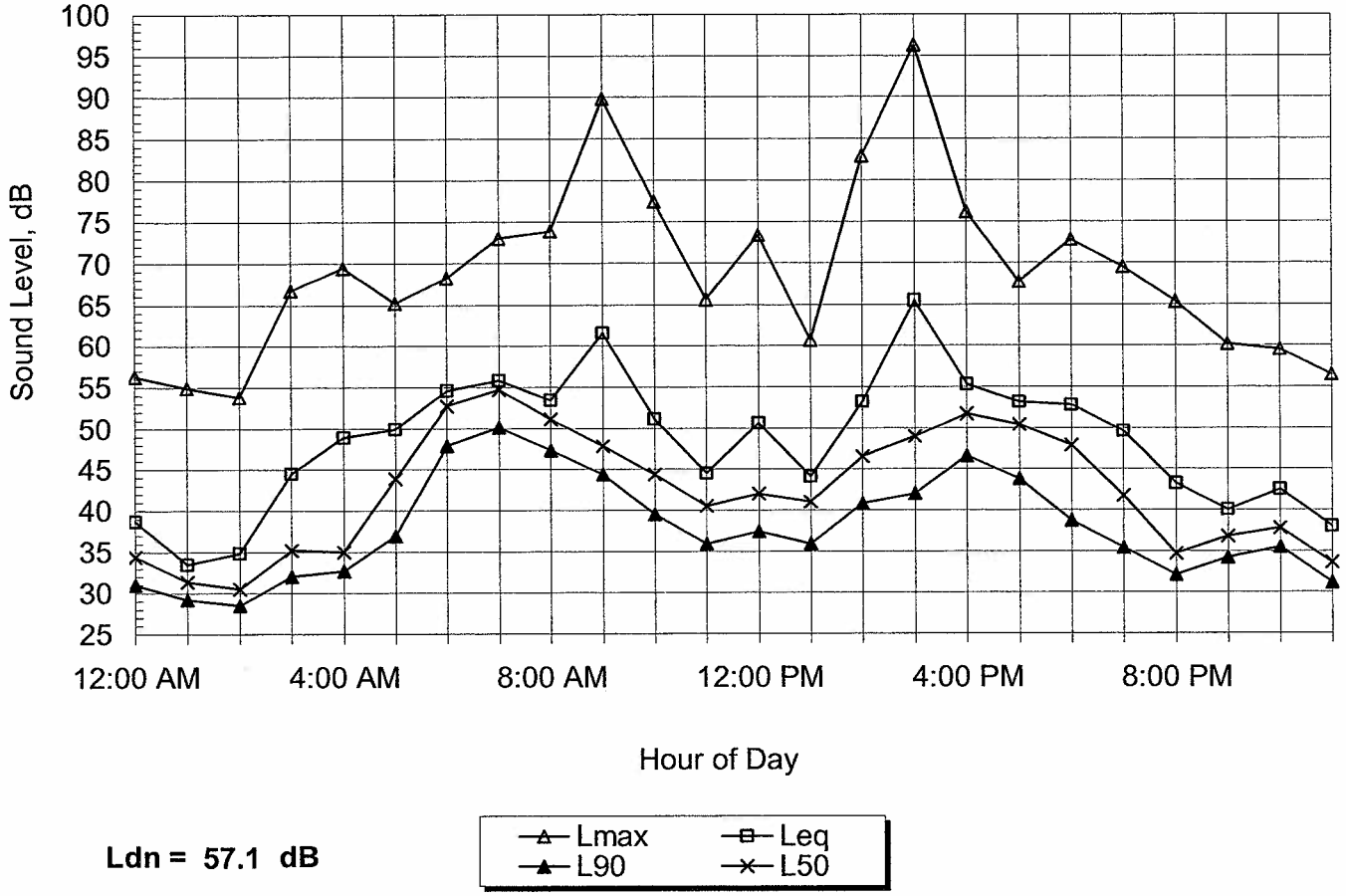
Figure 2: Measured Hourly Noise Levels

12300 White Rock Road

11/22-23/05



Ldn = 57.1 dB

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TABLE IV NOISE MODELING ASSUMPTIONS AND RESULTS FOR EXISTING TRAFFIC						
Roadway	Segment	ADT	% Med. Trucks	% Heavy Trucks	Speed	DNL, dB at 50 feet
White Rock Road	Project Site	Existing: 3500	5	20	55	68.4
		Existing plus Project: 3773	5	26	55	69.5

Based upon the traffic noise analysis, the project would result in an increase in existing traffic noise levels of about 1.1 dB for noise sensitive receivers located along White Rock Road. This would be considered an insignificant change in traffic noise levels for sensitive receivers. There are no noise sensitive receivers along this roadway at this time that would be affected by the change, so the noise impact would be insignificant.

Project Noise Levels

The project would include operation of a portable aggregate plant consisting of crushers and screens, along with associated conveyors and loaders. The mining activity would employ front end loaders, wheel-tractor scrapers and bulldozers. Although it is not proposed at this time, it is possible for the project site to accommodate an asphalt batch plant and a concrete batch plant. This equipment would produce noise that could affect the compatibility of nearby noise-sensitive land uses. Operations could occur at any time of the 24-hour day.

The portable aggregate plant could be located on any portion of the project site as development progresses to minimize haul distances. The mining activities could also occur on nearly any portion of the project site, as the dredger tailing piles that comprise the aggregate source are spread over most of the project site.

To prepare a noise contour map, it was assumed that the aggregate plant equipment would be located in the north central portion of the project site, approximately at grade with White Rock Road. The mining activities were assumed to be located in the south central portion of the project site.

BBA employed the Environmental Noise Model (ENM) to predict noise levels produced by the proposed processing and mining operations. The ENM is a commercially-available noise prediction model that accounts for sound propagation over distance, considering sound absorption by the air and ground, as well as the effects of barriers, applying internationally accepted algorithms.

Noise source data were derived from BBA file data collected for other Granite processing and mining equipment, supplemented by other file data for typical loaders and elevating scrapers. Specifically, the equipment included in the noise modeling included:

- Portable aggregate processing plant
- Material separation screens

- Cat 988 front loader at processing plant
- Cat 631 Wheel Tractor Scrapers (4)
- Cat D9 Bulldozer
- Portable asphalt batch plant (not proposed at this time)
- Portable concrete batch plant (not proposed at this time)

For the noise modeling, the processing equipment was distributed over a concentrated area in the approximate center of the designated processing plant site. Mining activity was modeled in the lower center of the project site. The ENM was used to produce hourly average noise level (L_{eq}) contours in the range of 60 to 75 dB for typical operating conditions. The resulting noise contours are shown by Figure 3, superimposed on a generalized base map derived from the AutoCAD site drawings provided by Granite.

The noise contours may be used to develop recommended setbacks to ensure that the City noise standards are satisfied. Specifically, the noise standard of 70 dBA at the property line of non-mining uses can be satisfied by locating the processing plant equipment so that the 70 dB L_{eq} contour lies within the north property boundary, which is about 600 feet from the center of processing operations. Similarly, noise from mining operations can be maintained at less than 70 dBA by setting back mining activity about 100 feet from the north property line. Note that these setbacks are only required along White Rock Road, since the adjacent land uses on the other three sides of the project site are mining-related.

MITIGATION MEASURES

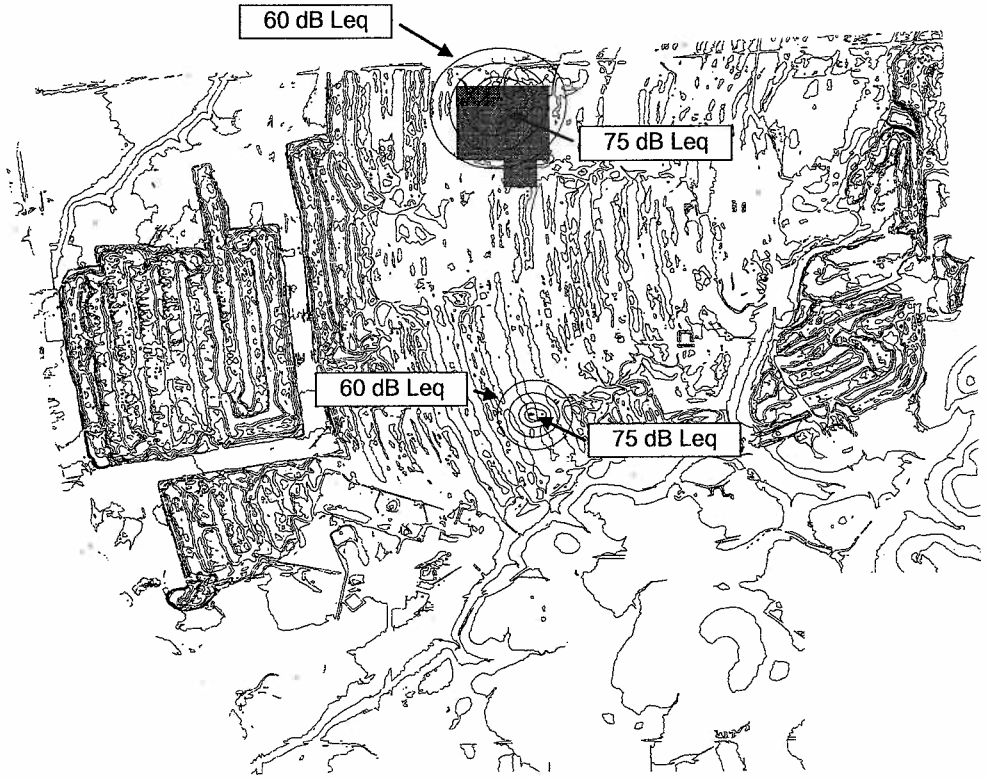
The project is not expected to result in significant noise impacts, given the generalized project site plan and the existing land uses adjacent to the project site. However, to ensure that the City of Rancho Cordova noise standards are satisfied, the following noise mitigation measures are recommended:

1. Aggregate processing equipment should be located about 600 feet south of White Rock Road, unless noise mitigation measures are provided. Suitable measures would include temporary barriers such as earth berms about 8 feet in height, or as otherwise required to intercept line of sight from the noise sources to the receivers.
2. Mining activities should be set back about 100 feet from White Rock Road, unless noise mitigation measures are provided. Suitable measures would include temporary barriers such as earth berms about 8 feet in height, or as otherwise required to intercept line of sight from the noise sources to the receivers.

Respectfully submitted,
Brown-Buntin Associates, Inc.

Jim Buntin
Vice President

Figure 3
Predicted Locations of Average Hourly Noise Level Contours
Granite RDO Project Site



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APPENDIX A

ACOUSTICAL TERMINOLOGY

AMBIENT NOISE LEVEL: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

CNEL: Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.

DECIBEL, dB: A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

DNL/L_{dn}: Day/Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

L_{eq}: Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.

NOTE: The CNEL and DNL represent daily levels of noise exposure averaged on an annual basis, while L_{eq} represents the average noise exposure for a shorter time period, typically one hour.

L_{max}: The maximum noise level recorded during a noise event.

L_n: The sound level exceeded "n" percent of the time during a sample interval (L_{90}, L_{50}, L_{10}, etc.). For example, L_{10} equals the level exceeded 10 percent of the time.

ACOUSTICAL TERMINOLOGY

NOISE EXPOSURE CONTOURS: Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and DNL contours are frequently utilized to describe community exposure to noise.

NOISE LEVEL REDUCTION (NLR): The noise reduction between indoor and outdoor environments or between two rooms that is the numerical difference, in decibels, of the average sound pressure levels in those areas or rooms. A measurement of "noise level reduction" combines the effect of the transmission loss performance of the structure plus the effect of acoustic absorption present in the receiving room.

SEL or SENEL: Sound Exposure Level or Single Event Noise Exposure Level. The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time-integrated A-weighted squared sound pressure for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.

SOUND LEVEL: The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

SOUND TRANSMISSION CLASS (STC): The single-number rating of sound transmission loss for a construction element (window, door, etc.) over a frequency range where speech intelligibility largely occurs.

APPENDIX D

ARSENIC HAZARDS ANALYSIS

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June 1, 2007

Project No. C242-0301

Pete Dwelley
Granite Construction Company
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Subject: **Rio Del Oro Mining Project, Mitigated Negative Declaration, Project RC-06-224 – Response to RWQCB Comment**

Dear Pete:

This letter offers responses to general comment number 1 in the May 3, 2007 letter from Alexander MacDonald of the California Regional Water Quality Control Board (RWQCB) to Ben Ritchie of the City of Rancho Cordova Planning Development regarding the proposed Rio Del Oro Mining Project. The RWQCB comment states that

> "The report needs to discuss the potential adverse health affects *[sic]* to mining workers associated with natural *[sic]* occurring levels of arsenic that are present on the property. Only in that manner can it be determined if mitigation measures are needed to allow the proposed operation on the property. A copy of pertinent sections of a report regarding the background metal concentrations on the property has been previously provided to City Planning staff and we submitted a similar comment on the draft Environmental Impact Report for the Rio Del Oro development."

Based on the data I have reviewed, it is evident that naturally occurring arsenic in soil at the Rio Del Oro site will not cause adverse health effects in mining workers. The reported arsenic levels in the soil are not elevated above common background concentrations and will not contribute meaningfully to typical exposure to inorganic arsenic from food and drinking water that are experienced by all Californians. Consequently, adverse health effects are not anticipated. The remainder of this letter provides an explanation of this opinion.

It is my understanding that Granite Construction Company is proposing an aggregate mining, processing, and reclamation operation located on the Rio Del Oro site in the City of

Rancho Cordova. The project site consists of a 1,300-acre proposed mining and processing area, situated within a 2,526 acre parcel owned by Aerojet-General Corporation referred to as the Inactive Rancho Cordova Test Site (IRCTS). The site is located directly adjacent and south of White Rock Road, 4,800 feet east of Sunrise Boulevard, and 5,100 feet north of Douglas Road. Approximately 600 acres of the total mining area are expected to be disturbed. The proposed project involves the mining and processing of tailings, which were created by previous gold dredge mining operations. These tailings consist of cobbles intermixed with sand and gravel, and vary from 5- to 75-feet in height with typical base widths in the range of 100- to 300-feet. The proposed operation will remove and process these mounds and the end result will be a site with elevations similar to the natural elevation of the site prior to gold dredging operations. All material mined from the site will be processed by a portable crushing and screening plant that will work its way across the site as mining progresses. Processed material from the site will be loaded into transport trucks and weighed at an on-site scale house before entering onto White Rock Road or Douglas Road for general circulation. Excess screened fine aggregate material may be used to reclaim excavation areas. The duration of the project is up to ten years.

The report referenced in the RWQCB comment quoted above is assumed to be the December 1994 report titled "Sitewide Background Levels of Soil Trace Elements, Aerojet Propulsion Systems Plant and Adjacent Subsidiary Sites, Rancho Cordova, California" (Prepared by Robert Borch, Environmental Geoscience Research & Analytical Services), sections of which were provided to me. Based on the data included in the pages of the report that were provided, it is difficult to understand the concern that lies behind the comment.

As you know, inorganic arsenic is naturally present in soil, water, air and food. Arsenic is present in much of the earth's crust, and both natural and anthropogenic processes have contributed to arsenic's wide distribution. Due to the pervasive presence of inorganic arsenic in the environment, speculation about potential health impacts from typical background exposures are not scientifically supportable, i.e., because all of humankind shares these exposures, effects cannot be discerned by observational studies. In some parts of the world, however, naturally occurring levels of arsenic in drinking water supplies are markedly elevated. In these cases, epidemiological studies have demonstrated health impacts, including elevated incidence of certain cancers. For areas where inorganic arsenic concentrations are elevated in soil, no such health impacts have been confirmed.

Arsenic is present in soils from a variety of different processes. The natural breakdown of rocks containing arsenic accounts for the presence of arsenic in all soils and with higher concentrations present in soils near rocks that are naturally enriched in arsenic, such as granite. Additionally, human activity such as the use of arsenical herbicides and pesticides, fallout of air releases from smelters, cotton gins, and coal burning, and releases from mine

tailings can all lead to increased arsenic concentrations in soils. Much agricultural land across the United States and in California has been impacted by the historical use of arsenical pesticides.

The predominant forms of inorganic arsenic compounds in soils are trivalent and pentavalent. Arsenic is typically found in soils as sulfide minerals, complex oxides, and arsenic present in iron, manganese, and phosphate mineral species, which have low solubility. The presence of these less water soluble mineral phases and ionic forms that are strongly adsorbed to soil particles or coprecipitated with other elements in soil contributes to reduced bioavailability of arsenic in soil (Kelley et al. 2002). Roberts et al. (2007) recently reported that soil arsenic was only 5-31% as bioavailable as water soluble arsenic. This reduced bioavailability of soil arsenic contributes to reduced exposure compared with arsenic ingested in food and water. Arsenic present in soils as a result of breakdown of rocks with naturally occurring arsenic are expected to have very limited solubility and bioavailability.

Based on the data provided in the 1994 report, it does not appear that arsenic in soil in the area of the Rio Del Oro development is elevated beyond the typical background range of concentrations. Summary statistics provided in Table 2 indicate a mean of 5.4 ppm (range 0.2 to 15.6 ppm) for 156 samples. For the 40 samples from the IRCTS the mean was 6.1 ppm (range 1.8 to 12 ppm). For the 15 samples within the proposed mining area the mean was 7.5 (range 4.4 to 12 ppm). The 1994 samples were analyzed by Chemex (a laboratory specializing in exploration geochemistry) using a total digestion procedure (grinding followed by hydrofluoric acid digestion and then inductively coupled plasma analysis). This total digestion analysis would have yielded higher concentration estimates than the standard U.S. Environmental Protection Agency (EPA) method (3050B) currently used for soil investigation. The hydrofluoric acid digestion used breaks down any silicon containing materials, whereas the current EPA 3050B strong acid digest with nitric acid and hydrogen peroxide would not break down those materials. Although the 1994 Chemex analyses could overestimate arsenic concentrations, a more recent study of background concentrations in the Aerojet Main Plant Site using an approved EPA method did yield similar concentrations, with a mean of 5.1 ppm and a maximum value of 12 ppm in 37 samples collected from xerorthents soil in areas without obvious sources of contamination.[1] Concentrations in Redding-Corning-Red Bluff soil were lower (mean of 2.7,ppm, maximum of 8.3 ppm).

[1] Source: Background Metals in Xerorthents and Redding-Corning-Red Bluff Surface Soils at the Aerojet Superfund Site, Main Plant Sacramento, California. Aerojet Document Control No. SR10121202. Prepared by R. Bienert, R. Borch and S. Neville, July 2006.

The range of concentrations observed at the site is typical of the expected range of concentrations in the State of California. Information on arsenic concentrations in California soil is available from a number of surveys. According to soil samples collected by the U.S. Geological Survey (USGS), arsenic concentrations in California soils that are not impacted by anthropogenic sources (N=72) range from 0.3 to 69 mg/kg with a mean of 6.6 mg/kg (Dragun and Chiasson 1991). Bradford et al. (1996) report concentrations of arsenic in 50 samples of California soils collected from around the state in 1967. Arsenic concentrations in that data set range from 0.6 and 11.0 mg/kg with a mean of 3.5 mg/kg. Of the nine soils collected closest to the Sacramento area, concentrations range from 0.8 to 9.6 mg/kg with a mean of 3.7 mg/kg. Hunter et al. (2005) reported values for arsenic in soil and groundwater collected at uncontaminated sites on 13 California Air Force Bases.[2] Median and 95th percentile concentrations were 2.2 and 12.7 mg/kg, respectively. The authors state that the 95th percentile represents background well "given the inherent complexities of these large and diverse samples."

As described above, anthropogenic sources of arsenic (e.g., from the use of arsenical pesticides) can result in significantly higher concentrations of soil. Background levels of arsenic in native forest soil located near a former orchard site in Placer County, California,[3] ranged from 4.1 to 31 mg/kg (MWH 2003). In the nearby orchard land, where there was historical inorganic pesticide use, arsenic concentrations in the soil ranged from 2.4 to 124 mg/kg (MWH 2003). The range of arsenic concentrations in the soils of former orchards in the U.S. can range from 100 to 200 mg/kg with levels as high as 2,500 mg/kg (ICPS 2001).

Background exposure to inorganic arsenic occurs through a variety of ways, but is primarily through diet and drinking water (Meacher et al. 2002). In 2001, EPA reduced the standard for arsenic in drinking water from 50 μg/L to 10 μg/L, but there are still many drinking water systems in the U.S., including California, that are naturally elevated above this level. Based on data from 2001 to 2004[4], the average level of arsenic in Sacramento area drinking water was estimated to be 3 μg/L, with levels in some water systems as high as 15 μg/L. Because adults ingest 1-2 liters of water per day, average arsenic intake from Sacramento area drinking water would range from 3 to 6 μg/day, with some water users ingesting 15 to 30 μg/day. Total inorganic arsenic intake from American diets (not including drinking water), measured in a market basket survey, ranged from 1 to 20 μg/day with a mean of 3.2 μg/day. Thus drinking water and food may typically contribute to arsenic intakes ranging from 6 to 9 μg/day up to a maximum of 50 μg/day.

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[2] Uncontaminated sites were identified based on the absence of organic contaminants.

[3] Placer County is the county northeast of Sacramento, California.

[4] Water Systems serving more than 50,000 people in Sacramento County as determined from http://www.epa.gov/safewater/dwinfo/index.html were included in this analysis.

Arsenic in soil contributes only a tiny fraction to these typical background exposures. For example, if a worker ingested an average of 100 mg of soil every day containing 12 ppm of arsenic (the maximum reported value in the area proposed to be mined), his or her daily arsenic exposure would only be 0.24 μg (when adjusted for 20% relative bioavailability, a value likely to be higher than actual site arsenic relative bioavailability). Typical background exposures from diet and drinking water for the Sacramento area are at least 25 times greater than this estimated dose from soil at the site.

Airborne arsenic does not contribute significantly to typical arsenic exposures and is not expected to be increased for site workers. Average air concentrations in California of 0.011 $\mu g/m^3$ lead to exposures of less than 0.1 μg/day (CARB 2006). Dust suppression measures during mining operations combined with the low arsenic concentrations present in site soil will prevent appreciable exposure to arsenic in resuspended dust.

Based on this analysis, there will be no potential health impacts to mining workers associated with naturally occurring levels of arsenic present on the property to be mined.

Sincerely,

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