APPENDIX A

Notice of Preparation and Initial Study

County of Yolo

PARKS AND RESOURCES DEPARTMENT

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NOTICE OF PREPARATION (NOP)
AND NOTICE OF SCOPING MEETING
FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT
ON THE GRANITE ESPARTO MINING
AND RECLAMATION PROJECT

The County of Yolo has determined that a project-level Environmental Impact Report (EIR) will be prepared for the **GRANITE ESPARTO MINING AND RECLAMATION PROJECT**. Yolo County is the lead agency and will need to know the views of your agency as to the scope and content of the EIR based on your agency's area of statutory responsibility as related to the project. Your agency will need to use this EIR when considering relevant permits or other approvals for the project. The County is also seeking the views of residents, property owners, and concerned citizens regarding issues that should be addressed in the EIR. The project description is summarized below. A meeting to discuss the appropriate scope of the EIR has been scheduled, as indicated below.

COMMENT PERIOD: Comments can be sent anytime during the 30-day NOP review period. The NOP review and comment period begins February 13, 2009 and ends March 14, 2009 at 4 p.m. All comments should be directed to the Yolo County Parks and Resources Department, Attention: Kent Reeves, Principal Natural Resources Planner, 120 West Main Street, Suite C, Woodland, CA 95695. Comments may also be emailed to kent.reeves@yolocounty.org. Please include the name of a contact person for your agency, if applicable.

SCOPING MEETING: Oral comments may be provided at the Scoping Meeting to be held Wednesday, February 25, 2009 at 6:00 p.m. at the Esparto Library Public Meeting Room, 17065 Yolo Avenue, Esparto, CA 95627

PROJECT NAME: Granite Esparto Mining and Reclamation Project.

PROJECT LOCATION: The Site is comprised of two adjacent parcels, APN 048-220-151 (286.4 acres) on the north and APN 048-220-221 (103.6 acres) on the south. The Site encompasses the active channel of Cache Creek and a portion of the relatively flat terrace north of the creek. Mining is proposed on 313 acres of the 390-acre total. The property is located in central Yolo County, adjoining County Road 87, approximately one mile north of the town of Esparto (see Figure 1, Location Map).

PROJECT DESCRIPTION: The Project proposes the mining of about 30 million tons (26.1 million tons sold maximum) of aggregate over a 30-year period at a rate of about one million tons per year (870,000 tons sold maximum) (see Figure 2, Mining Plan). The Project requires the following approvals from the County: Rezoning of the property to change the Sand and Gravel Reserve (SGR) combining zone to the Sand and Gravel (SG) combining zone, approval of an Off-Channel Mining Permit, approval of a Reclamation Plan, authorization to execute a Development Agreement, and approval of a Flood Hazard Development Permit (FHDP).

LEAD AGENCY: Yolo County Parks and Resources Department, Kent Reeves, Principal Natural Resources Planner, 120 West Main Street, Suite C, Woodland, CA 95695, (530) 406-4888, kent.reeves@yolocounty.org.

ALTERNATIVES ANALYSIS: The EIR will develop and analyze alternatives to the proposed Project that would eliminate or reduce environmental impacts identified for the propose Project. The alternatives are expected to include the following: No Project Alternative (Existing Conditions), Reduced Mining Tonnage/Acreage Alternative, Alternate Location Alternative, Sequential Mining Alternative. For each of these alternatives, the EIR will comparatively analyze the environmental impacts of the alternatives relative to the proposed Project.

PROBABLE ENVIRONMENTAL EFFECTS OF THE PROJECT: At this time the County believes that implementation of the project may result in impacts in the areas summarized below. The EIR has been scoped to address these issue areas. An Initial Study has been prepared to substantiate this determination. The conclusions of the Initial Study are presented Table 1. That Initial Study may be attached. If it is not attached, a hard copy may be viewed or purchased by making arrangements through the Parks and Resources Department, or it may be viewed and/or printed online at www.yolocounty.org/Index.aspx?page=1624.

Table 1. Summary of Initial Study Analysis

Environmental Topic	Conclusions of Initial Study	EIR Analysis Required
Aesthetics	Potential impacts related to visibility of mining operations, facilities, and landform alterations.	Yes
Agricultural Resources	Potential impacts related to the conversion of agricultural land to non-agricultural uses.	Yes
Air Quality	Potential impacts associated with emissions contributing to air quality violations and exposure of sensitive receptors to pollutants.	Yes
Biological Resources	Potential disturbance of candidate, sensitive or special status species; potential disturbance of wetlands and riparian habitat.	Yes
Cultural Resources	Potential disturbance of historical, archeological or paleontological resources.	Yes
Geology and Soils	Potential for slope failure or adverse erosion.	Yes
Greenhouse Gas Emissions/Climate Change/Energy Conservation	Potential to contribute to greenhouse gas emissions as the result of increased vehicle/equipment use and increased energy use.	Yes
Hazards and Hazardous Materials	Potential impacts related to encounter or handle hazardous materials.	Yes
Hydrology and Water Quality	Potential to violate Basin Plan requirements for mercury TMDL; potential for "pit capture" of mining areas; impacts of grading for stream bank stabilization.	Yes
Land Use and Planning	Potential conflict with zoning; full review of compliance with Yolo County Code and General Plan.	Yes
Mineral Resources	Potential loss of availability of aggregate resources.	Yes
Noise	All potential noise related are mitigated to less-than-significant levels based on project design and existing regulatory requirements.	Not required
Population and Housing	All potential impacts are mitigated to less-than-significant levels based on existing regulatory requirements.	Not required
Public Services (including Recreation)	All potential impacts are mitigated to less-than-significant levels based on existing regulatory requirements and project description.	Not required
Transportation and Traffic	Potential impacts related to increased vehicle trips and potential damage to roadways.	Yes
Utilities and Service Systems	All potential impacts are mitigated to less-than-significant levels based on existing regulatory requirements and project description.	Not required

Date: February 9, 2009
Name and Title: Kent Reeves, Principal Natural Resources Planner
Parks and Resources Department, Yolo County
Contact: (530) 406-4888
kent.reeves@yolocounty.org.

Signature: _____

Attachments: Figures 1 (Location map) and 2 (Mining Plan)

GRANITE ESPARTO MINING AND RECLAMATION PROJECT

Initial Study

February 2009

Prepared for:

Yolo County Parks and Resources Department
120 West Main Street
Woodland, CA 95695

Prepared by:

ENTRIX, Inc.
2300 Clayton Road, Suite 200
Concord, CA 94520

Table of Contents

TABLES

FIGURES

ACRONYMS

A-1	General Agriculture
AB	Assembly Bill
A-P	Agricultural Preserve
A-PEFZ	Alquist-Priolo Earthquake Fault Zone
APN	Assessor's Parcel Number
Applicant	Granite Construction Company, Inc.
bgs	below ground surface
BMPs	Best Management Practices
BrA	Brentwood silty clay loam
CAL FIRE	California Department of Forestry and Fire Protection
Cal OSHA	California Office of Safety Hazard Administration
CARB	California Air Resources Board
CCAP	Cache Creek Area Plan
CCAR	California Climate Action Registry
CCIP	Cache Creek Improvement Project
CCRMP	Cache Creek Area Plan Resource Management Plan
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent
CO_2	carbon dioxide
COE	Corps of Engineers
CRHR	California Register of Historical Resources
dBA	decibels
DOC	Department of Conservation
EIR	Environmental Impact Report
ENM	Environmental Noise Model
EPA	Environmental Protection Agency

ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHDP	Flood Hazard Development Permit
g	gravity
GHG	greenhouse gas
HCP	Habitat Conservation Plan
I-	Interstate
ICMMO	In-Channel Maintenance Mining Ordinance
IS	Initial Study
L_{eq}	noise level equivalent
Lm	Loamy alluvial land
LOS	level of service
MLD	Most Likely Descendent
MMI	Modified Mercalli Intensity
MRZ	Mineral Resource Zone
N_2O	nitric oxide
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NGVD	National Geodetic Vertical Datum
NHP	Natural Heritage Plan
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_2	Oxygen
OCMP	Off-Channel Mining Plan
OCSMO	Off-Channel Surface Mining Ordinance
OPR	Office of Planning and Research
PEIR	Program Environmental Impact Report
PG&E	Pacific Gas and Electric
PM	particulate matter
PM_{10}	Particulate Matter less than 10 microns in diameter
$PM_{2.5}$	Particulate Matter less than 25 microns in diameter
PRC	Public Resources Code
PRGs	Preliminary Remediation Goals
Project	Esparto Mining and Reclamation Project
Rh	Riverwash
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SG	Sand and Gravel
SGR	Sand and Gravel Reserve
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act

SMRO	Surface Mining Reclamation Ordinance
Sn	Soboba gravely sand loam
SO_x	sulfur
SPCC	Spill Prevention, Control, and Counter
SSP	Streambank Stabilization Plan
SWPPP	Stormwater Pollution Prevention Plan
TMDL	total maximum daily load
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
Ya	Yolo silt loam
YCFCWCD	Yolo County Flood Control and Water Conservation District
YCPRD	Yolo County Parks and Recreation Department
YSAQMD	Yolo-Solano Air Quality Management District

Section 1: Introduction

The Yolo County Parks and Resources Department (YCPRD) is the lead agency overseeing the Granite Construction Company. (Applicant) Esparto Mining and Reclamation Project (Project). The Applicant is requesting approval of a new 30-year off-channel mining permit in order to excavate, process, and sell sand and gravel resources at a property in central Yolo County. The 390-acre Project Site is located, approximately 1.0 miles north of the town of Esparto, California, and 27 miles west of Sacramento (Figure 1-1). Land uses in the area are dominated by agriculture and aggregate mining activities. The Applicant proposes to mine and process approximately 1.0 million tons of sand and gravel (i.e., construction aggregate) annually (a maximum of 870,000 tons sold annually) from a 313+-acre mining area and to reclaim the mined lands to agriculture, lake and habitat, and open space uses. Over the requested 30-year life of the permit, this would result in the extraction of about 30 million tons of aggregate resources (26.1 million tons sold).

The Project is located within the region regulated by the 1996 Cache Creek Area Plan (CCAP), an area of the lower Cache Creek Basin for which the County has developed specific requirements for the management of important aggregate resources. The Project is required to conform with the provisions of Title 10 of the Yolo County Code including the Off-Channel Surface Mining Ordinance (OCSMO) (Chapter 4), the Surface Mining Reclamation Ordinance (SMRO) (Chapter 5), and the newly adopted Cache Creek Area Plan In-Channel Surface Mining Ordinance (ICMMO) (Chapter 6). The County has determined that the Project is subject to environmental review under the California Environmental Quality Act (CEQA). Pursuant to CEQA, the YCPRD has prepared this Initial Study (IS) to identify and preliminarily evaluate the potential environmental impacts that may be associated with construction, operation, and maintenance of the Project.

The Applicant has submitted an application request to Yolo County requesting the following approvals and authorizations:

a. Approval of the request for a Rezoning to change the current zoning designations from Agricultural Preserve with Sand and Gravel Reserve Combining Zone (A-P/SGR) to Agricultural Preserve with Sand and Gravel Zone (A-P/SG) and from General Agriculture with Sand and Gravel Reserve Combining Zone (A-1/SGR) to Agricultural with Sand and Gravel Zone (A-1/SG);

b. Approval of a 30-year, Off-Channel Mining Permit for aggregate extraction and processing from a 313-acre mining area on portions of two adjacent parcels (Assessor's Parcel Numbers [APN] 048-220-015 and 048-220-022). The total volume of aggregate mined would be about 30.0 million tons extracted (a maximum of 26.1 million tons sold);

c. Approval of a Reclamation Plan for the proposed mining and processing areas to a combination of reclaimed uses, including agriculture, open space/dry pasture and open lake with habitat;

d. Authorization to utilize the temporary 20 percent exceedance to the annual maximum aggregate production cap as provided in Section 10.4-405 of the OCSMO;

e. Relinquishment of the existing mining entitlement (420,000 tons per year) for the Granite Construction Inc. "Woodland (Reiff) Site" currently approved under the Yolo County OCSMO;

f. Authorization to execute a Development Agreement;

g. Approval of demolition permit to remove existing single-family home and various outbuildings;

h. Authorization to mine to within 700 feet of and at least 200 feet away from the channel bank within the streamway influence boundary, as provided under Section 10-4.428(d) of the Yolo County Off-Channel Surface Mining Ordinance;

i. Approval of a Flood Hazard Development Permit to implement proposed bank stabilization and the Test 3 boundary along approximately 2,300 linear feet of creek bank from County Road 87 (Esparto Bridge) eastward.

The CEQA (Sec. 21093) promotes the concept of "tiering" the environmental review process whenever feasible by using pertinent information and analysis developed for Environmental Impact Reports (EIRs) prepared for a policy, plan, program, or ordinance. The environmental review of the Project takes advantage of the opportunity to "tier" the impact analysis from previously completed environmental reviews performed by Yolo County for aggregate mining and bank stabilization projects within the lower Cache Creek Basin.

Information and analysis developed during preparation of the Yolo County Cache Creek Area Plan and EIRs prepared for the Off-Channel Mining Plan (OCMP) (Yolo County1996) and the Cache Creek Resources Management Plan (Yolo County 1996, 2002) were used for background information and as the basis for some of the analysis in the IS. Additionally, available information being developed for the Yolo County General Plan Update 2030 has been reviewed and incorporated in the analysis. These sources of information, as well as other information from various sources listed in Section 4 (References and Technical Appendices), are incorporated by reference in this IS (CEQA State Guidelines Section 15150).

1.1 PROJECT LOCATION

The Project Site is located on relatively flat topography within an alluvial valley formed along Cache Creek. The valley is bounded on the west by the Capay Hills and Blue Mountains and to the east by the Dunnigan Hills. The geographical location is an unsectioned portion of Township 10 North, Range 1 West, Mount Diablo Base and Meridian, as depicted on the Esparto 1993 U.S. Geological Survey (USGS) 7.5-foot topographic quadrangle map.

The unincorporated town of Esparto is located about 1.0 miles south of the southern boundary of the Site; the city of Woodland is about 11.5 miles to the east (Figure 1-1). The eastern margin of the Site is bounded by County Road 87, a two-lane, north-south oriented roadway. The Site is comprised of two adjacent parcels: APN 048-220-022 (286.4 acres) on the north and APN 048-220-015 (103.6 acres) on the south. The Site encompasses the active channel of Cache Creek and a portion of the relatively flat terrace north of the creek. The dominant land uses in the vicinity of the Site are agriculture and sand and gravel mining and processing.

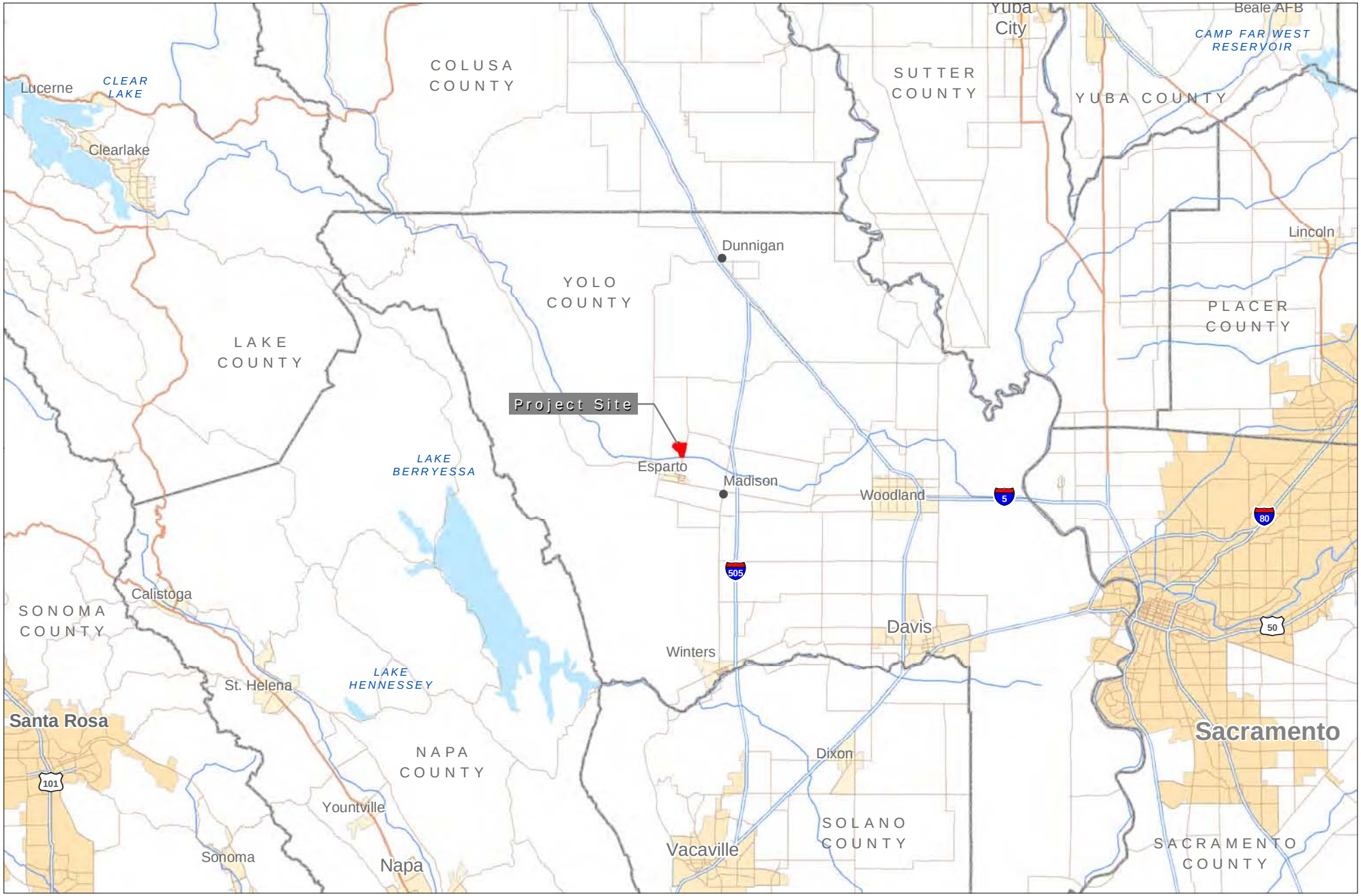

FIGURE 1-1

INITIAL STUDY
Granite Esparto Mining and Reclamation Project
REGIONAL LOCATION MAP

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1.2 PROJECT OBJECTIVES

The Applicant has defined the overall objective of the Project to be as follows:

- To secure permitting to mine and process 870,000 tons of aggregate from the Project Site for a 30-year mining period as a supply for the demand for construction aggregate. Aggregate resources provide the construction aggregate necessary for a broad range of public and private-sector construction, infrastructure, and maintenance projects. The cost of aggregate is largely dependent on the transportation costs. Therefore, shorter transportation distances afforded by local sources of aggregate contribute to maintaining an adequate supply at a reasonable cost to the consumer.

The Applicant has stated that other objectives for the Project are as follows:

- To maximize its ability to provide a secure source of high-quality construction aggregates to meet regional demand for these materials;
- To minimize the impacts of mining on adjacent property owners and the public;
- To maximize the benefits of land dedication to the County; and
- To provide for a diverse range of reclamation uses for mined lands.

1.3 PROJECT ALTERNATIVES

Pursuant to State CEQA Guidelines Section 15126(f) and 15126.6, the EIR will include an analysis of a reasonable range of project alternatives, including the "no-project" alternative. Alternatives to the Project that have been preliminarily identified at this time and that are expected to be analyzed in the EIR are summarized below. Additional or different project alternatives may be identified based on further evaluation of environmental impacts during EIR preparation, and/or based on input from the general public and responsible and trustee agencies during the public review process (including public scoping sessions).

No Project Alternative (Existing Conditions): This alternative will analyze the effects of taking no action. Under this alternative, no mining would occur at the proposed new site, the allocation of 420,000 tons per year would remain assigned to the Granite Woodland (Reiff) Site, the other requested tonnage (505,859 tons mined) would remain unallocated, and the 115-acre Granite Woodland Site would remain under the ownership of the Applicant.

Reduced Tonnage/Acreage Alternative: This alternative will analyze one half of the requested tonnage on a total and annual basis, approximately 500,000 tons mined annually (a maximum of 435,000 tons sold), assuming about one-half the Project area (approximately 156 acres) mined to the full depth of the resource. This alternative addresses several issues. It provides valuable information for future decision-making in that it will examine the environmental impacts associated with a project of reduced intensity. It also corresponds generally to the equivalent of the transfer the Woodland Site tonnage allocation, plus only a portion of the remaining unallocated tonnage that was studied under the CCAP.

Alternative Location: This alternative assumes the same requested tonnage but at an alternate Sand and Gravel Reserve (SGR) zoned site within the CCAP study area.

Off-Site Processing Alternative (Sequential Mining): This alternative analyzes sequentially mining first the existing Granite Capay Site, then the adjacent proposed Granite Esparto Site. Aggregate resources from both sites would be processed at the Granite Capay processing facilities. A new mining plant at the Granite Esparto Site would not be assumed. This alternative assumes that the annual allotment of one million tons sold at the Granite Capay Site would be increased by 870,000 tons sold annually which would allow for an accelerated pace of mining at both of the sites.

1.4 JURISDICTIONAL/PERMITTING AGENCIES

The following public entities and agencies may require review of the Project or may have jurisdiction or permitting authority over the Project:

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- California Department of Fish and Game
- State Water Resources Control Board
- Regional Water Quality Control Board, Central Valley Region
- Yolo County Parks and Recreation Department
- Yolo County Planning and Public Works Department
- Yolo County Office of the Agricultural Commissioner
- Yolo County Office of Emergency Services
- Yolo County Environmental Health Division
- Yolo-Solano Air Quality Management District

Section 2: Project Description

Granite Construction Company has filed an application with Yolo County requesting approvals to mine aggregate (i.e., sand and gravel) resources from a property located in central Yolo County, north of the town of Esparto, California. The Project proposes the mining of about 30 million tons of aggregate over a 30-year period at a rate of approximately 1.0 million tons per year. The mining area would cover approximate 313 acres of the 390-acre Project Site. The mining areas would all be located north of Cache Creek. The mined aggregate would be processed at a new rock processing plant proposed to be constructed within the southern portion of the proposed mining area. The mined areas would be reclaimed to three general uses: open lake and habitat, agriculture, and open space/dry pasture. The Project also proposes implementation of a Streambank Stabilization Plan (SSP) along the north bank of Cache Creek and within the Project Site.

2.1 SITE DESCRIPTION AND SETTING

The 390-acre Project Site is located in a rural area of central Yolo County, approximately 1.0 miles north of Esparto, California (Figure 2-1). Land uses in the surrounding area include agriculture to the north and east, an existing aggregate mining operation (Granite's Capay Facility) to the west, and open space and agriculture to the south. Cache Creek crosses from west to east through the central portion of the Project Site. The proposed 313-acre mining area is located entirely north of the north bank of the creek.

County Road 87, a north-south trending two-lane roadway, is located along the eastern margin of the Project Site. The Esparto Bridge on County Road 87 (crossing Cache Creek) is positioned adjacent to the southeast corner of the proposed mining area. A private paved, two-lane roadway, Fulton & Frank Lane, provides access through the central portion of the Site (and to the existing on-site residence) from County Road 87. County Road 19A extends eastward from the intersection of County Road 87 and Fulton & Frank Lane. A paved, two-lane driveway located along the south margin of the proposed mining area provides access to the existing Capay Facility west of the Project Site. The Project proposes to maintain this road as access to the proposed Project facilities. The West Adams Canal, an irrigation supply canal owned by the Yolo County Flood Control and Water Conservation District, is located along the northern boundary of the Project Site.

The Project Site (Figure 2-2) is comprised of two parcels, a 286.4-acre northern parcel (APN 048-220-022) and a 103.6-acre southern parcel (APN 048-220-015). One residence (with associated structures) is located in the central portion of the Site; no other structures are present at the Site. The portion of the Site north of Cache Creek is currently used as agriculture. The area north of Fulton & Frank Lane is currently in row crop production. South of the road, open space/grassland is located in the west and the east supports orchard crops. The area of the Site along and south of Cache Creek is either creek channel and banks or open space/grassland. A portion of the site was previously used for aggregate processing. There are three existing supply wells on the property which provide domestic and irrigation water supply.

2.2 PROJECT COMPONENTS

2.2.1 Rezoning

The current zoning designations for the Project Site are "Agricultural Preserve" (A-P) for the northern parcel (APN 048-220-022) and "General Agriculture" (A-1) for the southern parcel (APN 048-220-015). A SGR Combining Zone (or overlay) designation has been placed over the entire Project Site. The SGR overlay designates land within the CCAP that is "reserved" for mining after 2026 (Title 8 Article 23.8 of the County Code). In order for mining to be allowed before 2026, the Applicant has requested that the combining zone designation be changed from "Sand and Gravel Reserve" (SGR) to "Sand and Gravel". The change to the Sand and Gravel (SG) Combining District would allow mining upon approval of the Project (Title 8 Article 23.1 of the County Code).

2.2.2 Mining Plan

The Project proposes to mine sand and gravel resources from a 313± acre area north of Cache Creek, west of County Road 87, and south of the West Adams Canal. The mining plan is shown on Figure 2-3. The maximum mining depth would be approximately 75 feet below the existing ground surface (bgs). Groundwater levels fluctuate seasonally, but typically occur at depths ranging from 35 to 50 feet bgs (Wallace-Kuhl 2007a). Therefore, mining would occur both above (dry) and below (wet) the groundwater level.

The mining process would begin by clearing vegetation (including agricultural crops, orchard trees, and grasses/ruderal plants) from the surface. Following removal of vegetation, the topsoil (i.e., A-horizon) would be removed using scrapers and bulldozers (in accordance with OCSMO Sec.10-4.432). The topsoil would be stored in segregated stockpiles within the Project Site for future use in reclamation activities. Shallow subsoils consisting of B-horizon and C-horizon would be excavated and stockpiled. The stockpiling locations would include the area of proposed landscaped berms along the southern and eastern margins of the mining area. Following removal of the overburden materials, sand and gravel deposits would be extracted and transported to the processing plant site by a conveyor system. The raw aggregate may be stockpiled at the plant site prior to processing. The stockpiles of topsoil, overburden and aggregate would be managed in compliance with the requirements of the OCSMO Sec.10-4.433 and 10-4.414.

When mining depths extend to below the groundwater level, the saturated aggregate deposits would be excavated using a dragline, excavator, or dredge. The excavated sediments would be temporarily stockpiled adjacent to the active mining area to allow dewatering prior to transport (by conveyor) to the processing plant located at the southern margin of the mining area.

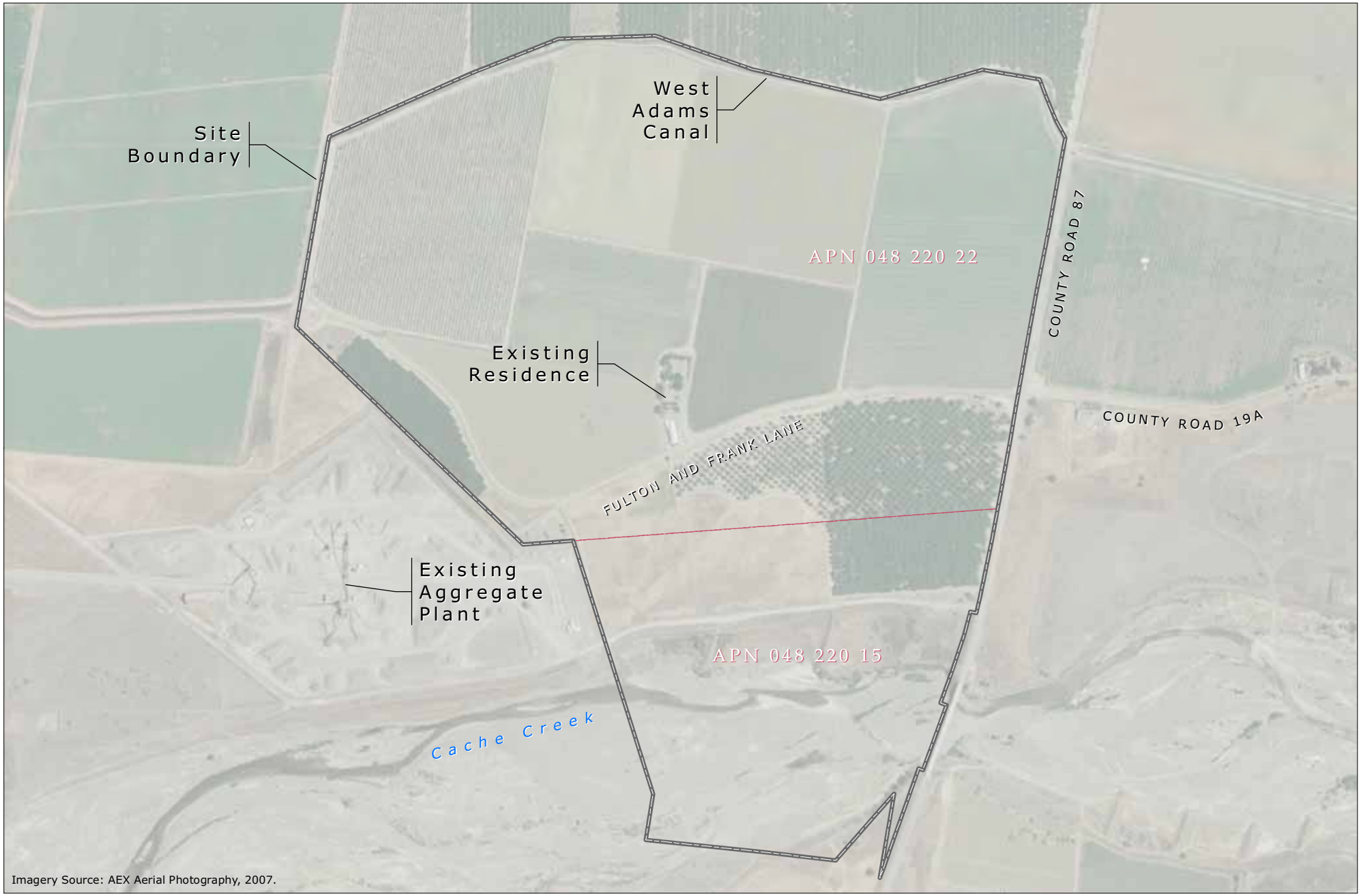

FIGURE 2-2

INITIAL STUDY
Granite Esparto Mining and Reclamation Project
PROJECT SITE MAP

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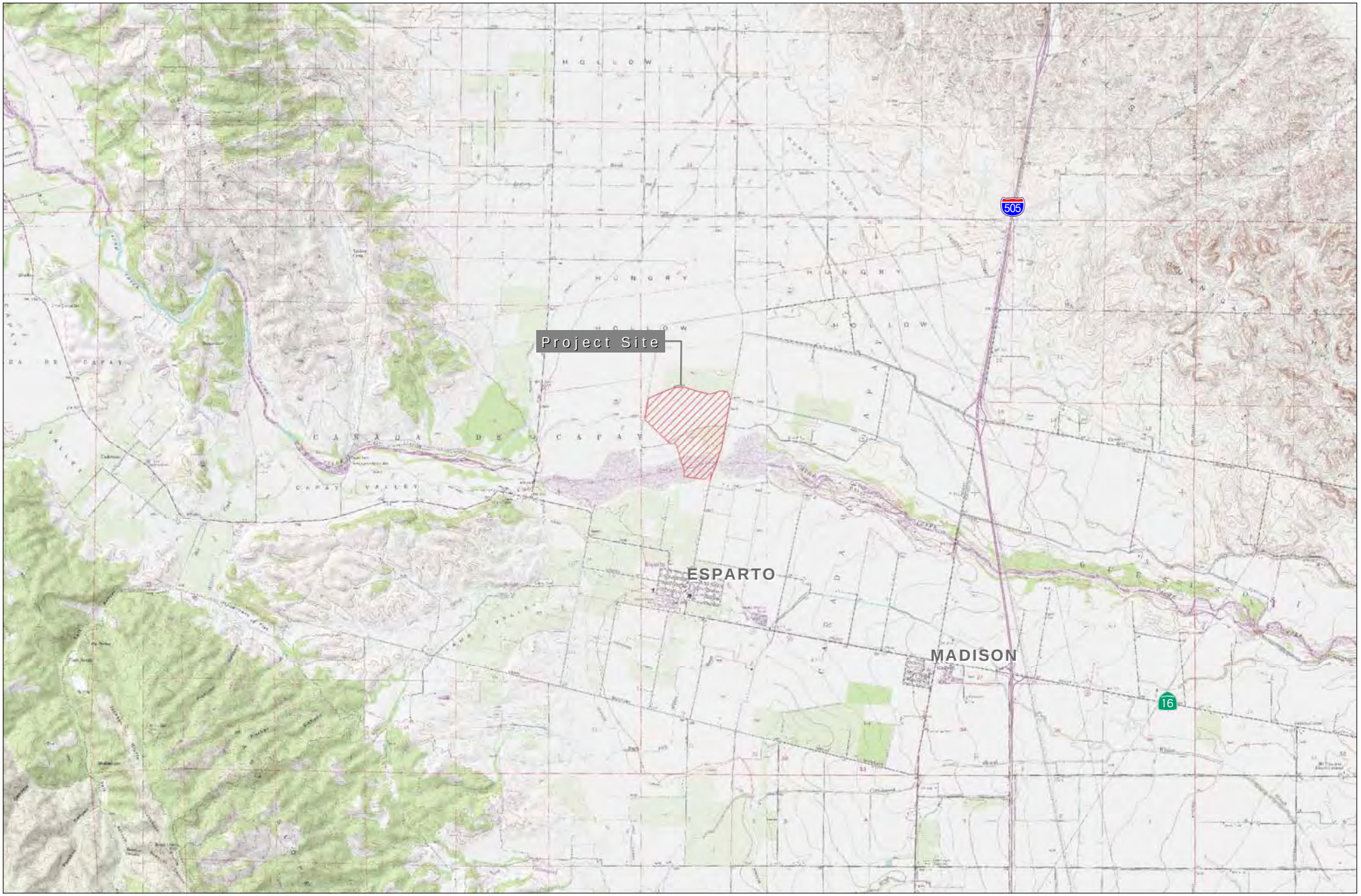

LEGEND

Project Site — County Boundary

N

0 1.25 2.5

MILES

FIGURE 2-1

INITIAL STUDY

Granite Esparto Mining and Reclamation Project

SITE VICINITY MAP

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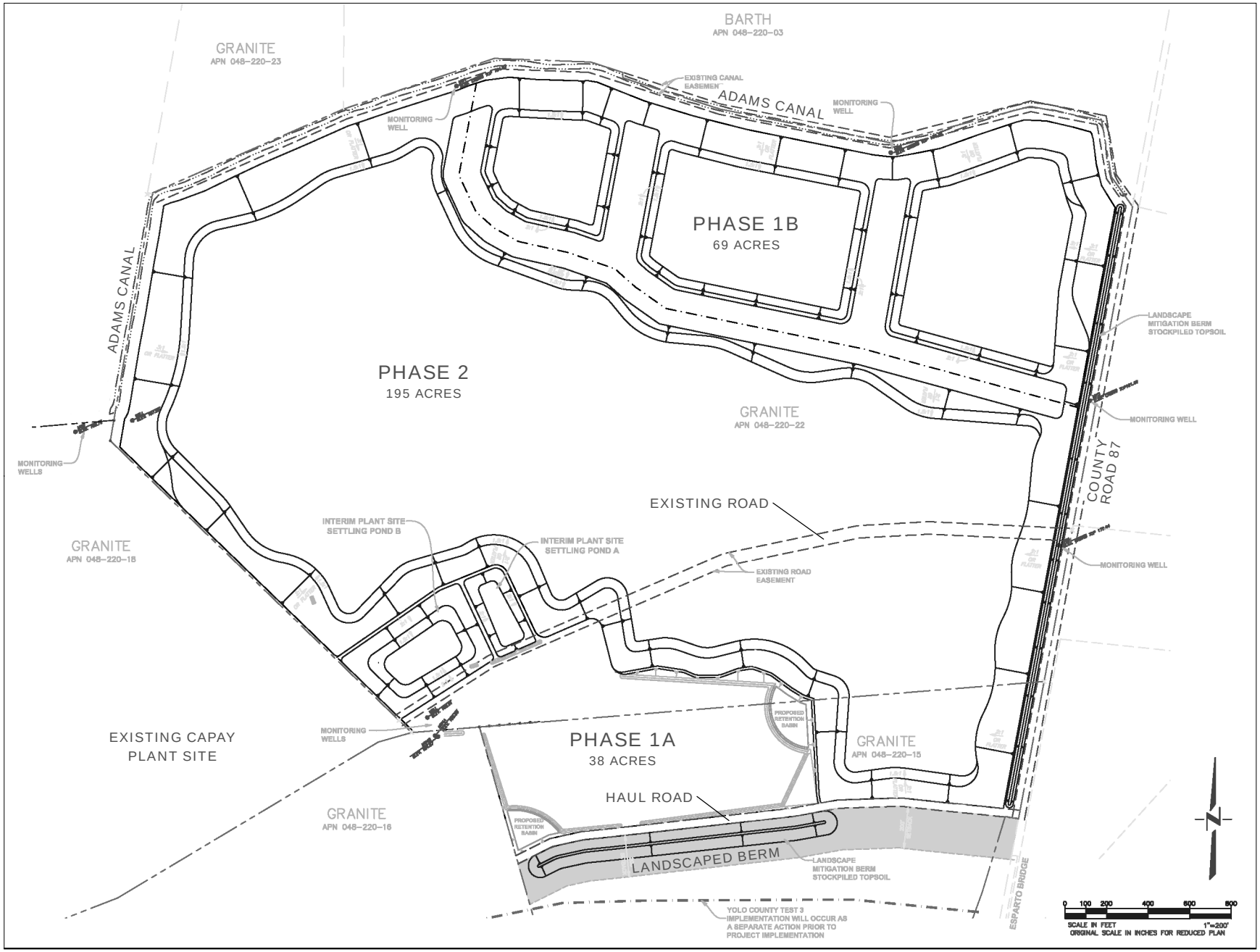

FIGURE | 2-3

INITIAL STUDY
Granite Esparto Mining and Reclamation Project
PROPOSED MINING PLAN

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The mining plan proposes that the slopes of the margins of the mining area (Figure 2-3) would generally be excavated to maintain a maximum gradient of 2:1 (vertical to horizontal) for depths above the groundwater table and 5 feet below the expected low groundwater level (in compliance with OCSMO Sec.10-4.431). The slopes that extend to depths greater than 5 feet below the low groundwater level would be maintained at a maximum gradient of 1.5:1. The mining slopes adjacent to the West Adams Canal and extending 500 linear feet south along County Road 87 from the canal would be no steeper than 3:1 to depths less than 5 feet below the groundwater level and 1.5:1 or 2:1 below that depth. In accordance with OCSMO Sec.10-4.429, proposed mining areas located less than 1,000 feet of public rights-of-way, public recreation areas, and/or off-site residences (i.e., along County Road 87 and along the bank of Cache Creek) would be shielded (to reduce the potential of noise, dust, and visual impact) from those areas by landscaped berms. Any stockpiles located within 500 feet of these areas would also be shielded by the berms.

The Project proposes a phasing plan for the proposed mining. Phase 1A consists of 38 acres from which 536,000 tons would be excavated to a depth ranging between 26 feet and 75 feet. This phase would be completed in approximately one year at which point the plant and two ponds would be located in the phase area. Under this initial phase, the first mining would occur to construct two “interim” settling ponds in the area northwest of the proposed processing plant site in the southern portion of the Project Site (Figure 2-3). The aggregate excavated from the first pond would be stockpiled in the area proposed for the processing plant. As the second deeper pond is excavated, the stockpiled aggregate would be processed and the wash water would be discharged to the first pond and fines would begin to fill the pond. The second pond would be constructed to receive fines from processing of the next mining phase.

Phase 1B consists of 69 acres from which 7.8 million tons would be excavated to a depth of 75 feet. In this next phase, the mining operations would shift to the northern portion of the Site where three mining “cells” or ponds would be excavated. The three ponds will be separated by north-south trending levees. Reclamation of Phase IB would be ongoing for the remainder of the mine life. Each of the three ponds would be sequentially reclaimed by filling the ponds with wash fines generated by processing of aggregate mined over the course of the Project; and the placement of topsoil and overburden material. The filling would create a final reclamation surface at least 5 feet above the groundwater table but lower than the existing and surrounding ground surface.

Phase 2 consists of 195 acres from which 21.7 million tons would be excavated to a depth of 75 feet. This would be the main excavation pit for this operation and mining of this phase would last about 21 years. This final phase of mining would be reclaimed to a large lake with shorelines dedicted to habitat. The shoreline will be enhanced with varying sideslope gradients. Along the northern portions adjacent to the West Adams Canal and northeastern margins of the lake adjacent to County Road 87, the gradient from a depth of 5 vertical feet below the low groundwater to the top of the slope would be 3:1 or flatter; along the remaining margins, the slope would be 2:1 or flatter. Wash fines from materials processed during Phase 2 mining operations would be contained in Phase IB settling ponds.

The remaining 11 acres of the 313-acre mining site, not included in these three proposed phase areas, is comprised of haul roads and setback areas.

2.2.3 Reclamation Plan

The Project proposes a reclamation plan (Figure 2-4) which includes reclamation of the proposed mining areas to three basic types of reclaimed uses: open space/dry pasture, agriculture, and an open lake with shoreline habitat. The Phase 1A mining area (about 38 acres), which includes the processing plant and stockpiling areas (about 30 acres) and settling ponds (about 8 acres), would be reclaimed to open space/dry pasture use. The reclamation would create a lowered reclamation surface as the result of a combination of excavation and partial refilling of mined areas. In conformance with SMRO Sec.10-5.516, the elevation of the surface would be raised to a height at least 5 feet above the highest groundwater level. The surface would slope toward two retention basins located in the north, southwest, and northeastern portions of the Phase 1A area. The basins would capture runoff from the reclaimed areas. The interior surface would be surrounded by 2:1 or flatter perimeter slopes. The reclaimed surface would be covered with A-horizon soil over C-horizon soil and vegetated by seeding with a mix of native grasses and forbs. The margins of the reclaimed surface would be planted with scattered clusters of oak woodland trees and shrubs.

The Phase 1B area (about 74 acres) in the northern portion of the mining area would be reclaimed to agriculture. The mining excavations would be filled with processing fines, overburden materials, and topsoil. The surface of the interior of the mining area would be raised by filling to an elevation at least 5 feet above the anticipated high groundwater level. The upper portion of the fill would include a minimum 36-inch thickness of C-horizon soils mantled by a minimum of 20 inches of A-horizon soils. The surface would be graded to slope gently toward a retention basin in the northeastern corner of the Phase 1B area. The surface would be tilled and prepared for row-crop production. The slopes surrounding the lowered surface would have slopes with gradient of 2:1 or flatter. The slopes would be covered with soil and vegetated with native grasses and shrubs.

The largest mining area, Phase 2 (about 201 acres), would be reclaimed to an open-water lake surrounded by vegetated slopes. The open lake would occupy approximately 157 acres; the additional 44 acres would be habitat and wetlands. However, the area of the lake would vary with the seasonal fluctuations in the lake level (controlled primarily by groundwater levels). The perimeter of the lake at expected high-lake levels would be approximately 13,300 feet. A portion of the lake perimeter along the northern and northeastern margins would have a slope of 3:1 or flatter; the remainder of the perimeter would have a slope of 2:1 or flatter. The area of the lake margin that is expected to provide “shallow water habitat” is about 5.2 acres. The margins of the lake would be planted with tules, cattails, and rushes. The slopes above the shallow habitat would be planted with riparian woodland trees and shrubs. The higher portions of the slopes would be planted with oak woodland trees and shrubs.

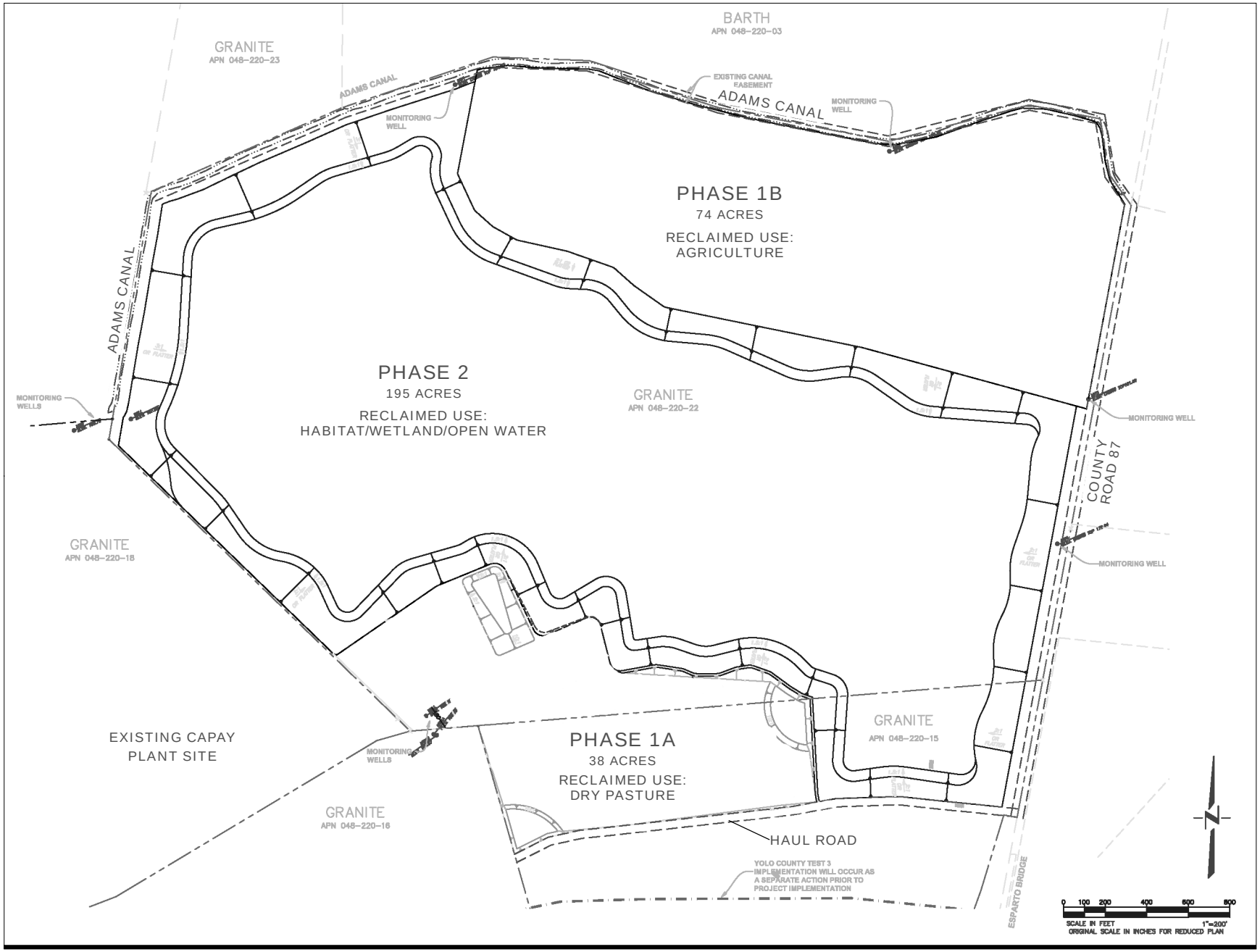

FIGURE | 2 - 4

INITIAL STUDY
Granite Esparto Mining and Reclamation Project
PROPOSED RECLAMATION PLAN

ENTRIX | Environmental and Natural Resource Management Consultants

2.2.4 Processing Operations

The proposed Project includes construction and operation of a rock processing plant. The plant would be located in the south central portion of the Phase 1A mining area (Figure 2-3). This location is adjacent to and east of the existing Granite Construction Company plant site. The plant site would be placed on a structural fill pad that is raised approximately 4 feet above the existing ground surface. Runoff from the plant site would be collected in shallow ditches at the perimeter of the Phase 1A area. The ditches would flow to retention basins is the north, southwest, and northeastern portions of the Phase 1A area.

ROCK PROCESSING

The plant would consist of three rock crushers and four rock screens, an office, parking areas, and a stockpile area for both raw aggregate and processed aggregate products. The raw aggregate would be generally transferred to the plant from the mining areas via electric-powered conveyor. When mining occurs proximal to the plant site (e.g. mining in the Phase 1A area) aggregate would be transferred to the plant by loaders, scrapers, or trucks. In addition to the crushing and screening equipment, the plant would include an aggregate washing operation.

Following crushing and screening, the aggregate would be washed. The wash water would be sent to a water clarifier to facilitate the removal of suspended sediment (i.e., “fines”). The clarifier would create two process streams: a wash-fines slurry and clean processed water. The fines slurry would be transferred by pipeline to one of several settling ponds to allow further dewatering of the slurry. The clean-water stream would be stored in a 50,000-gallon tank at the plant site. This water would be reused for washing aggregate. The source of the wash water would initially be well water from on-site wells. The processed water-reuse supply would need to be supplemented (due to losses by evaporation and water in the fines slurry) at a rate of approximately 1,100 gallons per minute (286 acre-feet per year). The “make-up” water would be supplied by on-site wells.

PLANT OPERATIONS

The proposed plant would have the capacity to process approximately 1.0 million tons of aggregate per year when operated on a single shift. All of the processing equipment would be electrically powered with an expected power demand of 1,500 kilowatts per hour or 12,000 kilowatts per day. The Applicant has indicated that the power supply would be provided by Pacific Gas and Electric (PG&E).

Normal hours of operations are proposed between 6:00 a.m. and 6:00 p.m., Monday through Friday (12 hours per day). Operations would normally occur five days per week during these hours; however, extended operations could occur occasionally to meet specific customer or Project demands. The number of nights that nighttime operations would occur is expected to be similar to existing conditions at Granite's Capay Facility. The mining, processing, and reclamation activities would employ 12 to 15 full-time workers.

MOBILE EQUIPMENT

The mining and reclamation operations would require the use of a variety of mobile construction equipment and vehicles. Most of the equipment would be diesel powered. The soil and

overburden removal and "dry" aggregate mining equipment would include loaders, scrapers, and bulldozer(s). "Wet" mining operation would also require some combination of a drag line, excavator, and/or floating dredge. The equipment for reclamation activities would include bulldozer(s), motor grader, and scrapers. In addition, the processing operation equipment would include a front-end loader. Maintenance activities would require motor grader, service truck(s), and a backhoe/tractor.

SITE ACCESS

The primary access to the plant would be an existing, two-lane paved driveway/haul road that intersects County Road 87 at the eastern margin of the Project Site. Traffic would enter the proposed processing plant to load aggregate products and then proceed from the proposed plant to the existing Granite Construction Company processing plant located adjacent to and west of the Project Site. The proposed plant site would share the existing truck scales at the existing plant site. Therefore, all trucks picking up aggregate products would be routed to the truck scales. Following weighing, the trucks would exit the Site traveling eastward on the driveway/haul road to its intersection with County Road 87. All truck traffic, with exception of local deliveries to Esparto, Capay, and Madison, would be required to travel east on the plant driveway, north on County Road 87, east on County Road 19 and either north or south on Interstate (I-) 505. The requirements are currently enforced by the Applicant for the Capay Facility.

2.2.5 Streambank Stabilization Plan

In support of a request to mine 200 feet from the existing Cache Creek channel bank and within the streamway influence boundary (Section 10-4,429, OCSMP), the Applicant proposes a Streambank Stabilization Plan (SSP) (Cunningham 2007) for the north bank of Cache Creek adjacent to the southern margin of the proposed mining area. The stabilization would include grading of the existing bank to a uniform slope, providing protection to the toe (i.e., base) of the slope, and revegetation of the bank and toe. The length of the stabilization project would be about 2,300 feet and would extend from the Esparto Bridge (i.e., County Road 87 crossing of Cache Creek) to the downstream (eastern) end of the completed Granite bank stabilization project. The intent of the plan is to implement a segment of the Test 3 boundary established in the Cache Creek Improvement Program (CCIP) of the CCRMP and conform with the requirements of the ICMMO. Implementation of the Test 3 boundary and other channel restoration activities promoted in the CCRMP already have CEQA clearance through the CCRMP EIR and the general permits and approvals issued by various responsible agencies as follows:

- Army Corps of Engineers (COE) Regional General Permit (Number 58) for the CCRMP\CCIP which authorizes instream activities under Section 404 of the Clean Water Act.
- California Department of Fish and Game Stream or Lake Alteration Agreement (Number 315-97) for the CCRMP\CCIP which authorizes, under Section 1601/1603 of the Fish and Game Code, the projects contemplated in the CCIP.

- Central Valley Regional Water Quality Control Board Section 401 Water Quality Certification for the CCRMP/CCIP which authorizes instream activities under Section 401 of the Clean Water Act.
- AB 297 (1999), AB 1984 (2004), and AB 646 (2007) which enacted/amended Section 2715.5 of the Public Resources Code (PRC) establishing the CCRMP as the equivalent of a Reclamation Plan for the California Department of Conservation (DOC) for the purposes of satisfying the Surface Mining and Reclamation Act (SMARA).
- County of Yolo Flood Hazard Development Permit process and implementation of the Title 10, Chapter 3, of the County Code entitled, ICMMO.

Implementation of the SSP requires approval of a Flood Hazard Development Permit (FHDP) from Yolo County (ICMMO Sec. 10-3.209). The plan proposes to contour the slope along the creek bank to a gradient of 3:1. A keyway filled with cobbles (natural and/or broken concrete) would be placed (extending to a depth of 5 feet below ground surface) at the toe of the slope. Additionally, a cobble revetment would be placed from the toe of the slope to a height of 5 feet above the toe. Willow or mule tail cuttings would be planted within the revetment. The top of the slope would be flat and approximately 12 feet wide. The north-facing slope adjacent to the mining/reclamation areas of the Project Site would be graded to a gradient of the 2:1.

2.3 "NET GAIN" BENEFITS IDENTIFIED BY THE APPLICANT

Yolo County has established a requirement that all mining and reclamation projects proposed within the CCAP present components of the projects which would provide a specific public benefit or "net gain" for Yolo County. The OCSMO (Sec. 10-4.502) sets the general guidance for meeting the "net gain" requirements and specifies that the project application includes:

> (i) A proposal for providing a "net gain" to the County, as determined by the following criteria:
>
> (1) Reclamation to multiple or conjunctive uses;
>
> (2) Enhancement and enrichment of existing resources; and/or
>
> (3) Restoration of past sites where the requirements of reclamation at the time no longer meet community expectations in terms of good stewardship of the land.
>
> "Net gain" may include participation in an established program whose goals are consistent with the above criteria. Benefits included in the technical studies submitted with each application which serve as mitigation measures for potentially adverse environmental impacts created by the project may not be included as a 'net gain."

As the "net gain" for this Project the Applicant proposes to dedicate the Granite Construction Company Woodland Facility property to Yolo County. The property is approximately 115 acres, comprised of APNs 025-300-051, 025-300-321, and 025-350-091. The Site is situated at the east end of the OCMP boundary, and is currently permitted for the extraction of approximately 420,000 tons per year. The Applicant suggests that the Woodland property has excellent habitat potential that would be a resource for the County.

The environmental review of the Project by Yolo County will evaluate the proposed "net gain" and any associated environmental impacts. The review will contribute information to assist the County in determining if the intentions of the OCSMO, ICMMO, and SMRO are met by the proposal.

2.4 FINDING

On the basis of the environmental analysis performed for this IS, it was determined that one or more potentially significant impacts may occur as the result of implementation of the proposed Project. The basis of this finding is presented in the responses to questions for each environmental topic covered in Section 3 of this IS. Therefore, an EIR will be prepared by the Yolo County Parks and Resources Department for the Project.

SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that has been identified as "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated in the "Environmental Checklist" section of this IS.

X	Aesthetics	X	Agriculture Resources	X	Air Quality
X	Biological Resources	X	Cultural Resources	X	Geology / Soils
X	Greenhouse Gas Emissions/Climate Change/Energy Use	X	Hazards & Hazardous Materials	X	Hydrology / Water Quality
X	Land Use / Planning	X	Mineral Resources		Noise
	Population / Housing		Public Services		Recreation
X	Transportation/Traffic		Utilities / Service Systems	X	Mandatory Findings of Significance

2.5 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, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 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, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

February 9, 2009

Kent Reeves, Natural Resources Division Manager
Yolo County Parks and Resources Department

Date

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Section 3: Evaluation of Environmental Impacts

This section of the IS provides a description of the environmental setting of the proposed Project and a preliminary analysis of environmental impacts that may be associated with implementation of the Project. The evaluated impacts include both short-term and long-term direct and indirect effects of the Project. The analysis follows the structure of the Environmental Checklist presented as Appendix G of the CEQA Guidelines. The analysis indicates that the proposed Project could cause "Potentially Significant Impacts" and, therefore, will require that an EIR be prepared for the Project. The analysis of potential environmental effects presented in the IS has been performed as a "scoping tool" to guide the identification of possible adverse environmental effects related to implementation of the Project. The analysis is preliminary and will be more thoroughly completed during preparation of an EIR for the Project. The following guidelines are provided for the answers to questions included in the checklist format:

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects 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 (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis). A "Less than Significant Impact" determination indicates that the potential adverse effects related to physical changes to the environment would not exceed the significance criteria. The analysis of these impacts and the significance criteria are presented in the answers. If the IS identifies that the project will have "No Impact" or a "Less than Significant Impact" with respect to a specific type of environmental effect, such impacts need not be assessed further in any EIR prepared for the project.
2. All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. The analysis presented in this IS is preliminary. Further analysis of the effects identified in this IS as "Potentially Significant Impacts" will be performed during preparation of the EIR for the Project. The more in-depth analysis in the EIR may determine that an effect initially identified as potentially significant in the IS could ultimately be found to have "No Impact" or a "Less Than Significant Impact." Additionally, the subsequent analysis could result in the final determination that a "Potentially Significant Impact" can be reduced to a less-than-significant level following development and implementation of mitigation measures in the EIR.

   Though these IS findings serve to trigger the preparation of the EIR, the IS determinations are only preliminary and are superseded by the impact findings of the EIR once it is certified as adequate by the Lead Agency. The EIR may, based upon a more thorough and comprehensive analysis of the project's physical effects and best available information, reach and justify final impact findings which differ from the IS.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   – Earlier Analysis Used. Identify and state where they are available for review.

   – Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   – Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address Site-specific conditions for the Project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached and other sources used or individuals contacted should be cited in the discussion.

8. This is only a suggested form and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

I. AESTHETICS Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have substantially adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) Substantially degrade the existing visual character or quality of the Site and its surroundings?	X			
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

DISCUSSION:

Ia. Potential to substantially affect scenic vista (Less than Significant Impact). The Project is located in a rural and relatively sparsely populated area of central Yolo County. The Site is not visible from any scenic vistas designated by Yolo County or any other public entity (Yolo County 1983).

Ib. Potential to damage scenic resources (Less than Significant Impact). There are no scenic highways designated in Yolo County by the State of California, Yolo County, or any other public agency (Caltrans 2008, Yolo County 1983). Therefore, the Project would not potentially damage any visual resources affecting a state scenic highway.

The Project is located within a broad, alluvial valley that supports extensive agriculture and aggregate mining operations. There is limited natural vegetation on the Site and significant historic or scenic trees would not be affected. The geologic setting does not include rock outcrops at or near the Project Site.

Ic. Potential to substantially degrade visual quality of the Site and surroundings (Potentially Significant Impact). The Project would potentially degrade the visual character of the Project Site, particularly during the mining and reclamation period. The temporary effects of the mining would be removal of vegetation within areas of the Site that currently support agricultural fields and orchards. Substantial changes in topography would result from the extensive excavation and grading of the Project Site.

The Project Site is located within an area zoned by Yolo County as the "General Agriculture" (A-1) and "Agricultural Preserve" (A-P) with a Sand and Gravel Reserve (SGR) Combining Zone. Within a rezoning to change the combining zone to "Sand and Gravel" (SG), the aggregate mining and reclamation activities proposed by the Project are permitted uses within these areas. The potential visual impacts related to aggregate production were evaluated in the Program EIR prepared for the OCMP (Yolo County 1996) and specific performance standards were developed for the OCSMO to mitigate significant impacts. The Project proposes to comply with the requirements of the ordinance to limit the height of stockpiles to less than 40 feet (Sec. 10-4.433).

However, the EIR for the Project will further evaluate whether the Project complies with the provisions of the ordinance which requires that the "visibility of mining operations, facilities, and landform alterations from public and viewpoints and nearby residences shall be minimized based on an assessment of Site-specific visual characteristics and viewing conditions" (Sec. 10-4.404). Additionally, the EIR will assess the conformance of the Project with the reclamation standard requiring that the "means of improving the appearance of the landscape after mining has been completed shall be assessed based on Site-specific visual characteristics, Site lines, and view corridors" (Sec. 10-5.502).

Id. Potential to create new source of substantial light or glare (Less than Significant Impact). The Project would introduce new permanent sources of lighting and glare from the rock processing plant and other improvements. As stated in the application, all lighting will be arranged and controlled so as not to illuminate public rights-of-way or adjacent properties (OCSMO, Sec. 10-4.420). To the extent such lighting may result in off-site glare, this can be conditioned by standard conditions of approval which require lighting to be shielded and/or screened from causing glare on off-site properties and roadways.

II. AGRICULTURAL 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:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	X			
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?			X	
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?			X	

DISCUSSION:

IIa. Potential to convert important farmland to non-agricultural use (Potentially Significant Impact). The Project Site is located within an area that includes extensive agricultural production. The zoning of the Project Site includes "General Agriculture" (A-1) and "Agricultural Preserve" (A-P). Currently, the area of the Project Site north of the north bank of Cache Creek supports row crops (including fallow fields) and orchard (almond and walnut) production. Available information indicates that the crops and average crop yields for fields in the northern portion of the Site include tomatoes (37 tons per acre) and sunflowers (870 pounds per acre) (LFR 2007).

Analysis of Farmland Mapping and Monitoring Program (California Department of Conservation 2008) data reveal that the Project Site includes areas designated as "Prime Farmland," "Unique Farmland," and "Other Land." The Prime Farmland (about 154 acres) is located in the northern portion of the Site, the area furthest from the active channel of Cache Creek. This category includes farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. The Unique Farmland forms a band through the central portion of the proposed mining area and includes about 133 acres. Lesser quality soils used for the production of the state's leading agricultural crops characterize this category. This land is usually irrigated, but may include non-irrigated orchards or vineyards.

The remainder of the Site (about 103 acres), including the area adjacent to and within the channel of Cache Creek, is designated as Other Land. The agricultural potential of this area is very limited as a consequence of coarse-grained, poor-quality soils developed on recently deposited creek sediments.

The mining proposed by the Project would result in excavation of approximately 104 acres of the area of the Site designated as Prime Farmland. Approximately 74 acres of this area would be reclaimed to agricultural use. The previous evaluations of the expected productivity of mined lands to agricultural use (using similar reclamation methods proposed by the Project) have

indicated that valuable agriculture productivity can be supported on these lands (Yolo County 1996, 2001). An agricultural assessment of the proposed reclamation suggests that the expected crop yields for the reclaimed agricultural would be within approximately 80 percent of pre-mining yields (LFR 2007).

However, the Project would result in the permanent conversion of at least 30 acres of Prime Farmland to non-agricultural use (i.e., habitat and open water). The SMRO (Sec. 10-5.525) establishes requirements for the offsets to compensate for the conversion of Prime Farmland (as defined by the provisions of the Williamson Act) to non-agricultural use. The potential offsets can include, but are not limited to, one or more of the following options:

- Identification of improvements of nonprime lands within or outside the Project Site that convert nonprime to prime agricultural conditions;
- Placement of permanent conservation easements on land meeting the Williamson Act definition of Prime Farmland; and/or
- Demonstration of the ability to provide irrigation to nonprime farmlands limited only by the lack of irrigation water supply.

The Project does not specify the measures that would be taken to offset the conversion of Prime Farmland to non-agricultural uses. The conversion is a potentially significant impact of the Project and would be fully evaluated in the EIR. Additionally, the expected productivity of the mined lands reclaimed to agriculture will be assessed in the EIR.

IIb. Potential to conflict with existing agricultural zoning or Williamson Act contracts (Less than Significant Impact). The Project would not conflict with any land currently zoned for agricultural use or with any existing Williamson Act or Farmland Security Zone Act contract. The northern parcel (APN 048-220-022) of the two parcels which comprise the Project Site is under an active Williamson Act contracts. A Notice of Non-Renewal of the contract was filed on November 25, 2003 (Granite 2007). Aggregate mining and reclamation associated other similar aggregate projects (Yolo 1996, 2002) have been found by Yolo County to be consistent with the "underlying contractual commitment to preserve prime land," as required under Section 51238.2 of the Williamson Act. The Williamson Act requires that a compatible use not compromise the long-term capability of the contract parcel. Conversion of a portion of the prime agricultural land at the site to non-prime condition may conflict with the requirements. If mining and reclamation is completed prior to expiration of the contract in 2013, the Project may not comply with the contract. This potential conflict will be analyzed in the EIR.

IIc. Potential to cause change that could cause conversion of farmland to non-agricultural use (Less than Significant Impact). The Project would convert about 30 acres of Prime Farmland to non-agricultural uses (see response to IIa). The Project would not involve other changes to the environment which could result in the conversion of farmland to a non-agricultural use.

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:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	X			
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	X			
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	X			
d) Expose sensitive receptors to substantial pollutant concentrations?	X			
e) Create objectionable odors affecting a substantial number of people?			X	

DISCUSSION:

IIIa. Potential to conflict with applicable air quality plan (Potentially Significant Impact)
The Project Site is located within the Sacramento Air Basin and air quality regulation is under the authority of the Yolo-Solano Air Quality Management District (YSAQMD). The District encompasses all of Yolo County and a portion of Solano County. The YSAQMD is included with the Sacramento Regional Nonattainment Area for the 8-hour Ozone Standard. Ozone is a colorless gas, can have harmful human and environmental health effects, including aggravation of respiratory diseases and damage to crops and other vegetation. The nonattainment designation is based exceedence of the federal 8-hour Ozone Standard. The federal 8-hour Ozone Standard lowered the health-based limit for ambient ozone concentration from 0.12 parts per million of ozone averaged over one hour to 0.08 parts per million of ozone averaged over 8 hours. The Sacramento region is classified as a "serious," nonattainment area for the 8-hour Ozone Standard, with an attainment deadline of June 15, 2013 (i.e., nine years after designation).

The YSAQMD Board of Directors adopted the District's portion of the Sacramento Area Regional Ozone Attainment Plan along with the four other air districts in the region. The plan is designed to bring the Sacramento Air Basin into attainment of the federal air standards. The attainment plan is a portion of California's State Implementation Plan (SIP) which contains federal, state, and district stationary and mobile source measures. The SIP was submitted to the U.S. Environmental Protection Agency (EPA) in November 1994, and approved by the EPA in September of 1996. The SIP was adopted to replace the Federal Implementation Plan, which was rescinded by the EPA in April 1996.

The proposed aggregate processing plant would be subject to the District's permit requirements to control air pollutant emissions generated from new sources within the District's jurisdiction. A main purpose of the permitting process is to prevent interference with the District's goal of attaining or maintaining ambient air quality standards. However, the Project would introduce

other sources of emissions, including mobile equipment and vehicles. The EIR will evaluate all source of air emissions related to the Project and the potential impacts on current air quality plans.

IIIb. Potential to violate or substantially contribute to violation of air quality standards (Potentially Significant Impact). The air emissions potentially associated with the Project would be temporary emission of fugitive dust and exhaust from equipment and vehicles used during construction and operation of the Project components. Temporary sources of emissions include fugitive dust generated during aggregate excavation and processing. Vehicle operation on unpaved access and internal roads would result in the emission of dust. Additionally, internal combustion engines for equipment and vehicles (including trucks transporting aggregate product) would also generate particulate matter (including PM_{10}, $PM_{2.5}$ and diesel particulates) and ozone precursors.

As a new source of air pollution, the proposed Project would be subject to the District's permit requirements to control air pollutant emissions generated within the District's jurisdiction. The Project would be required to obtain an Authority to Construct for the processing plant.

Additionally, the Project would be required to comply with performance standards of the County OCSMO and SMRO that have been established to reduce air emissions. The requirements include management of stockpiles (Sec. 10-4.414(a)), stabilization of disturbed ground (Sec. 10-4.414(b)), and maintenance of equipment engines (Sec. 10-4.415). The EIR will quantify and assess the impact related to air emissions from the proposed plant and all mobile sources.

IIIc. Potential to result in a cumulatively considerable net increase in criteria pollutants (Potentially Significant Impact). The Project would result in the emission of ozone-precursor compounds; the emissions would be from mobile sources (i.e., construction equipment and vehicles). The cumulative increase of these emissions will be estimated and evaluated in the EIR prepared for the Project.

IIId. Potential to expose sensitive receptors to substantial pollutant concentrations (Potentially Significant Impact). Sensitive receptors relative to air quality conditions are generally considered populations which have a greater-than-average sensitivity to adverse health effects related to adverse health effects related to air pollutants. Typical sensitive receptors include schools, hospitals, and nursing care facilities. Residences, or residential areas, can also be considered sensitive receptors if subjected to relatively long duration of exposure to emissions from specific sources.

The Project Site is located within a very sparsely populated area of central Yolo County. In general, the areas of mining and reclamation activities operations proposed by the Project are not located adjacent to any known sensitive receptors. The closest sensitive receptor (excepting individual residences) to the Project Site are residential areas in the north side of the town of Esparto, located about 0.8 mile south of the southern boundary of the proposed mining/reclamation areas. The closest school, Esparto High School is located approximately 1.2 miles south of the southern boundary of the Site.

The closest existing individual residences to the Project Site are located between 560 and 633 feet from the Site boundary. On the basis of analysis of aerial photographs, these are the

only residences within 1,000 feet of the Project Site boundary. The shortest distance between an existing residence and a mining or reclamation area is approximately 560 feet.

Due to their distance from Site operations, it is unlikely for sensitive receptors to be adversely affected by on-site activities. However, the emissions related to vehicle trips transporting people, equipment, and products to and from the Site (i.e., fugitive dust, vehicle emissions, and diesel particulates) could potentially adversely affect the health of sensitive receptors along the access roads to the Site. The EIR will identify all sensitive receptors (including residences) along the access roads, including County Roads 19 and 87, and evaluate whether identified sensitive receptors may be adversely affected by the emissions related to vehicle trips generated by the proposed Project.

IIIe. Potential to generate odors (Less than Significant Impact). The Project would not be expected to result in the creation of objectionable odors during the mining or reclamation activities or post-reclamation period. Existing mining projects (with similar operations) within the CCAP have not been the source of odor complaints in the period 1997 to present. The generation of odors is, therefore, a less than significant impact.

IV. BIOLOGICAL RESOURCES Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 US Fish and Wildlife Service?	X			
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?			X	
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, etc.) through direct removal, filling, hydrological interruption, or other means?	X			
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?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	X			
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?			X	

DISCUSSION:

IVa. Potential to have substantial adverse effect on special-status species or their habitat (Potentially Significant Impact). The Project activities could impact various special-status wildlife species. These impacts are discussed below. No impacts to special-status plants are anticipated.

BOTANICAL RESOURCES

According to the biological assessment conducted for the Project proponent, only four special-status plant species were identified by the California Natural Diversity Database (CNDDB) to occur within the vicinity of the property. These species included: the federally and state threatened or endangered palmate-bracted bird's beak, Colusa grass, Solano's grass, and Heckard's pepper grass; a California Native Plant Society list 1B species. An analysis of habitat requirements for each species determined that suitable habitat for these plants does not exist within the Project area, therefore no impacts to special-status plants are anticipated (TRC 2007b).

WILDLIFE RESOURCES

The proposed Project has the potential to adversely affect terrestrial wildlife resources. Activities of the proposed Project that could affect terrestrial wildlife resources include the following:

- Clearing, scraping, and excavation for construction;
- Habitat reduction and migration restrictions;
- Driving through and repeated occupation of equipment staging areas;
- Noise produced by construction equipment and activities; and
- Potential erosion into sensitive resources.

The information acquired to-date through reconnaissance-level surveys and document review indicate that special-status terrestrial species have been documented on the Project Site. These species include Swainson's hawk and northern harrier, both state-listed as threatened species. In addition, potentially suitable habitat exists for other special-status species such as the state threatened bank swallow and the following California Species of Concern: Western pond turtle, tricolored blackbird, ferruginous hawk, mountain plover, and the white-tailed kite which is a fully protected species. Construction, operations, and maintenance activities could result in direct and indirect impacts to individuals, communities, and habitats for special-status terrestrial species and other wildlife located within or adjacent to the study areas. Direct impacts include mortality due to crushing or trampling an individual or cause a species to abandon a territory, foraging area, courtship, nest, or preferred habitat. Indirect effects may include causing a substantial change in the availability of prey, reducing the available foraging or nesting habitat, substantially changing the usability of a required habitat or impeding migration.

Nesting habitat could be directly impacted by the removal of trees, or indirectly by human disturbances from construction activities or ongoing operations, that could cause nest abandonment and death of young or loss of reproductive potential active nests located near the Sites proposed for mining activities. As with aquatic and botanical resources, avoidance of areas with sensitive terrestrial species is preferred.

For some species, impacts of the proposed Project will be less than significant based on the distribution of the species, the area of construction, and other factors (e.g. timing of road repairs or vineyard development may avoid the critical breeding period for these species). For other species, the impact of construction activities could result in an impact on the local population. Thus, the potential for the proposed Project to result in adverse effects will be dependent upon the methods of construction and the time at which the construction is conducted which will be evaluated in the EIR developed for this Project.

The Best Management Practices (BMPs) listed below have been proposed in the biological assessment prepared for the Project (TRC 2007b) to reduce the potential impacts on wildlife resources during construction:

- Pre-construction bird surveys would be conducted for active or inactive nests before construction is scheduled to occur in any given area. These pre-construction surveys should be conducted by a qualified ornithologist in accordance with California Department of Fish and Game (CDFG) survey protocols to make sure active breeding and nesting sites are not, or minimally, disturbed. If no nests are found, then construction should proceed as scheduled. If an active nest is found, then the CDFG should be consulted to determine what mitigation measures should be applied (i.e., buffer zones or alterations to the construction schedule to avoid the area until nesting is complete and birds have left the nest).
- Pre-construction surveys upland of Cache Creek would be conducted for western pond turtle nests before construction is scheduled to occur in any given area. These pre-construction surveys should be conducted by a qualified biologist in accordance with CDFG survey protocols to make sure active breeding and nesting sites are not, or minimally, disturbed. If no nests are found, then construction would proceed as scheduled. If an active nest is found, then the CDFG should be consulted to determine what mitigation measures should be applied (i.e., buffer zones or alterations to the construction schedule to avoid the area until nesting is complete and birds have left the nest).

In addition to the implementation of the above listed BMPs, the Project proposes to implement a Habitat Restoration and Landscape Visual Screening Plan (TRC 2007c). The goals of the Plan are to provide a diversity of habitat types and plant communities including aquatic habitats (such as wetlands and open water) as well as the creation of riparian woodlands.

The EIR for the Project will fully evaluate the proposed measures for habitat protection to determine if the Project, as proposed, would eliminate or reduce to a less-than-significant level all impacts to special-status species or their habitat.

IVb. Potential to have substantial adverse effects on riparian or other sensitive habitat (Less than Significant Impact). There are no sensitive natural communities in the Project area, however, riparian habitat to the north and south of Cache Creek does exist. Riparian areas north of Cache Creek may be modified by implementation of the proposed Streambank Stabilization Plan (SSP). However, implementation of the SSP would be required to comply with all requirements of the CCRMP and all associated general regulatory permits, including the Yolo County Flood Hazard Development Permit. The requirements relating to the protection of are codified in ICMMO and include:

- Preparation of a site-specific plan consistent with the CCRMP (Sec. 10-3.208);
- Revegetation standards for areas of disturbed riparian vegetation (Sec. 10-3.415); and
- Setback from mature trees to be retained within the channel (Sec. 10-3.417).

The Program Environmental Impact Report (PEIR) for the CCRMP (Yolo 1996b) found that the potential impacts to riparian habitat would be reduced to a less-than-significant level through compliance with the performance standards. Conformance with the ICMMO will be evaluated in the EIR developed for this Project.

IVc. Potential to adversely affect wetlands (Potentially Significant Impact). Approximately 0.1 acre of jurisdictional wetland was identified within the Project study area, south of Cache Creek, in the eastern corner of the Project study area. The 0.1 acre of jurisdictional wetland is not within the Project area proposed for impact (TRC 2007a). The Project will avoid all impacts to identified wetlands. However, the wetland delineation prepared for the Project does not appear to have followed the most recent guidance requirements of the U.S. Army Corps of Engineers: Engineers' the Arid West Interim Regional Supplement to the Wetland Delineation Manual (USACOE 2006). The revision to the guidance may result in identification of additional jurisdictional wetlands. The EIR will further review the wetland delineation and address any identified deficiencies.

IVd. Potential to substantially interfere with migration corridors or nursery sites (Less than Significant Impact). The Project would not 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. Impacts to the northern bank of Cache Creek, as a result of the implementation of the County's Test 3, Line, would be in compliance with existing regulatory permits pursuant to the CCRMP that has a goal of creating a continuous corridor within the Creek (TRC 2007b). All terrestrial special-status species with potential to occur in the Project area are highly mobile and would be able to move out of the Project area. The Project would have a less than significant impact.

IVe. Potential to conflict with local policies or ordinances protecting biological resources (Potentially Significant Impact). As part of the proposed project-level Habitat Reclamation Plan (TRC 2007c), the Project includes creation of aquatic habitats such as open water and wetlands and create riparian habitat to be utilized by various wildlife species. As such, the Project is generally consistent with General Plan policies that stress the preservation and enhancement of sensitive biological resources. No oak woodland habitat has been identified at the Project Site. Therefore, the provisions of the Yolo County Oak Woodland Conservation and Enhancement Plan (Yolo County 2007) would not be applicable.

The proposed grading would remove or cover riparian vegetation established along the north margin of the channel of Cache Creek. The vegetation includes trees plant as part of previous habitat restoration projects; some vegetation is volunteer. Vegetation mapping for the Project indicates the presence of "cottonwood stands" in the area of grading. The ICMMO (Sec. 10-3.417) requires a setback of 25 feet from mature trees within the creek channel. The EIR will evaluate the conformance of the Project with the requirements of the ICMMO and all other policies.

IVf. Potential to conflict with habitat or natural community conservation plans (No Impact). The Project is in the area covered by the Draft Yolo County Natural Heritage Plan (NHP). The NHP is a Natural Community Conservation Plan (NCCP) and a Habitat Conservation Plan (HCP) which covers the entirety of Yolo County. The program defines conservation measures for 28 species over 400,000 square miles and encompasses four major towns (Davis, West Sacramento, Winters, and Woodland) and UC Davis. The EIR will provide a full assessment of potential conflicts between the Project and the NHP.

V. CULTURAL RESOURCES Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5?	X			
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?	X			
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	X			
d) Disturb any human remains including those interred outside of formal cemeteries?	X			

DISCUSSION:

Cultural resources include paleontological resources, prehistoric resources, Native American resources, and historic resources. Prehistoric resources are physical properties resulting from human activities that predate written records and are generally identified as isolated finds or sites. Paleontological resources may include fossils of Quaternary animals. Prehistoric resources may include village sites, temporary camps, lithic (stone tool) scatters, roasting pits/hearths, milling features, rock features, and burials.

Native American resources are sites, areas, and materials important to Native Americans for religious, spiritual, or traditional reasons. These resources may include villages, burials, rock art, rock features, or spring locations. Fundamental to Native American religions is the belief in the sacred character of physical places such as mountain peaks, springs, or burial locations. Traditional rituals often prescribe the use of particular native plants, animals, or minerals. Therefore, of primary concern are activities that may affect sacred areas, their accessibility, or the availability of materials used in traditional practices.

Historic resources consist of physical properties, structures, or built items resulting from human activities after the time of written records. Historic resources can include archaeological remains and architectural structures. Historic archaeological site types include town sites, homesteads, agricultural or ranching features, mining-related features, refuse concentrations, and features or artifacts associated with early military use of the land. Historic architectural resources can include houses, cabins, barns, lighthouses, early military structures, and local structures such as missions, post offices, and meeting halls.

A property may be designated as historic by federal, state, or local authorities. In order for a building to qualify for listing in the National Register of Historic Places or the California Register of Historical Resources (CRHR) it must meet one or more identified criteria of significance. The property must also retain sufficient architectural integrity to continue to evoke the sense of place and time with which it is historically associated.

At the state level, CEQA addresses effects on historic and prehistoric archaeological resources. CEQA Guidelines include criteria to determine if a cultural resource is considered historically significant. Significant historic resources are defined as: (1) resources that are listed on or eligible for listing on the CRHR and/or the National Register of Historic Places (NRHP), (2) resources designated as locally significant, or (3) resources a Lead Agency determines are

significant based on substantial evidence. However, CEQA Guidelines state that a resource need not be listed to be considered significant in regard to CEQA analysis (§15064.5(a) (4)). In order to be listed on the CRHR, a historical resource must meet one or more of the following criteria:

- Is associated with an event that has made a significant contribution to the pattern(s) of California history;
- Is associated with the life of a historically important person;
- Embodies a distinctive quality of a type, period, region, or method of construction and/or represents the work of a master or possesses high artistic value; or
- Is likely to or has yielded information important to prehistory or history.

Sites of traditional religious and cultural importance to Native Americans may also be considered significant. When resources significant to Native Americans are known, or likely to be present or are newly discovered, CEQA Guidelines require consultation (i.e., discussion to identify options for management of remains or artifacts) with appropriate Native American representatives, determined the Most Likely Descendent (MLD) from a list provided by the Native American Heritage Commission (NAHC). Consultation would assist in determining the significance of impacts to cultural resources and developing mitigation plans to reduce the potential adverse effects on the resource.

The potential for the presence of historic and prehistoric cultural resources has been evaluated in a cultural resources investigation conducted at the Project Site (ECORP 2007). The Site-specific investigation included review of available records of previously identified resources and published reports on the prehistory and history of the region and Site-specific surveys throughout the Project Site.

Va. Potential to substantially change the significance of a historical resource (Potentially Significant Impact). The cultural resource investigation prepared for the Project (ECORP 2007) indicates that the southwest portion of the former Adams Homestead may be located within the north central portion of the Project Site. The cultural resource surveys did not identify any evidence of the historic ranch within the Project Site. The investigation also assessed the existing structures at the Project Site. Inspection of the structures and interviews with the property owners indicate that the existing ranch house was built in the 1980s. A previous house, estimated to have been built between 1916 and 1945, was demolished prior to construction of the existing residence.

The results of available records and Site-specific cultural resource surveys (ECRP 2007) indicate three historical archaeological sites (i.e., the shed, barn, and concrete ditch) and eleven historical isolates. The eleven isolates consisted of farm equipment, a water truck, and a metal drum and tin can. The three historic sites consist of a debris scatter with shed, a concrete-lined portion of an irrigation ditch, and a sheep barn. A shed, located southwest of the residence, had been brought over from a property located to the north of the Project Site. According to the landowner, the shed had been rebuilt with modern material; and the only remaining original materials were the framing.

The large wooden barn is located south of the existing residence. The barn had previously been used to house sheep but was converted to an equipment storage area. The structure has a wooden

frame and corregated metal siding. The landowner indicated that the barn had also been moved to the Site from a property to the north and estimated that the barn was built in the 1950s.

A concrete-lined irrigation ditch is located at the western margin of the Project Site. The ditch is approximately 1,700 feet in length and connects to the West Adams Canal. The West Adams Canal was originally constructed in 1857 and may have historical significance. However, the canal is not located within the Project Site and would not be disturbed by Project mining or reclamation activities.

The cultural resource investigation (ECORP 2007) presented recommendation regarding the eligibility of the identified historical resources for listing on the National Register of Historic Places and/or the California Register of Historical Resources. One resource, the shed, was considered possibly eligible for listing. The other resources were not considered eligible. The conclusions of significance of identified historic resources and recommendations for protection of significant historic resources will require further evaluation in the EIR prepared for the Project.

Vb. Potential to substantially change the significance of an archeological resource (Potentially Significant Impact). The proposed Project would result in grading operations and other activities which could potentially disturb previously identified archeological resources. The Site-specific cultural resources investigation (ECORP 2007) performed for the Project (including pedestrian surveys) did not identify any significant archaeological resources. However, the transects performed for the pedestrian surveys did not include the area of the Project Site north of the driveway in the central portions of the Site. At the time of the investigation, this area was obscured by dense vegetation (i.e., agricultural row crops). The agricultural operations that have been performed at the Site have resulted in extensive disturbance of the ground surface throughout most of the Project Site. These activities would have likely disturbed or destroyed near-surface archaeological resources, if ever present. However, the area of the Project Site not surveyed by previous investigations will be further evaluated in the EIR prepared for the Project.

Vc. Potential to destroy a unique paleontological resource or geologic feature (Potentially Significant Impact). Paleontological resources include the fossilized remains of vertebrate and invertebrate organisms, fossil tracks, and plant fossils. The entire Project Site is underlain by Quaternary alluvial deposits (i.e., sediments transported and deposited by Cache Creek). The alluvial deposits within the lower Cache Creek Basin have yielded significant Quaternary fossils, including the discovery of a mastodon bone at the Capay Facility. The potential for the Project to disturb or destroy unique paleontological resources will be further evaluated in the EIR prepared for the Project.

For purposes of this evaluation, “unique” geologic features would include unusual bedrock exposures, isolated or unique outcrops of rare bedrock units, or unique tectonic features (e.g., well-preserved, isolated evidence of active faulting). No unique geologic features have been identified within the Project area.

Vd. Potential to disturb human remains (Potentially Significant Impact). The Project does not include any known formal cemeteries. It is possible that unknown burials (historic or prehistoric) may be present. Standard construction monitoring should be performed to manage any discovery of unknown human burials. However, the potential for impacts to previously unidentified human burials will be addressed in the analysis for the EIR.

VI. GEOLOGY AND SOILS Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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.			X	
b) Strong seismic ground shaking?			X	
c) Seismic-related ground failure, including liquefaction?			X	
d) Landslides?	X			
e) Result in substantial soil erosion or the loss of topsoil?	X			
f) 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?	X			
g) 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?			X	
h) 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?			X	

DISCUSSION:

Development of the Project would expose people and structures to potentially unstable geologic conditions. The Project Site is located in an area of active seismicity and includes geologic conditions that are known to be unstable, which could result in damage to buildings and other improvements and potentially cause injury or loss of life. The nature of the potential hazards are described and evaluated more specifically in sections VIa through VIh.

VIa. Potential for fault rupture (Less than Significant Impact). The Project Site is not located within an Alquist-Priolo Earthquake Fault Zone (A-PEFZ). The closest A-PEFZ identified by the State Geologist is the zone delineated for the Dunnigan Hills Fault, located approximately 4.5 miles east of the Project Site. Because no active faults have been identified at or adjacent to the Project Site, the risk for fault rupture is very low.

VIb. Potential for exposure to seismic shaking. (Less than Significant Impact). Although the risk of fault rupture is very low, the proximity of the Site to active regional faults, including the Coast Range-Sierran Block Boundary Zone, expected earthquakes generated on these faults would result in significant seismic shaking throughout the Project Site. The California Geological Survey (CGS) and the USGS have evaluated the potential levels of seismic shaking throughout the Project Site caused by earthquakes on known or suspected seismic sources (i.e., active faults). Maps of the expected maximum level of seismic shaking caused by any of these

sources have been developed (USGS 2007). The maps indicate the expected maximum acceleration with a 10 percent probability of occurring in the next 50 years. Acceleration is measured as a fraction of the acceleration due to gravity (g). The expected maximum acceleration at a particular location is a function of several variables, including distance from the epicenter of a seismic event, the magnitude (i.e., energy release) of the seismic event, and the material properties of the geologic material underlying the particular location.

As described above, there is more than one seismic source that could affect the Project Site. The geologic materials within the Project Site are uniformly heterogeneous unconsolidated alluvial (i.e., stream) deposits. The estimated maximum ground acceleration (10 percent probability of exceedance in 50 years) is expected to range between 0.3 g to 0.4 g (USGS 2007).

Another measure of the level of seismic shaking is "intensity," a more subjective description of the effects of earthquakes described by the Modified Mercalli Intensity (MMI) scale (Table 3-1). The expected maximum acceleration at the Site corresponds to MMI IX.

Table 3-1. Modified Mercalli Intensity Scale

Intensity Value	Intensity Description	Average Peak Acceleration
I	Not felt except by a very few persons under especially favorable circumstances.	< 0.0015 g
II	Felt only by a few persons at rest, especially on upper floors on buildings. Delicately suspended objects may swing.	< 0.0015 g
III	Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration similar to a passing of a truck.	< 0.0015 g
IV	During the day felt indoors by many, outdoors by few. At night, some awakened. Sensation like heavy truck striking building.	0.015 g-0.02 g[1]
V	Felt by nearly everyone, many awakened; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed.	0.03 g-0.04 g
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys.	0.06 g-0.07 g
VII	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken.	0.10 g-0.15 g
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Sand and mud ejected in small amounts. Changes in well water.	0.25 g-0.30 g
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Underground pipes broken.	0.30 g-0.55 g
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Shifted sand and mud. Water splashed (slopped) over banks.	> 0.60 g
XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.	> 0.60 g
XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.	> 0.60 g

[1] g = gravity = 981 centimeters per second squared (cm/s^2)

The intensity of expected ground shaking is characterized as "violent," and heavy damage to structures is possible. These secondary ground failures during regional earthquakes could potentially result in damage to the proposed Project facilities, including the irrigation and water supply systems. Additionally, seismic shaking could increase the occurrence of seismically-induced landsliding, particularly during period of prolonged or intense rainfall.

The EIR for the OCMP (Yolo County 1996a) evaluated the potential for damage to mining and reclamation components resulting from expected seismic shaking. The effects were found to be mitigated to a less-than-significant level with conformance with specific performance standards that have been incorporated as requirements of the OCSMO and SMRO. These requirements include:

- Geotechnical investigation for improvements built on backfilled mining excavations (Sec. 10-5.504);
- Engineering design for mining slopes (Sec. 10-4.430);
- Engineering design of reclaimed slopes, including minimum factors of safety for static and seismic conditions (Sec 10-5.530);
- Inspection and repair of backfilled mining areas and slopes following strong seismic shaking events (Sec 10-5.505);
- Annual inspection of mining areas (Sec. 10-4.701) and flood protection structures (Sec. 10-5.506) by qualified professionals; and
- Implementation of repair of reclaimed damage to lands resulting from natural disasters (including earthquakes) using contingency costs (Sec 10-5.526).

VIc. Potential for liquefaction. (Less than Significant Impact). Liquefaction is a sudden reduction of cohesion between particles in soil leading to loss in soil strength. Liquefaction occurs when saturated sediments are subjected to seismic energy. The cyclic, repetitive nature and force of strong seismic waves through a saturated medium, can induce a spike in pore pressure causing particles that have been in contact to move away from one another leading to a consequent drop in the strength of the soil mass.

Clean granular materials, such as sand, have the highest potential for liquefaction as compared to fine-grained sediments (including silt and silty clay) and coarser sediments (such as gravel). The California Geological Survey recommends designating areas underlain by saturated Holocene alluvial sediments potentially subject to 0.1g seismic shaking as “liquefaction hazard zones.” Some of the alluvial sediments at the Project Site may meet the conditions for liquefaction hazards. The potential adverse effects of liquefaction could include lateral spreading or settlement that could damage structures or other improvements (including reclamation features). However, the required conformance of the provisions of the OCSMO and SMRO (described above in the response to VIc) would reduce the impacts of liquefaction to less than significant.

VId and VIe. Potential for slope failure or significant erosion (Potentially Significant Impact). The topography of the majority of the existing Project Site is relatively flat to gently sloping. These areas are on the terrace surface above Cache Creek and are used for agricultural production. The terrace surface is stable from a slope stability perspective. However, the southern portion of the Project Site is occupied by the active channel of Cache Creek, including the banks at the margin of the channel. The banks are relatively high and steep and are susceptible to periodic erosion by flow in the creek (e.g., at high flows or as a consequence of changes in the position of the low flow channel). These slopes are prone to shallow, rotational landslides, or slumps.

The mining excavations proposed by the Project would create slopes at the margins of the mining areas during mining and after reclamation. The Project would also result in the formation of temporary stockpiles of topsoil, overburden, and aggregate products. Additionally, the Project proposes the construction of landscaped berms at the southern and eastern margins of the Site.

The application indicates that the mining, stockpile, and berm slopes above groundwater and to 5 feet below the average summer low groundwater level would be maintained at a maximum gradient of 2:1 (horizontal to vertical). Slopes extending from 5 feet below the groundwater level to maximum mining depth (approximately 75 feet below ground surface) would be excavated at 1.5:1. The slope design meets the performance standards set by Sec. 10-4.431 of the OCSMO**.** This slope design applies to all areas except the slopes adjacent to the West Adams Canal and along County Road 87 which are described below.

A slope stability analysis (Wallace-Kuhl 2007b) has been performed to evaluate the potential for failures on the most critical slopes proposed by the Project. These slopes include the slopes adjacent to the West Adams Canal and those extending 500 linear feet south along County Road 87 from the canal. These slopes are designed to be no steeper than 3:1 from the top of the slope to the elevation 5 feet below the summer low groundwater level. Slopes extending 5 feet or more below the summer low groundwater level would have a gradient of 1.5:1, except along County Road 87 where slopes below the summer low groundwater level would be maintained a 2:1 or flatter slope angle. The factors of safety determined by the slope stability analysis for static conditions ranged from 1.6 to 2.0, indicating stable slopes. Under seismic conditions, the factors of safety ranged from 1.1 to 1.3. These factors of safety meet the performance standards set for reclaimed slopes set by Sec. 10-5.530 of the SMRO.

The stability analysis for the Project does not appear to specifically address the potential for failure of the banks of Cache Creek. Relatively, small rotational landslides or slumps commonly occur along the banks throughout the lower Cache Creek Basin. Such failures are a component of the bank erosion process. The Project includes a Streambank Stabilization Plan (SSP) (Cunningham 2007) for the full-length, north bank of Cache Creek at the southern margin of the mining and reclamation area. The plan proposes to contour the slope along the creek bank to a gradient of 3:1. A keyway filled with cobbles (natural and/or broken concrete) would be placed (extending to a depth of 5 feet below ground surface) at the toe of the slope. Additionally, a cobble revetment would be placed from the toe of the slope to a height of 5 feet above the toe. Willow or mule tail cuttings would be planted within the revetment. The top of the slope would be flat and approximately 12 feet wide. The north-facing slope adjacent to the mining/reclamation areas of the Project Site would be graded to a gradient of the 2:1.

The design and implementation of the SSP are subject to the requirements of the ICMMO (Section 10-3.402), inclusive of the provisions of the CCRMP and CCIP. The plan proposes conformance with the design guidance of the ICMMO. The plan will require a Flood Hazard Development Permit and UASCOE, CDFG, and RWQCB general permits for projects within the CCRMP area (Section10-3.403). The requirements include review of the plan by the Cache Creek Technical Advisory Committee (TAC).

Conformance of the SSP with County requirements will be fully evaluated in the EIR prepared for the Project. The EIR will also assess the potential for erosion of the mining and reclamation slopes caused by on-site runoff and runon from off-site areas.

VIf. Exposure to unstable soils (Less than Significant Impact). In general, unstable soil conditions could include adverse erosion, slope failure, settlement of fills, liquefaction, and expansive soils. The potential for erosion and slope failure are addressed in Sections VId and VIf. Potential effects of liquefaction are addressed in Section VIc and expansive soils are assessed in Section VIg. The Project proposes filling of portions of the mining areas with processing fines generated during washing of aggregate. The fines are fine-grained sediment transported in wash-water discharges to settling ponds. The hydraulic fill would be allowed to dewater and consolidate but would not be compacted or otherwise treated. Over time, continued consolidation could occur and may result in significant settlement of the fill. Settlement could cause adverse changes in drainage conditions. However, the potential for adverse settlement would be reduced to a less-than-significant level through the required conformance with requirements of the SMRO for geotechnical investigation of improvements built on backfilled areas (Sec. 10-5.504) and repair of backfilled mining areas and slopes following strong seismic shaking events (Sec 10-5.505).

VIg. Adverse effects of expansive soils (Less than Significant Impact). The potential for soils to swell (expand in volume) upon wetting and to shrink (contract) upon drying is generally refer to as “shrink-swell potential.” A high potential indicates that the soil can undergo significant changes in volume during fluctuations in soil moisture. Significant changes in soil volume can damage structures and pavements. Soils mapping of the area of the Project Site by NRCS (2008) identifies five soil mapping units within the Project Site: Brentwood silty clay loam (BrA), Loamy alluvial land (Lm), Riverwash (Rh), Soboba gravely sand loam (Sn), and Yolo silt loam (Ya). All these soils, except the BrA, have low-linear extensibility and a low, shrink-swell potential. The shrink-swell potential for the BrA is high. The soil mapping unit is mapped along the northern margin of the Site. No structures or roadways are proposed in this area of the Site. It is unlikely that the shrink-swell potential would have a significant impact on structures or roads constructed with standard foundation practices.

VIh. Septic system hazards (Less than Significant Impact). The Project Site is not served by a public sanitary sewer system. The Project proposes to provide portable toilets to serve the sanitary needs of workers and visitors to the Site. There would be no significant impacts associated with these facilities. An existing on-site septic system would be removed. Removal of the septic system would be required to be performed in compliance with regulations and guidelines of the Yolo County Environmental Health Division.

VII. GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE/ENERGY USE Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance?	X			
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?				X

DISCUSSION:

VIIa. Potential to generate greenhouse gas emissions (Potentially Significant Impact). The Global Warming Solutions Act (Assembly Bill [AB] 32) was passed in August 2006 and requires California's "global warming" emissions to be reduced to 1990 levels by the year 2020. These "greenhouse gas" emissions reductions will be achieved by the implementation of an emissions cap system beginning in 2012. The California Air Resources Board (CARB) has been charged with developing appropriate regulations and a tracking system to monitor the emission levels for greenhouse gases (GHGs).

California SB 97, passed in August 2007, is designed to work in conjunction with CEQA and AB 32. SB 97 requires the California Office of Planning and Research to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including but not limited to, effects associated with transportation and energy consumption. These guidelines must be transmitted to the Resources Agency by July 1, 2009, to be certified and adopted by January 1, 2010. At the time of this writing OPR has released a draft set of guidelines. SB 97 applies to any EIR, negative declaration, mitigated negative declaration, or other document required by CEQA.

The GHG of most concern is carbon dioxide (CO_2), since the naturally occurring chemical also is generated by the continuing burning of fossil fuels, can last in the atmosphere for centuries, and "forces" more climate change than any other GHG (NRC 2001). In 2004, CO_2 accounted for 85 percent of the GHG emissions produced in the U.S. and electrical generation accounted for 40 percent of those CO_2 emissions.

The Project has the potential to incrementally contribute emissions of CO_2 during the operation of combustion engines, including on-site equipment use and hauling of aggregate products. The engines would also produce small amounts of nitric oxide (N_2O), another GHG. Additionally, the Project would require increased electric energy for the operation of the proposed aggregate processing plant and, possibly, for operation of electrically-powered mining equipment. The increased electric use would be supplied by Pacific Gas and Electric and would increase the power generated off-site by the utility, incrementally increasing off-site GHG emissions. Other significant GHGs such as methane, chloroflourocarbons, and hydroflourocarbons would not be generated in significant amounts from the Project.

An additional consideration regarding the "budget"' of GHG is the potential for implementation of the Project to change the ability of existing Site conditions to sequester, or take up, CO_2. Exiting vegetation at the Project Site (including row crops and orchard trees) have the potential to take in CO_2, the most common GHG, and release oxygen (O_2). In the process, carbon is held or sequestered, in the plant structure. The conversion of agricultural land to mining uses at the Site would result in the removal of vegetation. These activities will cause a change in the potential for carbon sequestration during and after mining and reclamation conversion. The potential effects of the emission of GHG during mining and reclamation activities and the proposed conversion of agricultural land to open water and reclamation uses on the short- and long-term carbon sequestration potential (i.e., GHG budget) will be more fully evaluated in the EIR prepared for the Project. The EIR will evaluate GHG emissions associated with the proposed Project and consider those emissions in the context of the cumulative effects of past projects, the effects of other current projects, and the effects of probable future projects.

VIIb. Potential to conflict with adopted plan, policy or regulation for the reduction of greenhouse gas emissions (Potentially Significant Impact). There will be both direct (i.e., on-site equipment use and hauling of aggregate products) and indirect (i.e., increased use of electric power generated off-site) emissions of GHG related to the proposed Project. The EIR will examine whether these activities could potentially hinder attainment of the state's goals of reducing greenhouse gas emissions to 1990 levels by the year 2020 as stated in the Global Warming Solutions Act of 2006. The significance of the increase in GHG on the goals would be determined on the basis of the quantification of the expected emissions related to the Project performed for the EIR. Currently, Yolo County does not have adopted plans, policies or regulation regarding the control of GHG emissions. However, the EIR will consider guidance on this issue developed during preparation of the Yolo County General Plan 2030 Update.

VIII. HAZARDS AND HAZARDOUS MATERIALS Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	X			
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?				X
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?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
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?			X	

DISCUSSION:

VIIIa. Potential hazard related to routine management of hazardous materials (Potentially Significant Impact). As with typical construction, agricultural operations, and mining operations the operation of construction equipment and vehicles requires the use of fuels, lubricants, and other hazardous substances. The use of these hazardous materials would be similar to their use in agricultural operations common in the area of the Project Site. Improper transport, use, storage or disposal of hazardous substances could potentially result in the accidental release of substances during construction operations. The transport, use, storage, and disposal of hazardous substances during construction is regulated by various state, federal, and local statutes and regulations.

In addition, the Project construction activities would be regulated under the provisions of the NPDES General Construction Permit. The permit requirements include preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include BMPs for Site-housekeeping practices, hazardous-materials storage and handling, spill containment, and worker training in pollution prevention measures. Adherence to existing laws

and regulations controlling the transport and use of hazardous materials reduces the risk of accidental hazardous materials releases.

Two investigations (Wallace-Kuhl 2007c, 2007d) of the potential for the presence of hazardous materials have been conducted at the Project Site. The review of regulatory databases did not identify any listed (i.e., known or suspected) hazardous materials sites at or adjacent to the Project Site. However, information collected during the investigations indicated that the presence of existing aboveground, fuel-storage tanks and removal of two underground fuel tanks could potentially have resulted in releases of petroleum hydrocarbons. The historic agricultural use of the Project Site may have resulted in the presence of agricultural-chemical residue in soils.

The results of soil-sample analysis (Wallace-Kuhl 2007d) indicated that the shallow soils in isolated areas near the two former underground tank sites have been affected by the release of petroleum hydrocarbons. Testing of soil samples collected throughout the Site indicate the presence of arsenic at levels above regulatory thresholds (i.e., U.S. EPA Preliminary Remediation Goals [PRGs]). Although the reported concentrations of arsenic may indicate relatively high, natural background levels, the potential impacts of management of the soil would be further evaluated in the EIR.

The soil sampling and testing conducted at the Site included analysis of three samples for chlordane, a common agricultural pesticide. The reported levels of chlordane were below PRGs. However, the SMRO (Sec. 10-5.532) requires more extensive testing of pesticides and herbicides if excavated topsoils are to be used for reclamation around reclaimed “wet pits.”

The Project would include use of agricultural chemicals (including fertilizers and pesticides). during on-going farming at the Site and for revegetation activities during reclamation. The EIR will evaluate the expected use of agricultural chemicals for the Project relative to existing conditions.

VIIIb. Potential for upset or accident conditions involving hazardous materials (Less than Significant Impact). The Project proposes on-site storage of fuel (including diesel, unleaded gasoline, and propane) in aboveground fuel tanks. The Project indicates that fueling of mining equipment would be performed using a mobile fuel truck. Fueling of rubber tired equipment (e.g., scrapers, motor graders, and front end loaders) would occur in a designated area with and impermeable base. Track-mounted equipment would be fueled in the mining area, following BMPs. Additionally, other hazardous materials (including oil, lubricants, solvents, and compressed gases) will be stored onsite. The application indicates that, as required by federal, state, and local regulations, a Spill Prevention, Control, and Countermeasures (SPCC) Plan and a Hazardous Materials Business Plan would be prepared for the Project. Compliance with federal, state, and local hazardous material regulations would reduce the potential for hazardous materials releases to a less-than-significant level.

VIIIc. Potential to expose schools to hazardous materials (No Impact). The Project Site is not located within 0.25 mile of any schools and would not be expected to result in hazardous emissions. The closest school, Esparto High School, is located approximately 1.2 miles south of the Project Site boundary.

VIIId. Potential to be located at a listed hazardous materials site (No Impact). Review of lists of hazardous materials sites compiled pursuant to Government Code Section 65962.5 did not identify any hazardous materials sites at or adjacent to areas potentially affected by construction or operation of the proposed Project (Wallace-Kuhl 2007c).

VIIe and f. Potential to expose residents or workers to a public airport or private airstrip hazards (No Impact). There are no public airports or private airstrips within 2 miles of the Project Site. The closest airport, Watts-Woodland Airport, is located 11.5 miles east of the Project Site. The Project would not expose residents or workers to hazards associated with airports or air strips.

VIIg. Potential to interfere with emergency response plans (No Impact). The Project would not interfere with implementation of any emergency plan or emergency response activities, as no such plans directly include the Project Site area. Adequate emergency access to the Project Site would be provided by public roads and the existing paved, two-lane driveway.

VIIh. Potential expose people or structures to wildfire risks (Less than Significant Impact). The Project Site is located within a rural area which is predominantly used for agricultural production. The area of the Site is located outside the zone mapped by California Department of Forestry and Fire Protection (CAL FIRE) for moderate to extreme wildfire hazard. The area is mapped as "non-fuel," a designation given to areas such as agricultural area that have limited fuel materials for wildfires (CAL FIRE 2005). Due to lack of fuel, the risk of wildfire is low. The increased operation of combustion engines and increased work force during implementation of the Project would increase potential sources of fire ignition. However, surface vegetation will be removed over relatively large areas during the mining period – a condition that would temporarily reduce wildfire potential. Additionally, the proposed reclamation would include a large lake – a condition that would also reduce the threat of wildfire. The potential to increase the occurrence of wildfires is less than significant.

IX. HYDROLOGY AND WATER QUALITY Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste-discharge requirements?	X			
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)?	X			
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?			X	
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 which would result in flooding on or off site?			X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	X			
f) Otherwise substantially degrade water quality?	X			
g) 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?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	X			
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j) Inundation by seiche, tsunami, or mudflow?			X	

DISCUSSION:

IXa. Potential to violate water quality standards (Potentially Significant Impact). The Project proposes to make significant changes to the vegetation and topography within the Project Site. The removal of vegetation and disturbance of soil during implementation of the Project could increase the potential for erosion and transport of sediment to surface water bodies including Cache Creek. The presence of mercury in sediments within the Cache Creek watershed presents the potential for increased mercury loading in the creek if increased transport of sediment to the creek occurs. In 2005, the Central Valley Regional Water Quality Control Board (RWQCB) adopted a Total Maximum Daily Load (TMDL) for Cache Creek and amended the Basin Plan (Resolution No. R5-2005-0146). Several requirements of the Basin Plan amendment would specifically apply to the proposed Project. The amendment requires that:

> "Reservoirs, ponds, impoundments, and wetlands generally produce more methylmercury than streams or rivers. Building new impoundments and wetlands that discharge to creeks in the Cache Creek watershed can add to the existing loads of methylmercury in Cache Creek and its tributaries. New impoundments, including reservoirs and ponds, and constructed wetlands shall be constructed and operated in a manner that would preclude an increase in methylmercury concentrations in Cache Creek, Bear Creek, Harley Gulch, or Sulphur Creek. This requirement applies to all new projects in the watershed, including gravel mining pits in lower Cache Creek that are being reclaimed as ponds and wetlands for which physical construction is started after the approval of this implementation plan. 'Preclude an increase in methylmercury concentrations' shall be defined as a measurable increase in aqueous concentration of methylmercury downstream of the discharge relative to upstream of the discharge.
>
> Any entity creating an impoundment or constructed wetland that has the potential through its design to discharge surface water to Cache Creek, Bear Creek, Harley Gulch, or Sulphur Creek (uncontrollable discharge after inundation by winter storm flows is excepted) must submit plans to the Regional Water Board that describe design and management practices that will be implemented to limit the concentration of methylmercury in discharges to the creek."

The design of the proposed Project provides for the capture of runoff from the Site during mining and reclamation periods into the active mining areas, settling ponds, and retention basins in the proposed plant site. Following reclamation, runoff from the Site would also be captured in lowered, reclaimed surfaces and retention basins in the Phase 1 and Phase 2 areas. These design features would reduce the potential for discharges of sediment to off-site water bodies. However, the potential for runoff transported away from the Site and into receiving waters will be fully evaluated in the EIR. The conformance of the Project with the requirements of the Basin Plan will also be analyzed.

The Project also includes the implementation of a Streambank Stabilization Plan (SSP) for the north bank of Cache Creek adjacent to the proposed mining area. Several requirements of the Basin Plan amendment for the mercury TMDL would specifically apply to the proposed Project. For projects which would occur within the 10-year floodplain of Cache Creek, the following requirements are specified:

> "Project proponents are required to: (1) implement management practices to control erosion; and (2) conduct monitoring programs that evaluate compliance with the turbidity objective, and submit monitoring results to the Regional Water Board. The monitoring program must include monitoring during the next wet season in which the project sites are inundated. In general, there must be monitoring for each project. However, in cases where projects are being implemented as part of a detailed resource management plan that includes erosion control practices, monitoring is not required as a condition of this amendment for individual projects. Instead, the project proponent may conduct monitoring at designated sites up and downstream of the entire management plan area."

The Project would need to comply with the requirements of the CCRMP for bank stabilization projects. The Project would be implemented to meet the objectives of the CCRMP to support projects that comply with implementation of the Test 3 boundary. The CCRMP has generally

served as a "detailed resource management plan that includes erosion control practices," referenced in the Basin Plan amendment. Compliance with the requirements of the CCRMP and the Basin Plan will be fully evaluated in the EIR.

IXb. Potential to substantially deplete or interfere with groundwater supply (Potentially Significant Impact). Under existing conditions, the Project Site supports the production of agricultural row crops and orchards. The water supply for the agricultural production is provided by a combination of groundwater, imported surface water, and precipitation. Currently, there are three water supply wells at the Project Site. According to the Applicant, the two irrigation wells have capacities of 1,000 and 2,000 gallons per minute (gpm) and the domestic well capacity is about 200 gpm. The total capacity for the existing wells is about 3,200 gpm or 5,100 acre-feet per year. The Project proposes to install an additional well in the area of the proposed aggregate processing plant.

Under current conditions, there are about 181 acres of agricultural row crop production and 98 acres of orchards within the Project Site. The Applicant has estimated the existing irrigation demand for the existing agriculture to be 1,018 acre-feet per year (Granite 2007). The water supply also serves as the domestic supply for the existing residence. Under the proposed Project, the water supply for the processing plant is estimated to be 286 acre-feet per year, a demand resulting from the loss of water in the washing and processing activities. The processing plant water demand for the Project would be met with groundwater supplies. Additionally, the Project proposes continued agricultural use of unmined areas during the mining period and reclamation of approximately 74 acres of land (Phase 1B) back to agriculture upon the completion of reclamation.

The proposed creation of a large (approximate surface area of 166 acres) reclaimed lake would be created by the Project. The creation of the lake would result in evaporative loss from the lake surface. The EIR for the OCMP (Yolo County 1996a) determined that creation of lakes in areas of existing irrigated land would result in a net increase in evaporative losses (i.e., losses from lake surfaces vs. irrigated crop evaporation losses). However, the County considered that the creation of wetland habitat around the lakes was a benefit that offset the net evaporative losses. The water demand for the mining, reclamation, and post-reclamation periods of the proposed Project will be more fully evaluated in the EIR.

A Project-specific groundwater evaluation was prepared for the proposed Project (Wallace-Kuhl 2007a). The evaluation included the installation of four monitoring wells (MW-6 through MW-9) and monitoring of groundwater levels and water quality in those wells and two additional existing well (MW-4 and MW-5). The monitoring was performed to comply with the requirements for groundwater monitoring established by OCSMO Sec. 10-4.417. The six wells used to monitor the Project Site meet the minimum number of monitoring wells required by the ordinance.

The groundwater level data was used to determine that the groundwater levels across the Site and groundwater flow direction. The groundwater levels at the site in the summer of 2007 varied from about 32 to 45 feet bg. The groundwater flow direction was determined to be toward the east-northeast. Groundwater level data collected over the period 1999 to 2007 at the Granite Capay Facility (including MW-4 and MW-5) were used to evaluate expected seasonal fluctuation

of groundwater levels. The evaluation indicated that the expected low groundwater levels for the Project Site ranged between 32 to 49 feet bg.

The evaluation qualitatively addressed the potential impacts of the proposed mining and reclamation activities on the flow of groundwater. The conclusions of the investigation included the following:

> "If fine-grained materials are deposited below the groundwater table within the wet pits, whether by direct disposal or by siltation, the movement of groundwater will be impeded. As a result, the amount of fine-grained material placed below the groundwater table within the wet pit areas should be kept to a minimum. Alternatively, the fine-grained materials should be used whenever possible to reclaim agricultural land above the groundwater table and to enhance areas designated for riparian or wetland re-vegetation" (Wallace-Kuhl 2007a, p.8).

The Project proposes the disposal of processing fines within settling ponds within the Phase 1A and 1B mining areas. The design of the ponds in the Phase 1B area indicates that fine sediments would be disposed below the groundwater table. The effect of the fine-grained material placement on the flow of groundwater will be more fully evaluated in the EIR.

The SMRO (Sec. 10-5.516) requires analysis of the potential for reclaimed lowered agricultural surface to be inundated by high groundwater levels. The Project proposes lowered agricultural surface in the Phase 1B area. The hydrogeologic analysis prepared for the Project indicates that the expected high groundwater level elevations in the Phase 1B area would range between 140 to 153 feet above mean sea level. The elevation of the reclaimed surface would be approximately 180 feet above mean sea level. The SMRO requires a vertical separation of at least 5 feet between the expected high groundwater level and the reclaimed surface. The expected separation of over 25 feet would meet the SMRO requirements.

IXc. Potential to substantially alter existing drainage patterns so as to result in erosion or sedimentation (Less than Significant Impact). The Project proposes significant changes to the topography and drainage patterns at the Project Site as the result of implementation of the mining and reclamation plans. Under current conditions, the topography of the mining/reclamation areas generally slopes gently toward the east-northeast. Much of the Project Site has been graded for agriculture. Surface runoff is collected along the eastern and southern margins of the Site and is directed to discharge outlets that flow to Cache Creek.

The mining of the Site would result in creation of large, internally drained depressions during mining (i.e., mining pits) and following reclamation (i.e., an open lake and lowered agricultural surfaces. The runoff generated at the Site would flow into the depressions and ultimately infiltrate to the groundwater table.

The changes to the existing drainage patterns would not change the course of any natural creek channels. With respect to the potential to increase erosion or sedimentation, the internal drainage of the Project Site during mining and after reclamation would result in reduced sediment deliveries to Cache Creek. Sediment transported in runoff generated at the Site would be expected to settle in the mining pits and retention basins during mining and in the lower reclaimed surfaces and retention basins proposed in the reclamation plan.

IXd. Potential to substantially alter existing drainage patterns so as to result in increased runoff or flooding (Less than Significant Impact). As discussed in the response to IXc above, the Project would result in creation of internal drainage conditions throughout the majority of the Project Site. Relative to existing conditions, the runoff volume (and rates) exiting the Site would be reduced to a negligible level through retention in depressions and infiltration into the subsurface. The Project would, therefore, incrementally decrease the flows to the Cache Creek and flood flows during flooding conditions.

IXe. Potential to create runoff exceeding the capacity of stormwater drainage system (Potentially Significant Impact). The Project Site is not served by a public stormwater drainage system. There are no known plans for development of a stormwater system. All runoff mining area from the Site would be directed into the mining areas during mining. Following reclamation, the runoff from the reclaimed mining areas would flow into lowered reclaimed surfaces and retention basins. The only area to be disturbed by the Project from which runoff would flow to Cache Creek would be the streambank stabilization area on the north bank of Cache Creek. The proposed stabilization is intended to reduce the potential for erosion of the bank. The EIR will evaluate the existing erosion conditions and the expected relative reduction in erosion afforded by the stabilization efforts reclamation. As discussed in VId, the implementation of the SSP is subject to numerous provisions of the ICMMO. The potential for increased sources of pollution are also addressed in IXa and IXf.

IXf. Potential to substantially degrade water quality (Potentially Significant Impact). The mining and reclamation activities proposed by the Project could introduce sources of water quality degradation. These potential sources include increased use of hazardous materials related to operation of heavy equipment (including fuel storage). Releases of contaminants to the surface or to open water bodies could potentially adversely impact the quality of soil, groundwater, or surface water. The potential for unintended releases of hazardous materials related to mining and reclamation activities were considered and evaluated during the development of the OCSMO (Yolo County 1996a). The Project would be required to comply with provisions of the OCSMO that require protective measures including restrictions for fueling activities and requirements for development and implementation of SWPPP (Sec. 10-4.415). Additional federal, state, and local laws and regulations control the use of hazardous materials (see Section VIII of this IS).

The grading activities proposed for the mining and reclamation activities present the potential for the erosion of disturbed soils and the potential for transport of sediment into Cache Creek. The potential for erosion and sedimentation is addressed in the responses to IXa and IXc above and will be more fully evaluated in the EIR.

An additional source of potential water quality degradation is the possibility the creation of aquatic habitat, particularly shallow-water habitat, could result in increase production of the methylmercury (see response to IXa). The shallow-water habitat of the proposed permanent lake could create anoxic environments that would potential increase the conversion of mercury to methylmercury. The potential for this impact was extensively evaluated for the development of the OCSMO and SMRO (Yolo 1996a). The SMRO includes requirements (Sec. 10-5.517) for methylmercury monitoring of the lakes created by mining within the CCAP. Yolo County has performed a monitoring program in conformance with the ordinance. The results of the program will be evaluated in the EIR prepared for the Project to assess the potential for increased

methylmercury production and the compliance of the Project with the requirements of the Mercury TMDL for Cache Creek (see response to IXa above).

IXg. Place housing in flood hazard zones (No Impact). The Project does not propose the construction of any housing. Therefore, no housing would be constructed in 100-year flood zones designated by Federal Emergency Management Agency (FEMA 2002) or any other public entity within or adjacent to the Proposed Site.

IXh. Place structures in flood hazard zone (Potentially Significant Impact). The Project proposes construction of a processing plant and related structures. However, these structures are not located within the 100-year flood zones designated by FEMA (FEMA 2002) or any other public entity within or adjacent to the Project Site. The OCSMO (Sec. 10-4.416) requires 100-year flood protection for all off-channel mining areas. The EIR will analyze conformance of the Project with OCSMO Sec. 10-4.416 and with the provisions and guidance of the CCIP.

IXi. Potential to expose people or structures to floods resulting from dam or levee failure (Less than Significant Impact). The Project Site is located, including the proposed mining and reclamation areas, within the Dam Failure Inundation Area established by the Yolo County office of Emergency Services for the potential failure of the Indian Valley Dam (Yolo County 2005). The EIR for the OCMP (Yolo County 1996a) determined that flooding, as the result of dam failure, within the Cache Creek Area Plan is a less-than-significant impact on the basis that such an event is a low-probability event and that the Emergency Action Plan (implemented by the Yolo County Flood Control and Water Conservation District [YCFCWCD]) would provide adequate warning and protection.

IXj. Potential inundation by seiche, tsunami, or mudflow (Less than Significant Impact). The proposed Project Site is not located within an area that could be affected by tsunamis or seiches. The distance of the Site from the San Francisco Bay (approximately 44 miles) and its elevation (generally above 160 feet National Geodetic Vertical Datum [NGVD]) relative to sea level preclude potential inundation by tsunamis. Seiches could potentially develop in proposed reclaimed lake and/or temporary settling ponds during local and distant earthquakes. It is expected that the magnitude of seiche waves would be minimal and would not likely result in overtopping of the impoundment structures. The potential for adverse effects of mudslides or other types of slope failure are described in Section VI of this IS.

X. LAND USE AND PLANNING Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?				X
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?	X			
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	

DISCUSSION:

Xa. Potential to physically divide a community (No Impact). The Project is in a rural area, and implementation of the Project would not occur within or directly affect any established community. Therefore, the Project would not divide an established community.

Xb. Potential to conflict with applicable land use plan, policy, or regulation (Potentially Significant Impact). The proposed Project would be required to conform with numerous Yolo County planning documents that apply to proposed actions and to the area of the Project Site. The applicable land use plans include the 1983 Yolo County General Plan and the 1996 CCAP. The General Plan is currently being updated and consideration of the draft goals, objectives, and policies of the plan update would need to be considered since the decision for approval of the Project may occur after adoption of a new General Plan. The Project proposes rezoning of parcels currently zoned "Agricultural Preserve" (AP) and "General Agriculture" (A-1) with a with a Sand and Gravel Reserve (SGR) Combining Zone overlay by replacing the Sand Gravel Reserve (SGR) overlay with a Sand and Gravel (SG) overlay (i.e., AP/SGR and A-1/SGR rezoned to AP/SG and A-1/SG). The zoning change would be necessary to allow mining of the parcels before 2026.

The Project would also need to comply with all mining and reclamation regulations set forth in Title 10 of the Yolo County Code. The Code includes the ICMMO (Chapter 3), OCSMO (Chapter 4), and SMRO (Chapter 5). Many of the requirements of the ordinances have been discussed throughout this IS. The EIR prepared for the Project will more fully evaluate the compliance of the Project with the requirements of the plans, policies, and regulations discussed above. The evaluation of the compliance will rely on the information developed in the analysis of impacts related to all resource areas.

Xc. Potential to conflict with applicable habitat or natural community conservation plan(s) (No Impact). The Project is in the area covered by the Draft Yolo County NHP. The NHP is a NCCP and a HCP which covers the entirety of Yolo County. The EIR will provide a full assessment of potential conflicts between the Project and the NHP.

XI. MINERAL RESOURCES Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?			X	
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?	X			

DISCUSSION:

XIa. Result in loss of availability of known mineral resource of regional or state value (Less than Significant Impact). Rock is an important mineral resource used for construction of buildings, roads, bridges, and other infrastructure components. Aggregate (i.e., bedrock mined and processed to select rock fragment sizes) for construction purposes is the largest mineral commodity in California. The Project Site is located within a geologic setting that is known to contain important and high-quality aggregate resources. Evaluation of mineral resources by the California Department of Conservation Division of Mines and Geology in the Sacramento-Fairfield Production-Consumption Region (CDMG 1985) classified the mineral resource zones within the area of the Project Site. The area of the proposed mining and reclamation is classified as Mineral Resource Zone (MRZ)-2. This classification indicates areas underlain by mineral deposits where geologic data demonstrate that significant measured or indicated economic resources are present. These resources are considered to be of value to the region. Within the lower Cache Creek Basin and in the vicinity of the Project Site, several permitted sand and gravel mining and processing sites are currently operating.

The primary objective of the Project is to obtain the appropriate permits and other approvals that will allow the Applicant to mine approximately 30,000,000 tons of sand and gravel aggregate over a 30-year period. As a mining operation, the Project would develop a known mineral resource, but would not cause the loss of the availability of the resource. The EIR for the OCMP determined that the mining of aggregate resource was not a significant impact on the availability of mineral resources, but rather beneficial in achieving the goal.

Xb. Result in loss of availability of known mineral resource of local value (Potentially Significant Impact). As discussed in Section Xb, the Project would result in the extraction of known important mineral resources. Yolo County has recognized the local importance of the mineral resources within the lower Cache Creek Basin through the CCAP and the development of comprehensive requirements for the management of these resources. The County Code included a zoning designation, the Sand and Gravel Reserve (SGR) Combining Zone, for the purpose of protecting some of the identified important aggregate resource from development until after 2026, the time when most of the 30-year mining permits approved in 1996 would expire. The Project proposes a zoning change which would replace the current Sand and Gravel Reserve (SGR) overlay from the proposed mining areas and replace it with a Sand and Gravel (SG) overlay. The change in zoning may present a potentially significant impact on the County's intention to conserve aggregate resources for future development. The EIR for the Project will evaluate the consistency of the proposed Project with the aggregate management goals of the County.

XII. NOISE Would the Project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?			X	
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?				X
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?				X

DISCUSSION:

XIIa. Potential to expose people to noise in excess of noise standards (Less than Significant Impact). Construction and operation activities associated with Project implementation would result in increases in noise levels at and adjacent to the Project Site. The Yolo County OCSMO includes performance standards to control of noise related to mining operations:

- Sec. 10-4.421: From 6:00 a.m. to 6:00 p.m., noise levels shall not exceed an average noise level equivalent (L_{eq}) of 80 decibels (dBA) measured at the property boundaries of the site. However, noise levels shall not exceed an L_{eq} of 60 dBA for any nearby off-site residences or other noise-sensitive land uses.
- Sec. 10-4.421: From 6:00 p.m. to 6:00 a.m., noise levels shall not exceed an L_{eq} of 65 dBA measured at the property boundaries of the site.
- Sec. 10-4.421: At no time shall noise levels exceed a community noise equivalent (CNEL) of 60 dBA for any existing residence or other noise-sensitive land use. An existing residence shall be considered the property line of any residentially zoned area or, in the case of agricultural land, any occupied off-site residential structures.
- Sec. 10-4.421: If mining occurs within 1,500 feet of residences, equipment used during nighttime activities shall be equipped with nonsonic warning devices consistent with the California Office of Safety Hazard Administration (Cal OSHA) regulations; which may include fencing of the area to avoid pedestrian traffic, adequate lighting of the area, and placing an observer in clear view of the equipment operator to direct-backing operations.

- Sec. 10-4.423: Operators shall provide acoustical analysis for future truck and traffic noise associated with the individual operations along county roadways identified as experiencing significant impacts due to increased traffic noise. The study shall identify noise levels at adjacent noise-sensitive receptors and ways to control the noise to the "normally acceptable" goal of a CNEL of 60 dBA and reduce the increase over existing conditions to 5 dBA or less.

A Site-specific analysis of noise generation and related impacts has been prepared for the proposed Project (BBA 2007). The analysis included collection of noise level data from the existing Granite aggregate mining and processing plant located adjacent to the western boundary of the Project Site. Measurements of noise generated at the rock processing plant (i.e., rock crushing, screening, and loading) and at mining operations (i.e., operation of bulldozers, excavators, and scrapers) were input to an Environmental Noise Model (ENM). The analysis evaluated changes in ambient noise levels at the four residences that are closest to the proposed rock processing plant (located at the south-southwest portion of the Site). The analysis assumed that the Project would include an 18-foot-high landscaped berm along the south side of the proposed plant site and a 6-foot-high, landscaped berm along the eastern margin of the Project Site. These features of the Project would tend to attenuate noise generated by Project operations. The analysis included evaluation of worst-case scenarios of proposed mining that is closest to the Project Site boundary.

The analysis concluded that the average hourly noise levels associated mining and processing activities would not result in an exceedance of the ordinance thresholds for daytime (80 dBA) and nighttime (65 dBA) at the Project boundaries. Additionally, the modeling indicates that the ordinance standards for noise levels at the closest off-site residences (60 dBA, 60 CNEL) would not be exceeded.

As required by Sec.10-4.423 of the OCSMO, the noise analysis also evaluated the potential noise levels generated by the increased truck traffic associated with Project implementation. The traffic-related noise levels were predicted using the Federal Highway Administration Highway Traffic Noise Prediction Model. The model evaluate conditions along County Roads 19 and 87 assuming the additional truck traffic estimated by the traffic analysis prepared for the Project (TPG 2007). The results of the noise-level modeling indicate that roadway noise levels within 50 feet of the centerline of Roads 19 and 87 could exceed 60 dBA. The distance from the centerline to the 60-dBA contour would range from 47 (Road 87) to 302 (Road 19) feet. The maximum increase in traffic noise within 50 feet of the centerlines of the roads relative to existing conditions would be 1.9 dBA. Although the levels would increase, there are no sensitive receptors that would be expected to be subjected to noise increases in excess of the County-noise standards (greater than 50 dBA).

There is a residence located within 1,500 of the proposed mining areas. The residence is located approximately 1,100 feet north of the northeastern boundary Phase 1B mining area. The OCSMO (Se. 10-4.422) requires that the Project provide non-sonic warning device for equipment used during nighttime activities. The Project proposes that, to comply with the provisions of Sec. 10-4.422, a variance will be filed with the Cal OSHA Standards Board showing that the proposed Project would provide equivalent safety procedures.

The analysis indicates that the proposed Project would be expected to meet the noise standards set by Yolo County. The potential for adverse exposure of on-site and off-site receptors to noise generated by the Project activities will not be further evaluated the EIR prepared for the Project.

XIIb. Potential to expose persons to excessive vibration (Less than Significant Impact). During the construction period of the proposed Project, standard excavation and transportation equipment would be operated. The equipment would not be expected to generate substantial groundborne vibration or noise. The operation of the equipment would be temporary and transient within the Project Site. Due to the sporadic nature of the equipment use and distance to the closest nearby off-site receptors (about 1,100 feet), the impact of limited groundborne vibration and noise would be minimal.

XIIc and d. Potential to permanently or temporarily increase ambient noise levels (Less than Significant Impact). The Project Site is located in a rural area with limited sources of noise generation. Under current conditions, human activities with the potential to generate noise at the Project Site are limited to agricultural activities. However, adjacent and nearby aggregate mining and processing activities are an existing source of industrial noise generation. Additional, existing roadway noise generated along local roads also contributes to ambient noise levels.

A Site-specific noise analysis evaluated the expected changes in ambient noise levels relate to implementation of the proposed Project (BBA 2007). As discussed in the response to X1a above, measurement of existing (ambient) noise levels and modeling of expected noise generation were performed during the evaluation. The results of the analysis suggest that predicted changes in ambient noise levels caused by the proposed mining and processing at the closest sensitive receptors (i.e., four rural residences) would be less than 0.5 dBA. This level of change in ambient noise levels would be less than significant.

XIIe-f. Expose people to excessive noise related to existing public airports or private air strip (No Impact). Review of available maps and aerial photographs indicates that the Project is not located within an airport-use plan area or within 2 miles of a public airport or private airstrip. The closest airport available to the public, the Watts-Woodland Airport, is located approximately 8.0 miles east of the Project Site.

XIII. POPULATION AND HOUSING Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

DISCUSSION

XIII. Potential to directly or indirectly induce population growth (Less than Significant Impact). The Project Site is located in a rural, agricultural area of central Yolo County. The population is relatively sparse with rural residences representing the only housing in the area surrounding the Project Site. The population of Yolo County in 2006 was 188,085 which represents an 11.5 percent over the population in 2000 (U.S. Census 2008). The closest community to the Site is Esparto, California (population 2,534) which is located about 0.8 mile south of the Project Site.

Project implementation would result in the creation of 12 to 15 jobs (Granite 2007). The employment opportunities would be, primarily, for equipment operators and laborers. It is expected that these positions could be filled by the local labor force. Therefore, the potential for inducement of population growth is low.

XIIIb. Potential for dislocation of housing (No Impact). Implementation of the Project would include removal of one residence located in the central portion of the Project Site. The removal of one housing unit is not a significant impact of the Project because the dislocation is a voluntary decision of the owner of the residence (i.e., Applicant)

XIIIc. Potential for displacement of people (No Impact). The only displacement of people that would result from Project implementation would be associated with the removal of one residence from the Project Site. The displacement of the residents is not a significant impact of the Project because the dislocation is a voluntary decision of the owner of the residence (i.e., Applicant).

XIV. PUBLIC SERVICES Would the Project: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 public services:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Police protection?			X	
b) Fire protection?			X	
c) Schools?			X	
d) Parks?				X
e) Other public facilities?			X	

DISCUSSION:

XIVa. Potential to impact police services (Less than Significant Impact). Police services for the unincorporated areas of Yolo County, including the area of the Project Site, are provided by the Yolo County Sheriff's Department. The most significant concerns related to unlawful activity within the area includes trespassing, burglary, and vandalism at existing gravel mining operations. Trespassing on aggregate company lands and with the Cache Creek riparian corridor by off-highway vehicle users is an on-going law enforcement issue. However, mining and processing activities have not presented specific law enforcement concern (Heatlie 2009).

XIVb. Potential to impact fire services (Less than Significant Impact). Fire protection services for the area surrounding Esparto, including the Project Site is provided by the Esparto Fire District. The district is a volunteer fire department with 24 volunteers and a fire station located at 16960 Yolo Avenue in Esparto. Equipment managed by the district includes two fire engines, two water tenders, a "grass rig" for grass fires, and a rescue vehicle. The estimated response time to the Project Site would be about five minutes. The proposed Project would not present any unusual conditions that would impact fire protection services (Burns 2009).

XIVc. Potential to impact schools (Less than Significant Impact). No residential uses are proposed by the Project that may increase the local student population. Considering the limited work force (12 to 15) required for the Project and the likelihood that the positions could be filled by local residents, it is unlikely that the job opportunities would bring a significant increase in population (including students). Implementation of the Project would not result in a substantial increase in the student population at local schools.

XIVd. Potential to increase the need for additional public park services (No Impact). Project implementation would not result in substantial increase in population (see Section XIII) and, therefore, would not present additional use of public parks (see Section XV). Additional park services would not be required.

XIVe. Potential to increase the need for other public services (No Impact). The Project would not be expected to significantly increase other public services. Mail service would be provided by the U.S. Postal Service, including mail delivery to the Project Site.

XV. RECREATION Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?			X	
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?			X	

DISCUSSION:

XVa. Potential for impacts related to increased use of recreational facilities (Less than Significant). The closest public recreational facility to the Project Site is the 41-acre Capay Open-Space Park, located about 1.0 miles west of the Project Site. The park is operated by the YCPRD. The land for the facility was donated to the County by the Applicant. The park, dedicated in August 2008, includes paved parking, picnic areas, and hiking trails along Cache Creek. Other recreational facilities in the vicinity of the Project Site include the Esparto Community Park (1.1 miles to the south) and the Cache Creek Nature Preserve (7.3 miles to the east).

The Project would not have the potential to significantly increase the use of these recreational facilities. The Project would not be expected to induce growth in the population using the parks because the Project would not result an increase in residential population.

XVb. Potential for impacts related to construction or expansion of recreational facilities (Less than Significant Impact). The Project does not propose any activities that would directly result in the construction or expansion of recreational facilities. The Project does propose, as a "net gain" to the public, to dedicate the 115-acre Granite Woodland Facility to the County. The property is a formerly mined area north of Cache Creek and west of County Road 94B. The Project does not specify the use of the dedication, and no plan for development of a recreational facility at the Site is proposed by the County at this time. Pursuant to the CCAP, the County could ultimately choose to use the Woodland site as an access point for future Cache Creek recreational opportunities. Such use is not proposed or contemplated as a part of this Project, but may be explored in the future pursuant to implementation of the CCAP. Such an effort would be subject to a separate public process and environmental impact analysis. If a recreational use is proposed in the future, the environmental impacts of construction of new facilities at the dedication site would need to be performed for such a project.

XVI. TRANSPORTATION AND TRAFFIC Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause an increase in traffic which 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)?	X			
b) Exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highways?	X			
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?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	X			
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			X	

DISCUSSION:

XVIa. Potential to cause substantial increases in traffic (Potentially Significant Impact). The area of the Project is rural and sparsely populated. Current agricultural activities at the Project Site generate very few vehicle trips. However, Granite Construction Company currently uses a paved driveway that crosses the center of the Project Site as the main access for trucks going to and from the existing Capay Facility, a mining and processing site located adjacent to and west of the Project Site. Previous traffic studies estimated that, when operating at full permitted capacity (1,200,000 tons per year), the Capay Facility could generate 480 daily trips (including 58 AM peak hour and 48 PM peak hour trips). However, traffic counts made in June 2007 indicated that 210 daily trips (including 11 AM peak hour and 7 PM peak hour trips) (TPG 2007a) were being generated under existing (at the time of the counts) conditions.

The proposed Project would result in additional vehicle trips associated with operation of the processing plant. The trips would include trips generated by up to 15 employees. The majority of the additional trips would be truck trips for pickups and deliveries of processed aggregate products. A traffic analysis performed for the Project (TPG 2007a) estimates that, if the proposed Project were operating at maximum requested capacity (i.e., 1,044,000 t/yr or 120 percent of 870,000 t/yr), the Project would generate 384 additional truck trips and 15 additional employee trips. During the peak AM hour, about 30 trips would enter the Site and 23 trips would exit. The peak PM hour would see 19 trips entering and 26 trips exiting.

The additional trips are considered to represent a substantial increase in existing traffic. The Site-specific traffic study has evaluated the impact of the additional trips on roadway segments and intersections (see XVb), traffic safety (see XVd), and road conditions. The EIR will critically review the results of the traffic analysis to determine the level of potential traffic impacts.

XVIb. Potential to exceed level of service (Potentially Significant Impact). A commonly used descriptor for assessing the flow of traffic on roadway segments and traffic delays at intersections is known as level of service (LOS). LOS qualitatively characterizes traffic conditions associated with varying levels of traffic. A LOS determination is a measure of congestion, which is the principal measure of roadway service. The LOS calculation methodology for intersections is dependent on the type of traffic control device, traffic signals, or stop signs. LOS ranges from free-flowing traffic conditions (LOS A) to forced flow with congested conditions (LOS F). The Circulation Element of the Yolo County 1983 General Plan establishes the objective of maintain a level of service (LOS) of C or better for roadway segments in the County (Objective CT-3.1) and LOS of D or better for all intersections. The General Plan Update is considering adoption of a policy (Policy CI-3.1) which would maintain LOS C for roadways and intersections in the vicinity of the Project (Yolo County 2009).

The LOS determinations for the roadways and intersections that could be potentially affected by the vehicle trips generated by were evaluated in a Project-specific traffic analysis (TPG 2007a). The analysis included evaluation of the following roadway segments and intersections that would be affected by the expected Project trip generation and distribution:

- Project driveway at County Road 87 (eastbound and northbound approaches);
- County Road 19 at County Road 87 (westbound and southbound approaches);
- County Road 19 at I-505 southbound ramps (westbound and southbound approaches); and
- County Road 19 at I-505 northbound ramps (westbound and southbound approaches)

The analysis evaluated the LOS under existing conditions (for AM and PM peak hours) and under future conditions with and without the Project. The future condition was analyzed for the year 2029 and assumed maximum production rates at both the existing Capay Facility and the proposed Project. Under existing conditions, the LOS at all intersections were rated A and the County Road 19 and 87 segments were rated as level B. Under the future condition without the Project, some intersection LOS were reduced to B. Adding the Project traffic resulted in additional intersection LOS to be reduced from level A to B. The roadway segment LOS remained rated as B (TPG 2007a).

The Yolo County 1983 General Plan (Circulation Policy CIR-7) establishes a significance criterion for changes in LOS. The policy states that a significant effect occurs when the increased traffic results in a change from an acceptable LOS (i.e., A, B, or C) to and unacceptable LOS (i.e., D, E, or F). The Project-specific traffic analysis indicates that a significant change in LOS would not result from the Project. However, the EIR prepared for the Project would fully evaluate all assumptions and results presented in the traffic analysis presented for the Project and will look at policy conflict under the Draft General Plan.

XVIc. Potential to change air traffic patterns (No Impact). The Project would have no effect on any air traffic patterns or any airport facilities. The closest airport is approximately 11.5 miles west of the Project Site. The proposed mining and reclamation activities and reclaimed use of the mined areas (i.e., open space/habitat and agriculture) would not be expected to substantially increase air transportation of workers or visitors. The Project does not propose any structures or other facilities with sufficient height to interfere with air traffic. Therefore, no new flight obstructions would be created.

XVId. Potential to substantial increase traffic hazards (Potentially Significant Impact). The Project would result in increased traffic on the rural roads in the vicinity. The increase could potentially affect traffic safety and roadway pavement conditions. Traffic safety analysis was evaluated in the Project-specific traffic study (TPG 2007a). The analysis documented the occurrence of traffic accidents on the roadways that would be affected by the increased traffic generated by the Project. However, the analysis did not specifically address particular safety hazards that might be associated with the increase in gravel-haul trucks. The potential hazards could include slow-merging speeds or turning movements of trucks at intersections or limited curve radii at intersections. These safety issues will be more fully evaluated in the EIR prepared for the Project.

Another potential safety hazard potentially related to the Project traffic could be increased deterioration of pavement surfaces of roadways affected by the Project. Increased deterioration can result in uneven pavement surfaces that could affect driving conditions. An analysis of the roadway conditions on the segments of County Roads 19 and 87 that would be affected by the Project was conducted (TPG 2007b). The analysis indicated that the pavement conditions on both roads were "good to fair." Visual inspections documented pavement distress in some areas, including pavement cracking and surface depressions. The distress was interpreted to be related to climate effects and pavement durability.

The Project would intensify pavement wear and tear related to increased gravel truck use. As a condition of the approval of the mining permit for the Capay Facility, the Applicant is required to assume joint pavement maintenance responsibility with the County on County Road 87 from the Project access road to County Road 19, and on County Road 19 from County Road 87 to I-505, for the permit period (as required by OCSMO Sec. 10-4.410) The Applicant must submit an annual evaluation of the structural integrity of the road and implement pavement improvements to maintain safe and efficient traffic operation on the road for each upcoming year

The Project-specific traffic analysis concluded that the additional loaded truck trips would accelerate the deterioration of roadway pavement on County Roads 87 and 19. The analysis recommends that a requirement similar to the existing requirement for fair share for pavement maintenance on County roads would be an appropriate mitigation for the adverse effects of the Project. The EIR will further evaluate the impacts related to road deterioration.

XVIe. Potential to result in inadequate emergency access (No Impact). Emergency access to the Project Site would be provided by a two-lane, paved roadway. The roadway currently serves the same purpose for access to the exiting Capay Facility west of the Project Site and no problems with emergency access have occurred.

XVIf. Potential impacts on parking capacity (No Impact). As required by Sec.10-4.425 of the OCSMO, the Project would provide off-street parking for all customers, employees, and mining equipment.

XVIg. Potential conflicts with alternative transportation plans or policies (Less than Significant Impact). The Project would have no direct impact on plans, programs, or policies supporting alternate transportation. There is currently no transit service operating on public roads that provide access to the Site. The Yolo County Transportation District operates bus service on State Highway 17. However, the Project proposes that trucks exiting its proposed facility would only use the route of County Road 87 south and connections to Highway 16 for local deliveries. The occasional trips would not be expected to adversely affect transit service.

XVII. UTILITIES AND SERVICE SYSTEMS Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable RWQCB?				X
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?				X
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) Result in a determination by the wastewater treatment provider which 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?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

DISCUSSION:

XVIIa and b. Potential to exceed wastewater treatment facilities or construction/expansion of existing facilities (No Impact). The Project Site is not served by a public wastewater treatment system and connection to an existing public system is not proposed by the Project. An existing private septic system at the Project Site has served the existing residence. In order to comply with Sec.10-4.428 of the OCSMO, Project proposes to provide portable toilets for employees and visitors to the Site. Therefore, there would be no potential to exceed or demand construction or expansion of existing wastewater treatment facilities.

XVIIc. Require construction or expansion of storm water drainage facilities (No Impact). The Project would not require or result in the construction of new public stormwater drainage facilities or expansion of existing public facilities, and would have no impact on public stormwater facilities. No public stormwater system serves the Project Site. Under existing conditions, the stormwater runoff is transported away from the Site by agricultural drainage ditches and directed to Cache Creek. The Project proposes to manage surface runoff under a SWPPP. The grading associated with the mining and reclamation activities is designed so that the proposed plant site would drain northerly toward a Phase IA (interim) plant pond, easterly toward retention basin at the northeast side of the plant site, and southwesterly toward a retention basin at the southwest comer of the plant site. Mining areas would temporarily or permanently create lowered ground surfaces which will contain runoff from the mining areas onsite. The disturbed areas of the Site would be grading and revegetation at the completion of mining to minimize erosion.

XVIId. Potential to have sufficient available water supplies. (Less than Significant Impact). The Project would not require water service from a public source. The water supply for aggregate processing, potable water, and irrigation for reclamation planting would be provided by existing on-site water supply wells. No water supply from public water supply systems would be required. The water demand for existing agricultural use of the Site is approximately 1,018 acre-feet per year. During mining and processing activities, the Applicant has estimated the water demand for these activities to be 286 acre-feet per year. The demand for agricultural supply will be variable; decreasing as agricultural land is gradually taken out of service as mining progresses and then increasing as portions of the mined land is reclaimed to agricultural use. Upon completion of reclamation, the Site would support about 74 acres of row crop agriculture and 38 acres of dry pasture/open space. Assuming all current agricultural land in production and aggregate processing plant operation at capacity, the approximate maximum water demand could be up to 1,304 acre-feet per year. This demand could be met by the pumping capacity of the existing three on-site water supply wells (approximately 5,100 acre-feet per year).

XVIIe. Potential to affect available wastewater treatment capacity (Less than Significant Impact). The Project does not propose to have any sanitary wastewater treatment onsite. Sanitary facilities for workers and visitors at the Site would be provided by portable chemical toilets. The existing septic system for the one house at the Site would be decommissioned (i.e, removed during mining). Therefore, the Project would not affect available wastewater treatment. The Project would treat wash water from aggregate processing by allowing the sediment contained in the water to settle in on-site settling ponds. The sediment retained in the ponds would be used on site for the reclamation components (i.e., partial filling of excavation areas). Therefore, the potential for the Project to adversely affect available wastewater treatment capacity is a less-than-significant impact.

XVIIf. Potential to be served by sufficient landfill capacity (Less than Significant Impact). The aggregate mining and processing and mine reclamation activities proposed by the Project would generate solid waste materials. The solid waste generated at the Project Site would be removed by a private contractor (Waste Management of Woodland) or processed onsite in accordance with county, state, and federal regulation. The waste would be transferred for disposal, initially, at the Yolo County Central Landfill located outside of the city of Davis. The permitted capacity of the landfill is 49.0 million cubic yards; the estimated remaining capacity of the landfill facility is 37.3 million cubic yards. Considering the remaining capacity of the landfill, the Project would be served by sufficient landfill capacity.

XVIIg. Potential to comply with solid waste regulations (Less than Significant Impact). The Project operator would be required to comply with all federal, state, and local regulations related to the management of solid waste. The Project indicates that recycling would be implemented during proposed activities.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X			
b) 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)?	X			
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X			

DISCUSSION:

XVIIIa. (Potentially Significant Impact). The Biological Resources evaluation of this IS (Section IV) provides analysis of the environmental effects on wildlife and habitat related to implementation of the proposed Project. The analysis identified potentially significant effects of the Project on biological resources that would likely require mitigation. The potential for adverse effects on cultural resources (including historical, archaeological, and paleontological resource is also presented by the Project (Section V).

XVIIIb. (Potentially Significant Impact). Impacts of implementation of the Project would potentially result in impacts which could have a cumulative effects on biological resources, water quality, groundwater supply, air quality, and traffic. The release of air emissions (including exhaust from equipment and vehicles) could potentially contribute to cumulative impacts on air quality, including increased GHGs. Emission of air pollutants is generally considered a cumulative impact on the quality of air within the air basin. The increase in traffic trips related transport of aggregate products from the Project Site would increase cumulative effects on public and private roadways. The potential cumulative impacts will need to be more fully evaluated in the EIR to determine the level and significance of the impacts.

XVIIIc. (Potentially Significant Impact). Substantial adverse effects on humans could be caused by implementation of the Project. Potential adverse impacts on humans include changes to visual resources (Section I), increased air emissions (including GHGs) (Section III), potential increased exposure of humans to strong seismic shaking and slope instability (Section VI), releases of hazardous materials to soil or water resources (sections VIII and IX), and increased traffic levels (Section XVI). Additionally, the Project may result in impacts to the availability of mineral resources and would result in loss of Prime Farmland. All of these potential impacts will be more fully evaluated in the EIR.

Section 4: References

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APPENDIX B

Comments on the Notice of Preparation

Comments

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

Notice of Preparation

February 13, 2009

To: Reviewing Agencies

Re: Granite Esparto Mining and Reclamation Project
SCH# 2009022033

Attached for your review and comment is the Notice of Preparation (NOP) for the Granite Esparto Mining and Reclamation Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Kent Reeves
Yolo County Parks and Resources Department
120 West Main Street, Suite C
Woodland, CA 95695

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Assistant Deputy Director & Senior Planner, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2009022033
Project Title Granite Esparto Mining and Reclamation Project
Lead Agency Yolo County

Type NOP Notice of Preparation

Description Mine and process 1.0 mil. tons of aggregate (870,000 tons sold) from a 313 acre mining area with reclamation in 30 years to agriculture, lake and habitat, and open space uses.

Lead Agency Contact

Name Kent Reeves
Agency Yolo County Parks and Resources Department
Phone (530) 406-4888 **Fax** 530-668-1801
email kent.reeves@yolocounty.org
Address 120 West Main Street, Suite C
City Woodland **State** CA **Zip** 95695

Project Location

County Yolo
City
Region
Cross Streets County Road 87
Lat / Long
Parcel No. 048-220-015; 048-220-022
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways Cache Creek
Schools
Land Use Agriculture, A-P/SGR, Agricultural Preserve with Sand and Gravel Reserve

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Minerals; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse; Other Issues

Reviewing Agencies Resources Agency; Department of Conservation; Department of Parks and Recreation; Central Valley Flood Protection Board; Department of Water Resources; Department of Fish and Game, Region 2; Department of Food and Agriculture; Native American Heritage Commission; State Lands Commission; California Highway Patrol; Caltrans, District 3; Air Resources Board, Major Industrial Projects; State Water Resources Control Board, Division of Water Quality; Department of Toxic Substances Control; Regional Water Quality Control Bd., Region 5 (Sacramento)

Date Received 02/10/2009 **Start of Review** 02/11/2009 **End of Review** 03/12/2009

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: [illegible]

SCH# [illegible]

Resources Agency

- [ ] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Mike Sotelo
- [ ] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Gerald R. Zimmerman
- [ ] **Dept. of Conservation**
  Rebecca Salazar
- [ ] **California Energy Commission**
  Dale Edwards
- [ ] **Cal Fire**
  Allen Robertson
- [ ] **Office of Historic Preservation**
  Wayne Donaldson
- [ ] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **Central Valley Flood Protection Board**
  Jon Yego
- [ ] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [ ] **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou
- [ ] _____
  Conservancy

Fish and Game

- [ ] **Depart. of Fish & Game**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Game Region 1**
  Donald Koch
- [ ] **Fish & Game Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Game Region 2**
  Jeff Drongesen
- [ ] **Fish & Game Region 3**
  Robert Floerke
- [ ] **Fish & Game Region 4**
  Julie Vance
- [ ] **Fish & Game Region 5**
  Don Chadwick
  Habitat Conservation Program
- [ ] **Fish & Game Region 6**
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] **Fish & Game Region 6 I/M**
  Gabrina Gatchel
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Anna Garbeff
  Environmental Services Section
- [ ] **Dept. of Public Health**
  Bridgette Binning
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Linda Fiack
- [ ] **Office of Emergency Services**
  Dennis Castrillo
- [ ] **Governor's Office of Planning & Research**
  State Clearinghouse
- [ ] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Leo Wong
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [ ] **State Lands Commission**
  Marina Brand
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- [ ] **Caltrans - Planning**
  Terri Pencovic
- [ ] **California Highway Patrol**
  Scott Loetscher
  Office of Special Projects
- [ ] **Housing & Community Development**
  CEQA Coordinator
  Housing Policy Division

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Bruce de Terra
- [ ] **Caltrans, District 4**
  Lisa Carboni
- [ ] **Caltrans, District 5**
  David Murray
- [ ] **Caltrans, District 6**
  Michael Navarro
- [ ] **Caltrans, District 7**
  Elmer Alvarez
- [ ] **Caltrans, District 8**
  Dan Kopulsky
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Ryan P. Chamberlain

Cal EPA

Air Resources Board

- [ ] Airport Projects
  Jim Lerner
- [ ] Transportation Projects
  Douglas Ito
- [ ] Industrial Projects
  Mike Tollstrup
- [ ] **California Integrated Waste Management Board**
  Sue O'Leary
- [ ] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Steven Herrera
  Division of Water Rights
- [ ] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
  - [ ] **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____

Last Updated on 01/07/2009

-----Original Message-----
From: Linda Donnelly [mail:eqjudge@yahoo.com]
Sent: Tuesday, February 17, 2009 7:55 AM
To: Kent Reeves
Subject: Impact report on Granite Esparto Mining and Recla. Proj.

I have read your letter sent to us in Esparto regarding the Granite mining and reclamation project, but I see no where on this letter to explain the notice in Spanish. At least 80% of our residents are Spanish speaking and will in no way understand this letter. The letter will end up in the trash.
I feel there must be a better way for your office to type such an important notice and let our Spanish speaking residents get some kind of notification that is written in Spanish.
>
>
I will not be able to attend your meeting on Feb.25,2009 (your note states 2008 I hope is a typing error) there fore I am letting you know by this email that I am against it.
>
>Respectfully
>
>Linda Donnelly
>16693 Freeman St
>Esparto, Ca 95627
>
>
>email eqjudge@yahoo.com

TAYLOR & WILEY
A PROFESSIONAL CORPORATION
ATTORNEYS
2870 GATEWAY OAKS DR., SUITE 200
SACRAMENTO, CALIFORNIA 95833
TELEPHONE: (916) 929-5545
TELEFAX: (916) 929-0283

JOHN M. TAYLOR
JAMES B. WILEY
JESSE J. YANG
KATE A. WHEATLEY
MATTHEW S. KEASLING
JAMES E. MIZELL, III

OF COUNSEL
KATHLEEN R. MAKEL

February 18, 2009

Mr. Kent Reeves, Principal Natural Resources Planner
Yolo County Parks and Resources Department
120 West Main Street, Suite C
Woodland, California 95695

Re: Notice of Preparation (NOP) for the Granite Esparto Mining and Reclamation Project

Dear Mr. Reeves:

Taylor & Wiley represents Teichert, Inc. ("Teichert") with respect to its Woodland and Esparto aggregate mining and reclamation operations in unincorporated Yolo County. We have reviewed the notice of preparation (NOP) for the Granite Esparto Mining and Reclamation Project ("Granite Project") and offer the following comments:

Land Use and Planning. The Granite Project may require the amendment of the Cache Creek Area Plan (CCAP) and the Off-Channel Mining Plan (OCMP), two regional plans that apply to the Granite Project. CEQA requires that an EIR analyze a project's consistency with applicable regional plans. (CEQA Guidelines § 15125(d).) Therefore, the EIR should evaluate the consistency of the Granite Project with the OCMP and CCAP.

Cumulative Impacts. CEQA requires that an EIR's analysis of cumulative impacts either follow a "list" approach that considers "past, present, and probable future projects producing related or cumulative impacts" or a "plan" approach that contains a summary of projections from an adopted general plan or related planning document or a certified environmental document that evaluated regional or areawide conditions. (CEQA Guidelines § 15130(b)(1).) On December 1, 2008, Teichert submitted applications to the County to modify its existing Woodland and Esparto operations as follows:

- To increase annual permitted production, permit additional mining properties, and increase the permitted life of the Woodland operation; and

- To increase annual permitted production at the Esparto operation.

The two Teichert applications are related and reasonably foreseeable projects that should be considered in the cumulative impact analysis to be conducted for the Granite Project, as required under the list approach to cumulative impact analysis. Moreover, the Granite Project and both Teichert projects could cumulatively contribute to a need to update the

CCAP and OCMP, two regional planning documents that would need to be evaluated under the plan approach to cumulative impact analysis. For this reason, the EIR for the Granite Project should consider the combined impacts of the Granite Project and the two pending Teichert projects, along with other reasonably foreseeable cumulative development.

Thank you for the opportunity to provide our comments on this matter. Please contact me if you have any questions regarding our comments or need additional information.

Sincerely,

Jesse J. Yang

cc: Lillie Noble

EIR SCOPING MEETING
Granite Esparto Mining and Reclamation Project
February 25, 2009

Minutes:

The meeting was started at 6:10pm. The attached agenda was followed (Attachment 1). For a list of attendees please see attached sign-in sheet (Attachment 2).

Claire Haag, neighbor – How was it concluded that noise is "not significant"? EIR consultant Kevin O'Dea explained that an acoustical study was prepared that demonstrated compliance with the regulatory requirements of the Mining Ordinance. Project Manager Tschudin explained that neighbors can still comment on noise issues but it will not be treated as a CEQA issue due to compliance with the regulations established for the program. There was discussion of allowed hours of operation for rock plant (6am to 6pm).

Lillie Noble, Teichert – Regarding CEQA project alternatives, what does "sequential mining" mean? It was explained that this meant the new site would be mined following the conclusion of mining at the existing site.

Frank Sieferman, neighbor – Would they mine the two sites at the same time? Yes, that is what is proposed. There was general discussion of mining truck traffic on CR 13 and 14.

The meeting was ended at 7:10pm. The County team and applicant stayed later to continue to answer questions.

These minutes were prepared by Heidi Tschudin on March 4, 2009.

Attachments:

1 – Agenda
2 – Sign-In Sheet

AGENDA

PUBLIC SCOPING MEETING
Granite Esparto Mining and Reclamation Project
February 25, 2009

1. Greeting and Introduction – Kent Reeves, Yolo County Parks and Resources Department
   (Welcome extended to members of the public with an introduction to the environmental review team and an outline of the meeting purpose, format, and general rules of conduct)

2. Summary of CEQA Process – Heidi Tschudin, Yolo County Project Manager
   (General discussion of the purpose and framework of the CEQA and the process as applied to the proposed project)

3. Description of Proposed Project – Kevin O'Dea, ENTRIX
   (Brief discussion of the location and setting of the proposed project and description of the major components of the mining and reclamation plans and "net gain" proposed by the applicant)

4. Results of Initial Study Analysis and Scope of EIR – Kevin O'Dea, ENTRIX
   (Short presentation of the findings of the Initial Study including preliminary identification of expected impacts and environmental issues found not to be significant)

5. Remaining Steps for Processing the Granite Application - Heidi Tschudin, County Project Manager
   (Brief description of the remaining environmental review process and opportunities for public involvement)

6. Public Comments
   (Meeting is opened for comments on the project and environmental review process)

7. Closure of Meeting

YOLO COUNTY

GRANITE - ESPARTO PROJECT SCOPING MEETING

FEBRUARY 25, 2009

NAME (PLEASE PRINT)	MAILING ADDRESS	REPRESENTING	PHONE	E-MAIL
Heidi Tschudin	710 21st St. Sacramento, CA 95811	Yolo County	916-447-1809	htschudin@sbcglobal.net
John R Hulsman, Jr.	26858 CR 23 Esparto, CA 95627	Self	530-787-4046	John.r.hulsman@gmail.com
Kent Reeves	120 W Main Street, Suite C Woodland, CA 95695	Yolo County	530-406-4888	Kent.reeves@yolocounty.org
Lillie Noble		Teichert		lnoble@teichert.com
Jesse Yang	2870 Gateway Oaks Dr., #200 Sacramento, CA 95833	Teichert	916-929-5545	jyang@taylor-wiley.com
Claire Haag	16200 CR 87 Esparto, CA 95627	Self	530-787-3603	hag@cal.net
Frank Sieferman	32375 CR 12 Zamora, CA 95698	Self	530-662-2561	N/A
Ben Adamo		Granite		
Yasha Saber		Granite		
Peter Dwelley		Granite		
Melissa Jordan	PO Box 375 Esparto, CA 95627-0375	ECAC	530-787-3652	melsi@hotmail.com
Giacomo Moris	PO Box 801 Esparto, CA 95627	ECAC		glmoris@gene.com

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

February 26, 2009

Regulatory Division (SPK-2009-00200)

County of Yolo
Parks and Resources Department
120 West Main Street, Suite C
Woodland, California 95695

Dear Mr. Reeves:

We are responding to your February 12 2009 request for comments on the Granite Esparto Mining Project. This project is located at Latitude 38.71 North, Longitude -122.016 West, Township 10 North, Range 1 West, near Esparto, in Yolo County, California. Your identification number is SPK-2009-00200.

The Corps of Engineers' jurisdiction within the study area is under the authority of Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. Waters of the United States include, but are not limited to, rivers, perennial or intermittent streams, lakes, ponds, wetlands, vernal pools, marshes, wet meadows, and seeps. Project features that result in the discharge of dredged or fill material into waters of the United States will require Department of the Army authorization prior to starting work.

To ascertain the extent of waters on the project site, the applicant should prepare a wetland delineation, in accordance with the "Minimum Standards for Acceptance of Preliminary Wetland Delineations", under "Jurisdiction" on our website at the address below, and submit it to this office for verification. A list of consultants that prepare wetland delineations and permit application documents is also available on our website at the same location.

The range of alternatives considered for this project should include alternatives that avoid impacts to wetlands or other waters of the United States. Every effort should be made to avoid project features which require the discharge of dredged or fill material into waters of the United States. In the event it can be clearly demonstrated there are no practicable alternatives to filling waters of the United States, mitigation plans should be developed to compensate for the unavoidable losses resulting from project implementation.

Please refer to identification number SPK-2009-00200 in any correspondence concerning this project. If you have any questions, please contact Jamie LeFevre at our California South Branch, 1325 J Street, Room 1480, Sacramento, California 95814-2922, email *jamie.m.lefevre@usace.army.mil*, or telephone 916-557-6693. You may also use our website: *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

Kathleen A. Dadey, Ph.D.
Chief, California South Branch

Rumsey Band of Wintun Indians

TRIBAL COUNCIL

Marshall McKay
Chairman

Bessey Villalobos
Secretary

Anthony Roberts
Treasurer

Twila Frease
Council Member

Cynthia Clarke
Council Member

Rumsey Indian Rancheria

March 10, 2009

YOCHA-DE-HE

Yolo County Parks and Resources Department
Attention: Kent Reeves
Principal Natural Resources Planner
120 West Main Street, Suite C
Woodland, CA 95695

Re: Granite Esparto Mining and Reclamation Project

Dear Mr. Reeves:

The Rumsey Indian Rancheria of Wintun Indians, of California ("Tribe") has received the Notice of Preparation ("NOP") for the Draft Environmental Impact Report ("EIR") on the Granite Esparto Mining and Reclamation Project ("Project"). We appreciate an opportunity to comment on this Project.

Based on the information you provided, we seek to initiate consultation with the County and Granite Construction Company prior to permitting by the County. The Project's development is within our ancestral lands. As such, the Tribe would like access to the site and to meet with Granite Construction Company representatives in order to develop appropriate mitigation measures for this Project.

We understand that the Project requires many approvals including: (1) Rezoning of the property to change the Sand and Gravel Reserve ("SGR") combining zone to the Sand and Gravel ("SG") combining zone; (2) Approval of an Off-Channel Mining Permit; (3) Approval of a Reclamation Plan, authorization to execute a Development Agreement; and (4) Approval of a Flood Hazard Development Permit ("FHDP"). Each of these approvals should include appropriate mitigation measures to avoid impacts to our tribal cultural resources and burials, wherever possible.

In the past, other mining companies have disregarded tribal cultural resources in their mining project planning and implementation. As a result, many Native American human burials and cultural items were disregarded and destroyed. We seek to ensure that new development projects are implemented with a greater level of involvement of the Tribe and our tribal representatives.

We also wish to establish procedures to follow for the treatment of Native American remains and cultural items in the event they are found in conjunction with the Project's development, excavation, investigations, and any ground-disturbing activities. These procedures should be required before the County approves this Project, in addition to other reasonable mitigation measures in the EIR.

PO Box 18 Brooks, California 95606 p) 530.796.3400 f) 530.796.2143 www.rumseyrancheria.org

Consultation with culturally-affiliated tribes is required in the event of the discovery of grave goods, ceremonial items, and cultural items. It is critical to have a tribal monitor present for any earthmoving activities, but particularly off-stream mining projects because of the high likelihood that such items will be impacted.

Thank you for providing us with this notice and opportunity to comment. Please contact our Tribal Attorney, Michelle LaPena, at (916) 442-9906, or michelle@lapenalaw.com in order to begin the consultation process.

Sincerely,

Marshall McKay
Tribal Chairman

From: Jim & Claire Haag [mailto:haag@cal.net]
Sent: Friday, March 13, 2009 2:19 PM
To: Kent Reeves
Cc: Wes Ervin; David Morrison; Sue Heitman; Melissa Jordan; Leslie & Stan Barth
Subject: Granite Esparto Mining and Reclamation Project

Dear Mr. Reeves;

I have read the Initial Study of the Granite Esparto Mining and Reclamation Project. If I understand the document correctly, it appears that the company is asking for a zone change that will effectively double the size of their Capay/Esparto operation and permanently withdraw over one hundred acres from agricultural production. In the place of prime and unique farmland the County is left with a lake covering 195 acres, and an assortment of offset properties. Given the current financial climate, it will come as no surprise if the Board of Supervisors adopts the Granite plan.

My particular concern at this time is in regard to night-time lighting for construction and operation. At the present time, lights are on in the middle of the night even though the hours of operation begin at 6 AM. It would be preferable that lighting be restricted as much as possible to hours of operation both at the current Capay Site and at the proposed Esparto Site. Additionally, it would be preferable that lights be not only "shielded" from Road 87 and adjacent properties (page 3-4, Initial Study) but aimed down instead of out. The effect of project lighting is not less than significant. Granite may own the ground, but it does not own the sky.

Next to lastly, I would ask that you recognize that farmland does indeed provide a scenic vista; it does not need to carry an official designation. Ask the people who live in an urban area what constitutes a scenic vista. I doubt that a gravel extraction site will make their list. I know it doesn't make mine.

Thank you for the opportunity to comment on the Initial Study.

Claire Haag
16200 County Road 87
Esparto, CA 95627

From: Jim & Claire Haag [mailto:haag@cal.net]
Sent: Friday, March 13, 2009 2:19 PM
To: Kent Reeves
Cc: Wes Ervin; David Morrison; Sue Heitman; Melissa Jordan; Leslie & Stan Barth
Subject: Granite Esparto Mining and Reclamation Project

Dear Mr. Reeves;

I have read the Initial Study of the Granite Esparto Mining and Reclamation Project. If I understand the document correctly, it appears that the company is asking for a zone change that will effectively double the size of their Capay/Esparto operation and permanently withdraw over one hundred acres from agricultural production. In the place of prime and unique farmland the County is left with a lake covering 195 acres, and an assortment of offset properties. Given the current financial climate, it will come as no surprise if the Board of Supervisors adopts the Granite plan.

My particular concern at this time is in regard to night-time lighting for construction and operation. At the present time, lights are on in the middle of the night even though the hours of operation begin at 6 AM. It would be preferable that lighting be restricted as much as possible to hours of operation both at the current Capay Site and at the proposed Esparto Site. Additionally, it would be preferable that lights be not only "shielded" from Road 87 and adjacent properties (page 3-4, Initial Study) but aimed down instead of out. The effect of project lighting is not less than significant. Granite may own the ground, but it does not own the sky.

Next to lastly, I would ask that you recognize that farmland does indeed provide a scenic vista; it does not need to carry an official designation. Ask the people who live in an urban area what constitutes a scenic vista. I doubt that a gravel extraction site will make their list. I know it doesn't make mine.

Thank you for the opportunity to comment on the Initial Study.

Claire Haag
16200 County Road 87
Esparto, CA 95627

APPENDIX C

Habitat Restoration and Landscape Visual Screening Plan

Habitat Restoration and Landscape Visual Screening Plan

Granite Esparto Site

September 2007

Prepared for:
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Suite 238
Sacramento, CA 95826

Prepared by:
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Half Moon Bay, CA 94019

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1.0 INTRODUCTION

Granite Construction Company (Granite) contracted TRC to develop a Habitat Reclamation Plan for a proposed gravel mining and processing project near Cache Creek, near the town of Esparto in Yolo County, California. Reclamation of the site will include development of open water, wetland, and upland natural habitat elements. This document describes the methods to be employed for natural lands reclamation during and following completion of mining operations on the property. In order to ensure consistency, many of the restoration techniques and monitoring methods have been adapted from the Habitat Restoration Program (Zentner and Zentner, 1995) and the Habitat Restoration Program Addendum (Foothill Associates, 2001) developed for Granite for the adjacent Capay facility.

The biological feasibility of successful habitat reclamation is largely based on three primary factors– soil, water, and plant selection. As described in the Soils Evaluation Report and Reclamation Plan, there is adequate high quality soil that will be salvaged for use in reclamation. A reliable water source will be available for establishing native vegetation and for maintaining visual screening. Plant species have been selected based on previous plans prepared for the Capay site, along with the Esparto Biological Assessment and experience at other sites. Native plants were chosen that are accustomed to the local climatic conditions. In addition, the hydrology of groundwater at the site was reviewed to ensure that a proper hydrological regime exists to reasonably conclude that proposed wetlands and riparian habitat reclamation is feasible on the property. The program described herein also assigns responsibility for implementation of these measures and provides a plan for monitoring and maintenance. Considering these factors, the proposed revegetation efforts associated with reclamation of mined lands, as described in this plan, are feasible.

1.1 SETTING

The Granite Esparto site (site) is located in the Central Valley of California, west of the Sacramento River, in an area rich in agricultural production consisting of orchards, row crops, and grain crops. The site is situated in western Yolo County, approximately 1.5 miles north of the town of Esparto, along the west side of County Road (CR) 87 near Cache Creek. Elevation at the site ranges from approximately 180 to 186 feet. The climate in the area can be characterized as mild, with average temperatures ranging from 33 to 55 degrees Fahrenheit in the winter and 57 to 96 degrees Fahrenheit in the summer. Average annual precipitation in the area is about 19 inches. A vicinity map is provided in Attachment A.

1.2 PURPOSE AND SCOPE

As required by the California Surface Mining and Reclamation Act of 1975 (SMARA), land reclamation is a required component of plans to extract mineral resources. In addition, Yolo County Surface Mining Ordinance section 10-5.601(c)(1) requires:

> A biological analysis to evaluate the feasibility of proposed revegetation efforts, including detailed plans describing planting methods, appropriate planting times, species to be used, irrigation

requirements, erosion control, weed control, and proposed success rates for plant cover and density. The analysis shall also include cross-sections for those areas proposed to be revegetated, including slopes, visual screens, and wildlife habitat.

Reclamation for the property includes reestablishment of both agricultural and natural habitat lands in areas disturbed by the project. This document addresses Yolo County ordinance 10-5.601(c)(1) for project lands reclaimed to natural habitat. This document also includes establishment of field margin (or fence row) habitat as required by ordinance 10.5-509. The *Soils Evaluation Report and Reclamation Plan* is being prepared under separate cover, and will include agricultural reclamation and soils analysis that may be applicable to this plan.

A *Biological Assessment* has been prepared for the project that documents existing habitat on the site and potential value for wildlife. The habitat reclamation design for the site is based on re-creating plant communities that currently exist on-site, such that their compatibility with the specific soils and climate is assured.

This document addresses the specific measures directed to revegetation of natural plant communities during the various project phases, including seeding and planting methods, appropriate planting times, species to be used, irrigation requirements, erosion control, weed control and proposed success rates for plant cover and density.

1.3 RESPONSIBLE PARTY

Granite, or its successor, is the responsible party for implementing site reclamation in accordance with this plan and subsequent updates, including maintenance or remediation work required to achieve defined performance standards.

2.0 LANDSCAPE AND HABITAT DESCRIPTIONS

2.1 EXISTING CONDITIONS

The Granite Esparto site consists mainly of agricultural production, including row crops, English walnut (*Juglans regia*), and almond (*Prunus dulcis*) orchards. A portion of the site includes nonnative grassland that appears to have been previously disturbed (graded), and the southernmost portion of the site includes an access road to Granite Construction's gravel mining operation and the banks and bed of Cache Creek. A small rural/agricultural development exists at the center of the site, and consists of a house, a barn, and associated smaller structures.

Ornamental native and nonnative plant species, including toyon (*Heteromeles arbutifolia*), oleander (*Nerium oleander*), cork oak (*Quercus suber*), interior live oak (*Quercus wislizeni*), valley oak (*Quercus lobata*), eucalyptus (*Eucalyptus globulus*), sycamore (*Platanus racemosa*), juniper (*Juniperus californica*), and pine (*Pinus* spp.), have been planted along Fulton and Frank Road and near the rural/agricultural development. Nonnative grasses make up a majority of the rest of the area between the Cache Creek stream bank and active agricultural production. Species typical of Central Valley riparian habitats occur on the margins of Cache Creek, including

Fremont cottonwood (*Populus fremontii*), willow (*Salix* spp.), and mule's fat (*Baccharis salicifolia*).

Plant communities that are present within the project boundaries are described in detail and shown in maps in the *Biological Assessment.*

Plant Communities and Habitat Types

The site and surrounding areas support the following natural plant communities:

- Great Valley Willow Scrub
- Nonnative Grassland
- Riverine

Great Valley Willow Scrub

Great valley willow scrub is located along the margins of Cache Creek. On the south bank of Cache Creek, where disturbance is not proposed, approximately five larger cottonwood trees occur. Most of the great valley willow scrub along Cache Creek at the site has sparse stands of cottonwood with an open understory dominated by willow and other low shrubs and grasses, including ripgut brome (*Bromus diandrus*), Mexican tea (*Chenopodium amnrosioides*), and hedge mustard (*Sisymbrium officinale*).

Nonnative Grassland

Nonnative grassland covers a portion of the site proposed for the processing plant. It also covers the slope between the existing Capay facility gravel mining access road and the great valley willow scrub plant community along the bank of Cache Creek. This plant community consists of a dense to sparse cover of annual grasses interspersed with flowering stalks approximately 1 to 3 feet high. Stands of cottonwood trees were observed interspersed along the margins of the nonnative grassland where water sources from irrigation and Cache Creek were persistent.

Riverine

Riverine is primarily a non-vegetated community (habitat) that is located along the banks and in the bed of Cache Creek. This habitat consists predominantly of gravel bars and open water, with patches of riparian vegetation, consisting of mule's fat and willow species near persistent water sources. Where seasonal water flow becomes ponded, marsh-like communities may develop. Within the creek area, one pool of ponded water was supporting a small marsh community with tules (*Schoenoplectus acutus* var. *occidentalis*), cattail (*Typha* spp.), and other emergent species.

2.2 PHASE 1A

The Phase 1A area is comprised primarily of open-space with nonnative grassland. A fraction (approximately 15 percent) is in use for row crops. The Phase 1A area will be reclaimed to dry pasture with annual grasses.

2.3 PHASE 1B

The Phase 1B area is currently farmed as row crops. This area will be reclaimed to prime agriculture land. Reclamation of this area to prime agriculture is described in the *Soils Evaluation Report and Reclamation Plan* and is not further discussed in this document.

2.4 PHASE 2

The Phase 2 area is currently planted with orchard crops and row crops. A small percentage is developed with buildings, farm facilities, and some ornamental vegetation. The Phase 2 area will be reclaimed to lake with associated wetlands, and surrounding riparian and oak woodland vegetation.

2.5 TEST 3 LINE MAINTENANCE AREA

Part of Granite's proposal includes implementing a segment of the County's Test 3 line on Cache Creek, as a net benefit to the County. The area encompassed by the proposed Test 3 line implementation is shown in maps in the *Biological Assessment*. There will be no mining in the Test 3 line Maintenance area, but disturbance will occur to construct a stable streambank along the Test 3 alignment and to fill behind the streambank. This work will require a Flood Hazard Development Permit from Yolo County pursuant to the CCRMP.

3.0 RESTORATION MEASURES AND IMPLEMENTATION

3.1 GOALS AND OBJECTIVES

This plan is designed to meet the goals and objectives of the Yolo County Surface Mining Ordinance to provide for the protection and subsequent beneficial use of mined lands, and the CCRMP and OCMP to develop high quality natural habitat that is dominated by native plants. In particular, principles incorporated into the habitat design of the reclaimed lands include the following:

- Promote the conjunctive use of surface and groundwater to maximize the availability of water for a range of uses, including habitat, recreation, agriculture, water storage, flood control, and urban development.

- Provide a diversity of habitat types and plant communities. Habitat diversity promotes vegetation diversity, which in turn, provides for greater and more varied wildlife use, and more resiliency within the system to withstand environmental shocks.

- Create long, variable shorelines for a range of habitat and protected sites for nesting pair territories, ranging from large species such as waterfowl and shorebirds to smaller organisms such as amphibians.

- Limit dense stands of aquatic vegetation in shallow areas to lower mosquito harborage and enhance wave action. This will also serve as substrate for mosquito predators. Prevent isolated pooling as the water level recedes to allow for wave action and to provide access to mosquito predators.

- Provide dense, tall plant cover at the shoreline. Trees at the water's edge provide roosting and nesting habitat near a food source, while the tree leaves provide an important source of organic material that, in turn, promotes productivity of organisms within the open water and marsh zones.

- Provide a continuous corridor of natural open space between restored habitat lands and Cache Creek. Plant oaks and drought-tolerant shrubs interspersed with grasslands on higher elevation lands. Oaks and shrubs should be especially encouraged on slopes facing north or east.

3.2 SITE PREPARATION

Soils

During mining operations, the A-horizon topsoils and the B- and C-horizon subsoils will be removed and salvaged for use in reclamation. If ongoing reclamation activities do not immediately require soil placement, salvaged materials will be used for visual berms and levees, or stored in temporary stockpiles located in nearby areas on the site, so as to minimize haul distances and re-handling. Topsoil and subsoil stockpiles will be seeded with a vegetative cover to prevent erosion and leaching. The vegetative cover will consist of species included in the annual grassland seed mix. Pre-project assessments of the grass and herbaceous cover growing in areas proposed for topsoil salvage will identify weed species and prescribe methods for controlling them before topsoils are stockpiled. The following soils will be used for habitat reclamation:

- ***Brentwood silty clay loam (BrA):*** Historically this soil has been used for tree fruit, nut crops, vegetables, and field crops. This soil is suitable for annual grassland and oak woodland restoration.

- ***Loamy alluvial land (Lm):*** These soils have a texture of sand, sandy loam, loam, and silt loam and are very well drained. They are suitable for annual grassland, wetland, and willow/cottonwood riparian restoration.

- ***Soboba gravely sandy loam (Sn):*** This soil unit consists of deep, excessively drained soils that formed in alluvium from predominantly granitic rock sources and is suitable for annual grassland and scrub restoration. This soil type is partially hydric and is suitable for wetland restoration.

- ***Yolo silt loam (Ya):*** This soil unit consists of thick grayish brown, neutral silt loam and pale brown mildly alkaline silt loam. The soil will be primarily used for row, field, and

orchard crops, but may also be used for restoration of annual grasslands and oak woodlands.

The *Soils Evaluation Report and Reclamation Plan* indicates that overburden soils are adequate for the necessary habitat reclamation. Soils that are salvaged as overburden will be used initially for temporary berms and levees and later for habitat reclamation purposes in accordance with their suitability as described above. Some of the overburden may be stockpiled for later use in reclamation [It is anticipated that approximately seven feet of overburden and topsoil will be salvaged for reclamation of the mined areas and approximately two feet of A-horizon and C-horizon soils will be spread where needed for reclamation] (refer to the *Soils Evaluation Report and Reclamation Plan* for details). Subsoils will be ripped to a depth of three feet prior to spreading stockpiled topsoil.

Erosion and Sediment Control

Slopes around the Phase 2 area will be reclaimed as soon as practical to reduce erosion potential and ensure the establishment of habitat.

Permanent erosion and sediment control will be in the form of revegetation in accordance with this plan.

Mulch, consisting of weed-free straw, wood fiber, or an approved equivalent, may be applied to disturbed soils to minimize the effects of wind or rain to exposed soils. Mulch will be applied at a minimum of 3,000 pounds per acre.

3.3 PHASE 1A

Excavation and Contouring

Reclamation plans for this area call for a return to annual grassland for use as dry pasture. Refer to the Mining and Reclamation Plan Exhibits for reclamation plan and cross-section drawings. Phase IA includes the plant site and the initial two (interim) settling ponds. The interm settling ponds will be reclaimed early in the project's operational life. These ponds will be used to deposit washed fines until the first settling pond is completed in Phase IB. The Phase IA settling ponds will be reclaimed with a lower surface elevation than surrounding land to collect and infiltrate runoff from the plant area. When no longer needed, the interim settling ponds will be allowed to dry. When sufficiently dry, the surface of the accumulated fines will be ripped. Stockpiled C-Horizon and A-Horizon soils will be evenly spread across the surface, and the area will be tilled and planted.

Upon completion of mining, processing and sales, the remainder of the Phase IA area, where the processing plant is located, will be reclaimed. Stockpiles, equipment and gravel or asphalt surfaces will be removed. The site will be graded to match surrounding contours, and the subsoil will be scarified to a depth of 6 inches prior to topsoil replacement. Stockpiled C-Horizon and A-Horizon soils will be evenly spread across the area. After topsoil is replaced, the area will be tilled, planted and seeded.

The plant site's final reclamation grades are designed to drain northerly toward the interim settling ponds, easterly toward a retention basin at the east side of the plant site, and southwesterly toward a retention basin at the southwest corner of the plant site. This will keep surface drainage at the plant site from entering open water mining areas and from leaving the site.

Seeding and Planting

Following final grading and topsoil replacement, the area being reclaimed will be tilled to a minimum 12-inch depth using a stubble disk, followed by a spring-tooth harrow for the final pass, to alleviate soil compaction. The tilled surface will be seeded with the annual grassland seed mix as described in **Section 3.7**. Scattered valley oak woodland clusters of trees and shrubs will be planted along the perimeter of the grasslands. Planting sites will be identified by the Environmental Monitor (EM) based on the suitability of the soil, slope, aspect, and micro-habitat. Exact locations and spacing will be determined by the EM based on site constraints, area availability, and access requirements for maintenance and irrigation.

3.4 PHASE 2

Excavation and Contouring

The Phase 2 area will be reclaimed to be a lake with varying depths, seasonally fluctuating water levels, and diverse shorelines. The lake will have a variable shoreline with changing slopes of 2:1 or flatter to provide natural type variations in habitat. Refer to the Mining and Reclamation Plan Exhibits and Attachment A for reclamation plan drawings.

The proposed lake will be centered in a generally east to west orientation within the property between reclaimed agricultural land to the north and open space/pasture to the south. Depth to groundwater is on the order of 40 feet below the surface. During mining operations, the lake will be excavated to a depth of approximately 75 feet below the surface. This will lead to a maximum water depth on the order of 35 feet. The water elevation of the lake will fluctuate on the order of 10 feet with the groundwater elevation. The slopes around the lake will be graded no steeper than 2:1 to five feet below the average low water (ALW), except for the west end of the lake adjacent to the canal where the slope will be approximately 3:1. Topsoil will be spread over the surface of the slopes to the edge of the lake.

A variable shoreline will be sculpted around the lake with a series of coves and undulations to increase shoreline edge. Sculpting of the shoreline area will be done to ensure proper drainage and prevent establishment of isolated ponds that could harbor mosquito larvae.

After excavation and contouring is complete, the enhancement site will contain the following features:

- Deep open water
- Various degrees of transition slopes

- Vegetated wetland/open water edge
- Upland perimeter slopes

Lake Level Fluctuations

Refer to the *Hydrogeology Report of Findings* for a description of groundwater depths within the basin.

Seeding and Planting

The slopes around the lake will be planted with a progression of habitats down-slope including oak woodland species higher on the slopes transitioning to riparian woodland and then wetland species near and in the edges of the lake. Planting methods and species are described in **Section 3.8**.

To account for the drying effects of the sun and wind on slope aspects, a higher ratio of trees to shrubs, and riparian species to upland species will be planted on the more mesic north-facing and east-facing slopes, as opposed to the more xeric south-facing and west-facing slopes, which will get more sun and receive the prevailing wind off the lake.

The proposed habitat enhancement is designed to be structurally diverse with vegetated areas interspersed among more open water areas, allowing several foraging depths for waterfowl. Vegetated areas will be composed of low herbaceous vegetation, tall herbaceous vegetation, and minimal shrub/tree layers. Various wildlife species forage at the interface between habitats. Habitat edge is an important indicator of biotic diversity (Yahner, 1988; Harris, 1988).

3.5 TEST 3 LINE MAINTENANCE AREA

Excavation and Contouring

The proposed implementation of the Test 3 line is not part of proposed mine reclamation, since it is outside of the mining and mineral processing boundaries and there will be no mining in the Test 3 line area. Test 3 Line implementation will adhere to the conditions of the Flood Hazard Development Permit.

3.6 VEGETATIVE SCREENS

Seeding and Planting

Landscaped buffers will be constructed along County Road 87 and directly south of the Capay facility haul road, to screen project operations from adjacent lands. Berms established from the stockpiled soil will be contoured to conform visually with the surrounding topography, where possible. In order to prevent erosion or the establishment of noxious weeds, the soil berms will be seeded with grass species included in Table 1 and planted with shrubs.

The berm south of the Capay facility haul road will be constructed on top of a portion of the Test 3 line implementation area. The vegetated screen on this berm will include cottonwoods planted on 20-foot centers, and seeded with annual grassland species. The cottonwoods are relatively fast growing and may reach heights of 10 to 12 feet after two years. Low growing shrubs of 6 to 12 feet in height, such as coyote brush, will make up the visual screen along County Road 87. These screens are expected to last until final reclamation measures are implemented, which will include removal of the screens and reclamation of the screen footprint.

3.7 SEEDING

Seed will be applied in fall, winter or spring. Fall seeding prior to November 1 will occur wherever practical, since this is the optimal time for taking advantage of winter rains. For typical years, fall seeding would be expected to favor a higher percentage of germination and more robust growth. Soil stockpiles, visual screening berms, and the Phase 1A area will be seeded with the mix identified in Table 1. Depending on seed availability, alternate seed mixes may be approved by the EM.

Before seeding is initiated, all debris will be removed from the area to be seeded and the soil will be treated for weeds. If soil has been compacted, the ground surface will be tilled to a minimum 12-inch depth using a stubble disk. Otherwise, the surface will be scarified to a depth of 3 to 4 inches to reduce compaction and create a favorable seedbed. In those sites where seedbed preparation is not practical (e.g., steep slopes, rocky areas, etc.), topsoil will be left in an adequately rough condition to create micro-environments for seed germination and growth, and to reduce the potential for soil loss. In order to prevent an overabundance of invasive weed species, a mixture of non-invasive annual grassland species will be applied to the site for the first one or two years. Weed treatment will consist of at least one grow-kill cycle involving irrigating the soil followed by hand, mechanical, or chemical removal of germinated weed species. The cycle will be conducted a sufficient number of times to remove the majority of the weed species seed bank, usually determined by a decrease in germination. This will help ensure the successful establishment of native grasslands and woodlands before the annual grassland seed mix and any plantings are applied. Seeded upland areas will be fertilized using a low dose of 20-9-9 (NPK ratio) fertilizer (such as brand name First Choice), or other approved safe controlled release fertilizer at a rate of 200 pounds per acre. Fertilizer will be applied to the seeded upland areas under the direction of the EM. A mycorrhizal inoculant will be added at the rate of approximately 60 pounds per acre for any soil that has been stockpiled for more than one year. The composition of the inoculant will be determined in consultation with a qualified specialist at the time of implementation to ensure compatibility with the local soils.

Table 1: Annual Grassland Seed Mix

Common Name	Scientific Name	Native or Nonnative	PLS (lbs./acre)
California barley	*Hordeum brachyantherum* spp. *californicum*	Native grass	5
California brome	*Bromus carinatus*	Native grass	10
Blue wildrye	*Elymus glaucus*	Native grass	5
Six-weeks fescue	*Vulpia microstachys*	Native grass	5
Purple needlegrass	*Nassella pulchra*	Native grass	5
Creeping wildrye	*Leymus triticoides*	Native grass	4
California poppy	*Eschscholzia californica*	Native forb	3
Tom cat clover	*Trifolium tridentatum (willdenowii)*	Native forb	1
Sky lupine	*Lupinus nanus*	Native forb	2
Total			**40**

PLS: pure live seed; values derived from Pacific Coast Seed

Each bag of seed will be properly labeled certifying the species, the percentage of seed of each species, the percent germination of each species, the purity of seed, and the source of the seed.

Each seed mix will be uniformly applied at its specified Pure Live Seed application rate as described in Table 1. Seed will be applied by "rangeland"-type seed drill or by broadcast equipment. Seeding rates are based on drill-seed application rates. If the broadcast method is used, the seed will be applied at a rate of twice that prescribed for drill-seeding. Seed applied directly on bare soil will be lightly raked into the soil surface. In areas where straw mulch is used, seed will be applied before the mulch.

3.8 PLANTING

Oak and Riparian Woodland

The Phase 2 slopes above average high water (AHW) and the perimeter of the Phase 1A area will be planted in valley oak woodland. Species to be planted in the oak woodland are comprised of the grasses in Table 1 with the following oak woodland species in Table 2 planted in clusters within the grasslands.

Table 2: Valley Oak Woodland Planting List

Common Name	Scientific Name	# Per Acre(1)
Valley oak	*Quercus lobata*	43
Interior live oak	*Quercus wizlensii*	6
California buckeye	*Aesculus californica*	5
California blackberry	*Rubus ursinus*	8
Coyote brush	*Baccharis pilularis*	10
Wild rose	*Rosa californica*	15

(1) Per acre average within clusters.

Native grass plugs will be incorporated within oak woodland planting clusters; 300 plugs of purple needlegrass (*Nassella pulchra*) and 100 plugs of creeping wildrye (*Leymus triticoides*) will be added to the list in Table 2.

Riparian woodland will be planted from just above the average low water (ALW) line to just above the AHW line along the Phase 2 slopes. Species to be planted in the riparian woodland are shown in Table 3.

Table 3: Riparian Woodland Planting List

Common Name	Scientific Name	# Per Acre
Valley oak	*Quercus lobata*	82
Freemont cottonwood	*Populus fremontii*	26
Black willow	*Salix goodingii*	29
Red willow	*Salix laevigata*	29
Arroyo willow	*Salix lasiolepis*	29
California blackberry	*Rubus ursinus*	19
Mule fat	*Baccharis salicifolia*	6
Wild rose	*Rosa californica*	36
Wild grape	*Vitis californica*	16
Dogwood	*Cornus stolonifera*	16
Creeping wildrye	*Leymus triticoides*	400

The numbers per acre in tables 2 and 3 are to be considered averages and the exact planting spacing and layout will be determined by the EM in the field. The EM will determine the

approximate number of plants that will be needed, so a sufficient quantity can be ordered prior to the restoration. As a general rule, large crowning trees can be spaced at 20 to 25 ft. on center (OC), small crowning trees at 10 to 15 ft. OC, large shrubs at 5 to 8 ft. OC, small shrubs at 3 to 5 ft. OC, and grasses and ground cover plants at 1.5 to 3 ft. OC. As noted previously, a higher ratio of trees to shrubs, and riparian species to upland species will be planted on the more mesic north-facing and east-facing slopes, as opposed to the more xeric south-facing and west-facing slopes, which will get more sun and receive the prevailing wind off the lake. Groupings of blackberry and wild rose shrubs may also be planted over long stretches of slope to provide spiny nesting substrates for colonial nesting species such as tricolored blackbird.

All plant material for use in propagation will be collected from the region. Containerized stock in the form of 1-gallon and 5-gallon trees will be purchased from nurseries that collect acorns and other plant material from Yolo County and Central Valley woodlands. A mycorrhizal inoculant will be included with the nursery medium at approximately 5 pounds per cubic yard, or will be added at a similar ratio to the planting holes. All trees will be inspected to ensure they are not root-bound, desiccated, or otherwise diseased. If possible, willow cuttings will be taken from plants on-site or adjacent to the project area within the Cache Creek drainage.

Plantings will be done in the late fall or early winter to take advantage of cool months and maximize plant survival. Planting holes will be made by hand or mechanical auger and will be approximately twice the diameter of the pot. Each planting hole will be filled with water and the water will be allowed to soak into the soil prior to plant installation. A low dose of Osmocote 18-6-12 fertilizer, or other approved safe controlled release fertilizer compatible with mycorrhizae, will be added to the planting holes. The crown should be level with grade and covered with approximately 0.25 inch of soil to prevent a wicking effect from drying out the rootball. Watering basins are to be constructed around each tree to conserve the water applied via drip irrigation or hand watering. The basin will be constructed so as to keep the root or crown area dry. The plants will be thoroughly watered after installation. Approximately 2 inches of wood mulch will be applied around each plant. The mulch should be watered during the initial plant watering. Protective wire cages or ventilated tree shelters will be installed around trees and shrubs as needed to prevent browsing by wildlife that otherwise would threaten reclamation success.

Willow cuttings will be a minimum of 18 inches long and not less than three-eighths of an inch in diameter at the base. The base of the cuttings will be planted to a depth of approximately two-thirds the length of the cutting (12 inches). Willow planting will be performed during the typical dormant period for the species, generally from December to February. Any remaining leaves will be trimmed away from the stems with at least three bud scars present aboveground. The cuttings will be obtained from surrounding willows in the Cache Creek drainage if possible, with not more than 25 percent of any individual plant cut. All cuttings will be made with sharp, clean tools. For each cutting, the top will be cut square above a leaf bud (node), and the base will be cut below a leaf bud at an angle of approximately 45 degrees. All cuttings should be oriented the same way and bundled for storage. If not immediately planted, cuttings will be stored for no longer than 48 hours under moist, cool conditions.

Wetlands

Wetlands around the fringe of the open water lake will be supported within the zone of alternating inundation and exposure. Based on the hydrology at the site, freshwater marsh at the Phase 2 site will be restricted to within a few feet of the ALW zone where soils are highly permeable. Where less permeable soils are present, perennial freshwater marshes will transition to other wetland plant communities with higher elevation up to the AHW zone. This transition will move from seasonal marshes at mid-elevations to wet meadows near the AHW zone. Species to be planted in the wetland plant communities are shown in Table 4.

Table 4: Wetland Planting List

Common Name	Scientific Name	Relative Elevation	# Per Acre
Common tule	*Scirpus acutus*	Low	25
Cattail	*Typha domingensis*	Low	15
Three-square	*Scirpus americanus*	Low	10
Creeping spikerush	*Eleocharis palustris*	Mid	20
Seep monkeyflower	*Mimulus guttatus*	Mid	5
Baltic rush	*Juncus balticus*	Mid	5
Beaked sedge	*Carex rostrata*	Mid	5
Scouring rush	*Equisetum hyemale*	High	5
Yerba mansa	*Anemopsis californica*	High	5
Buttonbush	*Cephalanthus occidentalis*	High	5

In addition to these species planted along the shoreline, floating vegetation such as duckweed (*Lemna* sp.) and azolla (*Azolla filiculoides*) will be planted within open water. The following guidelines will be implemented to help ensure that the marshes do not promote mosquito production.

- The banks of areas that retain water after June 1 (the beginning of the optimal mosquito breeding period) will be steep enough to prevent isolated pooling as the water level recedes and to allow wave action and access to mosquito predators. Shoreline configuration will not isolate small channels or shallow ponding areas from the main body of water, but instead will provide for continued access by predators, particularly mosquito fish (*Gambusia* sp.).

- Dense stands of aquatic vegetation will be limited in shallow areas to lower mosquito harborage and enhance wave action. Perennial marsh species, like cattails and tule, in moderate stands, do not promote mosquito productivity and will function as substrate for mosquito predators.

3.9 IRRIGATION

The wetland planting, the lower portions of the riparian planting, and annual grassland will not require irrigation. Upland trees and shrubs, and upper portions of riparian plantings will be provided with a reliable source of water until their root structures become established. Because the first rainfall of the year is unpredictable, temporary irrigation will be required. A proper water regime that promotes deep rooting is crucial to the establishment of these plantings. Conversely, over-watering will cause damage to the trees' root structure and may cause root rot. Most plantings will require supplemental irrigation during the first three years. It is anticipated that the watering schedule will be gradually diminished each year so that the native plants do not become dependent on regular watering. Most irrigation should cease by the fourth year. All new woodland plants and cuttings, with the exception of willows and other species planted on low terraces, will be irrigated using a temporary drip irrigation system. A watering schedule, including which tree species will require irrigation, will be determined by a landscape architect or certified arborist based on the maintenance requirements of individual plantings.

The irrigation systems will be set up with pressure reducers and filters to avoid clogging drip emitters. Polyethylene tubing may be installed above ground and secured with 6-inch staples or jute hooks. All lines will be flushed prior to installing emitters. Emitters will be placed at the rootball, and moved back to the dripline as the plant canopy expands. Pressure testing of the completed main irrigation lines and valves will be required. Lateral lines will be left on for at least two hours to visually inspect for leaks and functionality. Upon completion of the irrigation system, the EM will verify the system is operating correctly.

4.0 MONITORING AND MAINTENANCE

This section provides the specific monitoring methods and performance standards for evaluating plant community restoration success, along with annual reporting requirements and maintenance and remediation guidelines. Monitoring and maintenance, and remediation if needed, will be, performed as described in this plan and will be overseen by the EM.

4.1 GENERAL REQUIREMENTS

- Monitoring shall occur for five years after reclamation is completed or until the success performance standards have been met for three consecutive years without supplemental watering or plant care, whichever is greater. The monitoring period will be triggered following completion of reclamation in a given area, so different stages of monitoring at different areas of the site may be ongoing at any given time.

- Monitoring results shall be submitted in an annual report to the permitting agencies by November 1 each year.

4.2 WETLAND MONITORING

Methods

Wetland monitoring will consist of the following actions:

- **Mapping**. Ground measurements or aerial photographs, other methods documenting the extent of inundation will occur in the areas of wetland construction twice per monitoring period between February and June. The purpose of these mapping programs is to provide an overview of general conditions in the wetland reclamation areas, and to identify potential problem areas (e.g., erosion, lack of inundation).

- **Site Monitoring and Floristic Data Collection.** Data on plant community composition will be collected once each monitoring period. Based on expected inundation, the optimum time for data collection will be late spring or early summer. Wildlife species associated with the wetlands will also be incidentally noted during field data collection.

- **Data Analysis.** Data analysis will consist of calculation of the Prevalence Index and wetland species richness and preparation of summary statistics for each constructed wetland.

Performance Standards

The following shall be used to measure the performance of wetland restoration:

Species Richness/Wetland Species Richness

Species richness is defined as the total number of plant species recorded within an individual wetland, while wetland species richness is defined as the total number of wetland plant species recorded within an individual wetland. Wetland plant species include those categorized by the *National List of Plant species that Occur in Wetlands: California (Region 0)* (Reed, 1988) as described in Table 5.

Table 5: Species Category Definitions

Species Category	Definition
Obligate (OBL)	Occur almost always in wetlands (more than 99 percent probability)
Facultative Wetland (FACW)	Usually occur in wetlands (67 to 99 percent probability)
Facultative (FAC)	Equally likely to occur in wetlands and non-wetlands (34 to 66 percent probability)
Facultative Upland (FACU)	Usually occur in non-wetlands (67 to 99 percent probability)
Upland (UPL)	Occur almost always in non-wetlands (more than 99 percent probability)

For those wetland species not listed as OBL, FACW, or FAC, or eligible for such designation, a literature review will be conducted to determine their status. A wetland species richness of 10 is the success performance standard for wetlands reclamation areas of the project.

Prevalence Index

The prevalence index (PI) is a floristic gradient that ranks wetlands on the basis of the relative proportions of wetland and non-wetland species, weighted on the basis of the species' category in the *National List of Plant species that Occur in Wetlands: California (Region 0)* (Reed, 1988). For calculation of the PI, each category is weighted according to the scale outlined in Table 6.

Table 6: Prevalence Index Weight Scale

Wetland Status	Weighting
OBL	1
FACW	2
FAC	3
FACU	4
UPL	5

The PI is a standard method of determining whether a wetland data set is categorized as a wetland or upland plant community. By using the weightings described above, the PI establishes a gradient where low values represent the "wet" end of the gradient (plant communities dominated by OBL and FACW species) and high values represent the "dry" end of the gradient (plant communities dominated by FACU and UPL species).

PI values range from 1 to 5, with a value of 1 indicating that all species in that sample are obligate wetland species and a value of 5 indicating that all species are obligate upland species, with intermediate values indicating the relative importance of wetland species. To be considered a wetland, the area must have a prevalence index value less than 3.0 (U.S. Fish and Wildlife Service *et. al.*, 1989). The PI for wetland reclamation will be calculated using the following formula:

$$PI = \frac{1f(OBL) + 2f(FACW) + 3f(FAC) + 4f(FACU) + 5f(UPL)}{f(OBL) + f(FACW) + f(FAC) + f(FACU) + f(UPL)}$$

where "f" equals the frequency of occurrence for each indicator group of plants counted along a given transect through a wetland. A minimum of two 50-meter (or four 25-meter) point intersect transects will be conducted per acre vertically along the bank from the interface of water and vegetation. Points will be taken every half meter in accordance with the sampling technique described by the California Native Plant Society (Sawyer and Keeler-Wolf, 1995).

A PI value of less than 3 is the success performance standard for wetlands reclamation areas of the project.

4.3 OAK AND RIPARIAN WOODLAND MONITORING

Oak and riparian woodland monitoring is designed to ensure compliance with performance standards and to discover and correct conditions that are detrimental to the plantings. Annual monitoring of plantings will occur during the monitoring period, and will be conducted by the EM and, as necessary, in consultation with a certified arborist.

Methods

Monitoring will occur annually to evaluate the health of plants. Tree health will be evaluated based on the qualitative scale shown in Table 7. Only trees receiving a rating of fair or above will be considered successful.

Table 7: Tree Health Rating Scale

Rating	Tree Health
Excellent	Free of any signs of stress, disease, nutrient deficiency, or parasites. Wounds, if any, all healed.
Good	Some evidence of stress, disease, nutrient deficiency, or parasites. Minor leaf loss or deformity. Any wounds nearly healed or showing satisfactory progress toward healing.
Fair	Clear evidence of stress, disease, nutrient deficiency, or parasites. Moderate loss or deformity of leaves or buds. Wounds showing evidence of closure but with moderate amounts of exposed wood.
Poor	Widespread evidence of stress, disease, nutrient deficiency, or parasites. Substantial leaf loss or deformity, bud death, or other pathology. Wounds showing little or no closure, with substantial exposed wood. High potential for tree mortality.

Performance Standards

The success performance standard for plantings is a minimum of 80 percent survival annually. Trees will be successful with 80 percent or more exhibiting fair or better health rating based on Table 7. If the plantings fail to meet this performance standard, they will be replaced annually, under the guidelines of this plan, to meet the 80 percent survival goal.

4.4 REPORTING

Annual monitoring reports will be prepared and submitted to Yolo County by November 1 each year for five years or until success performance standards are met for three consecutive years. The basic purpose of the monitoring reports is to present data, summary statistics, and data analysis for constructed wetlands and each planting area. The monitoring reports will contain reproductions of maps or aerial photographs and a description of reclamation success relative to performance standards. Any conditions identified during monitoring as being detrimental to wetland function or to plantings (erosion, predation, etc.) will be described, along with recommended corrective measures. The effectiveness of the irrigation systems will be evaluated, along with recommendations for altered watering regimes, if appropriate.

4.5 MAINTENANCE

The need for maintenance activities will be determined by the EM during the monitoring surveys or during site visits at other times of the year. Potential maintenance measures could include supplemental watering, weed eradication, additional planting or seeding, and erosion repair. At least monthly visits will be made to check on the irrigation systems and plantings during the first year. Maintenance will be performed on at least a quarterly basis during the second and third years, and as-needed, thereafter.

Weed Abatement

Throughout the monitoring period, one focus of inspections will be to observe for the presence of weeds, and weed eradication will normally be implemented (by hand-pulling or cutting) with scheduled maintenance events. It is expected that the measures described in Section 3.7 for controlling weeds as part of the seeding regimen will significantly reduce, but not eliminate, the need for continued weed abatement during maintenance. In the event of problematic weed infestations, non-routine response such as strategic use of an appropriate and approved herbicide by a licensed applicator may be necessary. Integrated vegetation management (IVM) includes preventing encroachment of noxious weeds into land that is not infested, detecting and eradicating new weed introductions, and containing large-scale infestations using an integrated approach, often with the use of revegetation. The following methodologies have been adopted from the *Integrated Vegetation Management Guide* (Drlik *et al.*, 1998).

Areas determined to require noxious weed control will be prioritized based on size and severity of weed establishment in a given area and the likelihood of noxious weeds spreading into adjacent areas. Transects will be walked through restored areas for the purpose of making visual estimates of noxious weed cover. Situations that may increase the priority of a site include (1) the discovery of a small "outlier" population, such as a recent invasion from another area that must be controlled quickly in order to prevent it from becoming a larger problem, or (2) the discovery that a weed population has become a threat to agriculture, native plants, food sources for wildlife, water resources, etc.

Table 8 lists thresholds that may be used to indicate and prioritize infestation levels. Larger areas or areas with high percentages of noxious weed cover will be given higher priority for weed

control response. Areas will be treated for weeds beginning at a low threshold level to proactively minimize the potential for infestation. For some cases the criteria threshold will be established at the trace level, as with particularly noxious weeds such as perennial peppergrass (*Lepidium latifolium*) and yellow star-thistle (*Centaurea solstitialis*). In other cases the number of weeds tolerated may be much greater, such as the natural succession of moderate ruderal vegetation cover. In some cases, complete eradication may not be practical unless the weed-infested patches are very small.

Table 8: Noxious Weed Threshold Criteria

Threshold Level	Percent Noxious Weed Cover	Action Priority*
Trace	Less than 1 percent	None
Low (occasional plants)	Between 1 and 5 percent	Low
Moderate (scattered plants)	Between 5 and 25 percent	Moderate
High (fairly dense)	Greater than 25 percent	High

* Priorities may be altered due to patch size and the invasiveness of identified weed species.

Noxious weeds to be controlled will be in accordance with species lists available from the Yolo County Agriculture Department (http://www.yolocounty.org/org/AG/), and the Yolo County Resource Conservation District (http://www.yolorcd.org/on-farm-practices/weeds-a-war-we-can-win).

Manual Controls

Hand removal of weeds will be best suited for relatively small patches infested by invasive woody plants. Cutting may be accomplished by hand-pruning or chopping, weed whips, or similar hand-held, gas-powered tools. Weeds may also be cut and then spot sprayed with an herbicide. Grubbing is another effective method, which consists of removal and destruction of the entire plant, including the taproot. However, this procedure can be destructive to the treated area (National Park Service, 2007) and should be restricted to small plots. Removal of crowns only is more effective than cutting, but must be repeated, since remaining roots will re-sprout. Crown removal should be timed with flowering (when the plants are weakest) if they are easily visible, or in the fall. Crowns may be difficult to find except in the spring, when this method will be less effective. Selection of the appropriate manual control method will depend on the type and extent of the weed infestation.

Timing is crucial in controlling weeds, especially annuals. Because cutting does not remove the root systems, weeds should be cut just prior to setting seed to maximize the likelihood of complete control.

Herbicidal Controls

Pre-emergent chemical controls are applied to the ground prior to the emergence of weeds in the spring and post-emergents are used to kill or stunt plants during their active growth stages. Pre-emergents may be applied adjacent to newly planted plants for revegetation purposes because they limit the growth of competing weeds. Post-emergent controls are most useful for broad areas completely dominated by weeds, or for spot spraying of individual weeds.

Herbicides should be applied before seeds are produced. Proper timing will depend on the herbicide, weed characteristics, and other physical factors such as soil moisture and site characteristics. Most summer or winter annuals, biennials, or newly germinated perennial weeds can be successfully treated in the seedling or rosette stage prior to bolting (Drlik *et al.*, 1998). Because it is easier to distinguish weeds from desirable plants when they are rosettes rather than seedlings, the rosette stage is often preferred. Also, the rosette stage may last for several months, providing a wider treatment period.

Established perennial plants, particularly woody species, are more difficult to control with herbicides, and timing according to the stage of growth is critical. In general, herbicides will be applied to established perennial plants toward the end of the growing season. At this time, food reserves in the roots have been used up, reducing the plant's ability to resprout. Woody species treated at other growth stages when nutrient reserves are high, will often recover and resprout.

Spot-treatment applies herbicides to target weeds without impacting desirable vegetation or other non-target organisms. Broadcast herbicide applications will be used only when necessary (e.g., where weed infestations are dense and extensive, or when plant fuel must be dry prior to controlled burns). Herbicides may be used as a border spray to prevent infestations from moving into non-infested areas.

Herbicide applications will be kept to a minimum and all spraying will be done by a California licensed qualified applicator. Herbicides should be approved for use near water sources. All herbicide use will follow the written recommendation of a California licensed pest advisor.

Other Controls

Other controls that may be appropriate include mechanical (i.e., mowing, disking), or cultural (modification of grazing practices).

Plant Care

Most plants should require little cultural care, except for irrigation and weed control in the basins. Oaks are very susceptible to root rot and will be carefully monitored. Weed control around plantings is very important during the first two years of maintenance. Areas within approximately two feet of the plants will be kept free of competing vegetation. No use of weed-eating machinery will occur in or around the crown area of the plant, so as to prevent girdling.

Plants will be fertilized once in the spring of the second and third year of maintenance. If determined necessary by the EM, plants in the vegetative screen areas may be staked using two eight-foot, pressure-treated stakes, two inches in diameter, installed on either side of the tree.

Irrigation

The irrigation systems will be routinely checked for malfunctions and to correct any over or under watering. Irrigation scheduling decisions will be made by the EM in consultation with a certified arborist. Drip lines and filters will be flushed as needed. Emitters will be checked regularly for malfunctions and their locations adjusted away from the crown as the canopy expands.

For revegetation efforts using native plants, the goal is for the plant community to become self-sustaining as soon as possible. The irrigation systems will be used as a supplement to seasonal precipitation to establish plants. A typical establishment period lasts one to three years, after which irrigation systems can be removed or abandoned. In order to facilitate this, water will be decreased each year until no longer needed after the third year. Watering will be limited so that plants develop deep root systems and do not become dependent on regular watering. Deep watering spaced at the longest time possible before plants show signs of stress will be used.

The exception will be along the visual screens where lush plants are desirable and the plants will only be present until the end of operations. The visual screens will be watered with drip systems throughout the life of the project. Watering will be kept to the minimum that is consistent with the aesthetic benefits of the screening.

Remedial Actions

Additional willow cuttings or plants will be planted in the late fall or early winter if scheduled inspections show that the total number required to meet the success criteria did not survive. Similarly, additional seeding will take place if appropriate ground cover requirements are not met.

Should monitoring indicate that plantings or wetlands are not achieving the performance standard, Granite will meet with County representatives to discuss appropriate remediation or maintenance actions. These may include planting additional trees, seeding, enhanced control of competing vegetation, re-grading, and protection from predation.

5.0 REFERENCES

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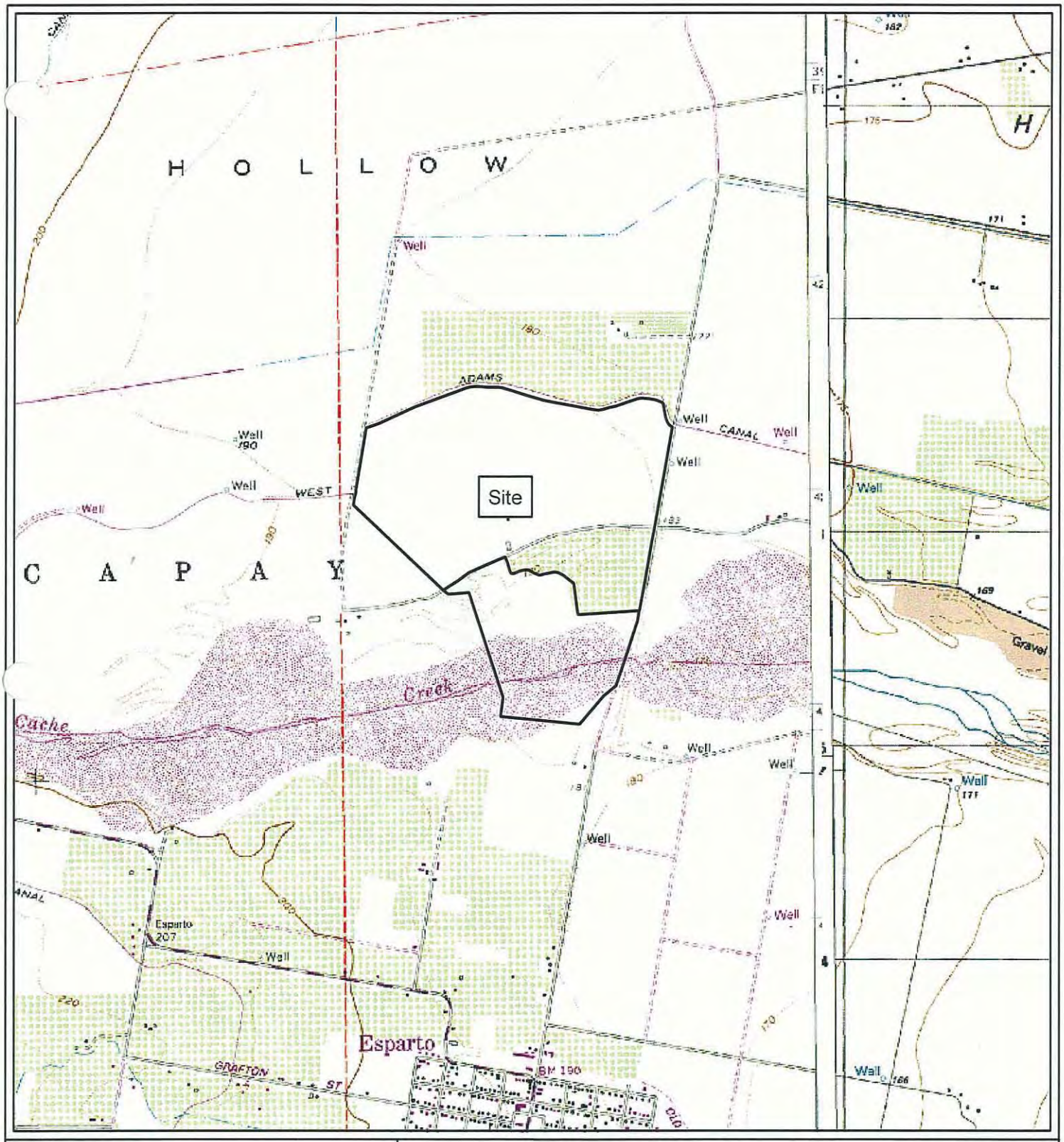
Attachment A:
Vicinity Map and Drawings



Granite Esparto Site
Figure 1. Vicinity Map

June 11, 2007

TRC

Figure 2

Northern Lakeshore Cross Section

Esparto Facility

Yolo County

California

NOT TO SCALE

TRC

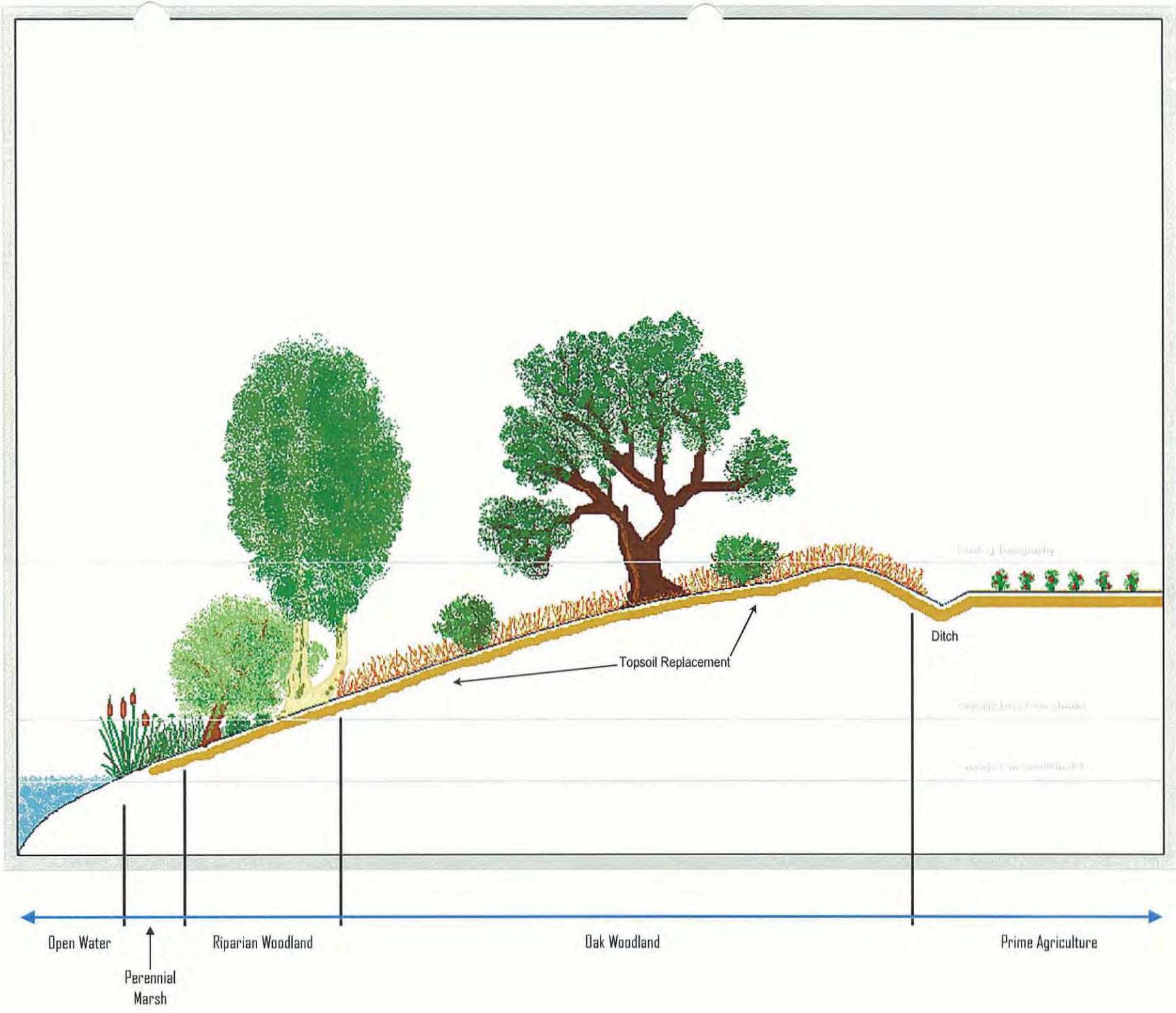


Figure 3

Southern Lakeshore Cross Section

Esparto Facility

Yolo County

California

NOT TO SCALE

TRC

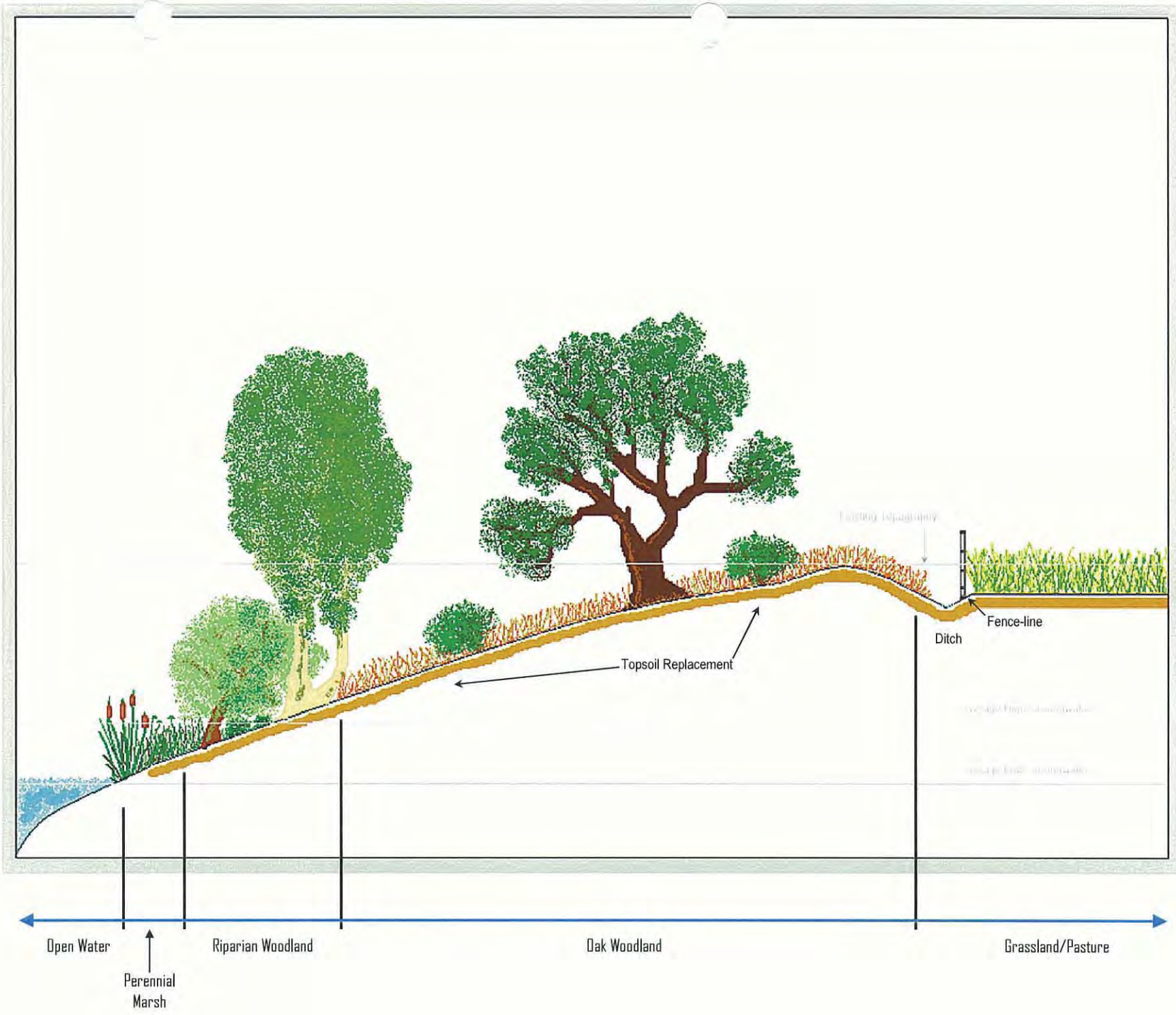


Figure 4

Eastern Lakeshore Cross Section

Reclaimed

Esparto Facility

Yolo County

California

NOT TO SCALE

TRC